

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/86-07

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: March 1-31, 1986

Inspector:

PHH
P. H. Harrel, Senior Resident Reactor
Inspector

6/2/86
Date

Approved:

D. R. Hunter
D. R. Hunter, Chief, Project Section B,
Reactor Projects Branch

6/3/86
Date

Inspection Summary

Inspection Conducted March 1-31, 1986 (Report 50-285/86-07)

Areas Inspected: Routine, unannounced inspection including operational safety verification, maintenance, surveillance, plant tours, safety-related system walkdowns, followup on previously identified items, followup on licensee event reports, and review of plant procedures program.

Results: Within the eight areas inspected, one violation (failure to maintain a vital area security barrier in accordance with regulations, Appendix A) was identified.

8606110263 860605
PDR ADOCK 05000285
G PDR

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

DETAILS

1. Persons Contacted

- *R. Andrews, Nuclear Production Division Manager
- *C. Brunnert, Quality Assurance Supervisor
- *M. Core, Maintenance Supervisor
 - J. Foley, I&C and Electrical Field Maintenance Supervisor
 - W. Gates, Plant Manager
 - R. Johansen, Test Engineer
 - M. Kallman, Security Supervisor
 - L. Kusek, Operations Supervisor
- *T. McIvor, Technical Supervisor
 - R. Mueller, Plant Engineer
- *D. Munderloh, Licensing Engineer
- *G. Roach, Chemical and Radiation Protection Supervisor
 - J. Tesarek, Reactor Engineer
- *D. Trausch, Operations Engineer
- *S. Willrett, Administration Services and Security Supervisor

*Denotes attendance at the monthly exit interview.

The inspector also contacted other plant personnel, including operators, technicians, and administrative personnel.

2. Followup on Previously Identified Items

(Closed) Unresolved Item 285/8002-01: Licensee to provide data for containment leakrate test.

The licensee has provided the data as requested by the NRC inspector. No additional action is required.

(Closed) Severity Level IV Violation 285/8415-01: Failure to inspect critical quality equipment (CQE) material.

The licensee has reviewed all open CQE requisitions/purchase orders to verify that no other material, other than that identified by the NRC inspector, had entered the plant without the proper receipt inspection. The results of the review indicate that no other material was installed in the plant without the proper receipt inspection being performed. The licensee has also taken actions to prevent recurrence of this problem. The actions taken include installing a sign at the plant entrance to warn personnel not to bring material in the plant without the proper receipt inspection, enhancing CQE receipt inspection requirements at general employee training sessions, and instructing security guards not to allow material received during off-normal hours to enter the plant. The

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

licensee has made the appropriate procedure changes to include the requirements. The NRC inspector has reviewed the actions listed above to verify that the actions were appropriately completed. No problems were noted.

- (Closed) Severity Level IV Violation 285/8515-03: Failure to perform routine surveillance for toxic gas monitors.

The licensee has revised Form FC-71 to include a requirement for recording toxic monitor readings on a shift basis. The NRC inspector reviewed Form FC-71 and verified the form was changed and that the readings were being recorded. The NRC inspector also reviewed other changes in the Technical Specification amendments to verify that the licensee has properly incorporated the requirements into appropriate procedures. No problems were noted during the review.

- (Closed) Deviation 285/8527-01: Failure to meet a commitment relative to the cleanliness of fluid systems.

To ensure that personnel involved in establishing cleanliness control conditions are aware of all the applicable program requirements, the licensee issued a memorandum to quality control, plant engineering, and maintenance personnel. This memorandum explains what actions are required for maintaining system cleanliness. The NRC inspector reviewed routine operational and maintenance activities during this inspection period to verify the requirements for system cleanliness were being met. No problems were noted.

- (Closed) Severity Level V Violation 285/8527-03: Failure to display security badge while in protected area.

The licensee has issued a memo to each badge holder to remind them of the requirement for displaying their security badges while inside the protected area. The licensee has also posted signs at the entrance to the protected area to remind individuals of the requirement. The NRC inspector has reviewed the wearing of security badges by personnel while in the protected and vital areas. No problems were noted.

3. Licensee Event Report (LER) Followup

Through direct observation, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence has been accomplished in accordance with Technical Specifications.

The LERs listed below are closed:

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

84-020	85-002
84-023	85-003
84-025	85-007
85-001	

LER 84-020 reported the inoperability of hydrogen analyzer VA-81A due to improper replacement of the catalyst bed/cell. During performance of the calibration procedure for VA-81A, it was discovered that the analyzer would not calibrate properly. An investigation was performed and it was determined that the analyzer catalyst bed/cell had been installed incorrectly during modification activities. The investigation also noted that the calibration performed after the modification was completed had been performed incorrectly by the technician due to the technician failing to follow the procedure. The catalyst bed/cell was immediately reinstalled correctly and calibrated to verify operation. The licensee appropriately disciplined the technician for failing to correctly follow procedure. The licensee revised the analyzer calibration procedure to provide further assurance against a recurrence of the problem. The licensee also issued a postmaintenance operability check procedure for the analyzers. To ensure that postmaintenance operability checks are performed on plant equipment, the licensee has added a blank to the maintenance order form for quality control personnel to sign to verify the necessary operability checks have been performed. The NRC inspector reviewed the actions taken by the licensee in this area and noted no problems.

LERs 84-023, 84-025, and 85-002 reported initiation of the ventilation isolation actuation system (VIAS) due to leaks in various systems caused by different problems. LER 84-023 discussed five VIAS initiations due to leakage from the pressurizer spray valve. The initiation occurred while shutting down the plant to repair the spray valve leakage.

LER 84-025 reported a VIAS initiation due to a leaking valve in the waste gas vent header. LER 85-002 discussed an initiation of the VIAS due to a leak on a charging pump suction line. In each of the above cases, when the VIAS initiation occurred, all activities associated with venting operations were suspended. A search was conducted to locate the source of the activity and immediate action taken to stop the leak. In each of the above occurrences, none of the releases experienced exceeded Technical Specification or 10 CFR Part 20 limits. This was confirmed by analyses performed by the licensee.

LER 85-001 reported a case where the VIAS was initiated due to a chemistry technician purging the reactor coolant sample line in preparation for drawing a sample. The chemistry technician purged the line too long, causing a buildup of radioactive gasses released by the reactor coolant. This buildup of gasses initiated a VIAS. There was no release exceeding Technical Specification or 10 CFR Part 20 limits as determined by a licensee analysis. A review of procedures and sampling operations was performed. No problems were identified. The importance of not greatly exceeding minimum purge times was emphasized to the plant staff.

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

LER 85-003 reported an actuation of the VIAS during the transfer of spent resin. The VIAS initiation was caused when the ion exchanger was purged with nitrogen gas after the resin had been transferred to the spent resin storage tank. When the nitrogen gas purge was performed, a mixture of nitrogen/radioactive gas carried through the drain line, causing an actuation of the VIAS. During this transfer operation, the VIAS was initiated twice, each time for the same reason. In each case, the licensee performed an analysis to verify the release to the atmosphere did not exceed Technical Specification or 10 CFR Part 20 limits. A review was performed of the controlling procedure and the actual operation. No problems were noted. This evolution has been performed since this occurrence without a VIAS initiation.

LER 85-007 reported the initiation of the VIAS during a refueling shutdown. The licensee was in the process of testing the containment stack gas monitor to prove operability. The test was being performed in accordance with an approved procedure. The procedure required that containment pressure be reduced to atmospheric before opening the purge valves. Due to an inaccurate indication, containment pressure was slightly greater than atmospheric when the purge valves were opened. This caused a VIAS initiation. The licensee performed an analysis to determine the magnitude of the release. The results indicated that no Technical Specification or 10 CFR Part 20 limits were exceeded.

No violations or deviations were identified.

4. Operational Safety Verification

The NRC inspector conducted the reviews and observations described below to verify that facility operations were performed in conformance with the requirements established under 10 CFR, administrative procedures, and the Technical Specifications. The NRC inspector made several control room observations to verify:

- . Proper shift staffing.
- . Operator adherence to approved procedures and Technical Specifications.
- . Operability of reactor protective system and engineered safeguards equipment.
- . Logs, records, recorder traces, annunciators, panel indications, and switch positions complied with the appropriate requirements.
- . Proper return to service of components.
- . Maintenance orders had been initiated for equipment in need of maintenance.

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

. Appropriate conduct of control room and other licensed operators.

No violations or deviations were noted.

5. Plant Tours

The NRC inspector conducted plant tours at various times to assess plant and equipment conditions. The following items were observed during the tours:

- . General plant conditions.
- . Equipment conditions including fluid leaks and excessive vibration.
- . Plant housekeeping and cleanliness practices including fire hazards and control of combustible material.
- . The physical security plan was being implemented in accordance with the station security plan.
- . Adherence to the requirements of radiation work permits.
- . Work activities being performed in accordance with approved procedures.

During a tour of the plant, the NRC inspector noted that a vital area security barrier was not being maintained in accordance with regulations. The discussion of the details of this occurrence contains safeguard information, as defined by 10 CFR Part 73.21; therefore, the details are discussed in Appendix A of this inspection report.

6. Safety-Related System Walkdowns

The NRC inspector walked down accessible portions of the following safety-related systems to verify system operability. Operability was determined by verification of valve and/or switch positions. The systems were walked down using the drawings and procedures noted:

- . Fire protection system (Drawing 11405-M-266, Revision 31 and Procedure OI-FP-6, Revision 46).
- . Electrical distribution, 480-volt system (Drawing 8.1-1, Revision 21, and Procedure OI-EE-2, Revision 8).
- . Electrical distribution, 125-volt DC system (Drawing 8.1-1, Revision 21, and Procedure OI-EE-3, Revision 17).

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

. Electrical distribution, 125-volt AC system (Drawing 8.1-1, Revision 21 and Procedure OI-EE-4, Revision 24).

During the walkdown of the fire protection system, the NRC inspector noted minor discrepancies of an editorial nature between the drawings, procedures, and plant as-built conditions. None of the conditions noted affected the operability or safe operation of the system. Licensee personnel stated that the noted minor discrepancies would be corrected.

During the walkdown of the electrical distribution system, numerous apparent discrepancies were noted on the procedures and the electrical distribution one-line diagram. None of the noted discrepancies affected the operability or safe operation of the system. However, the apparent discrepancies affect the correctness of the procedures and the drawing. At the end of this inspection period, the discussion regarding the apparent discrepancies had not been completed. For this reason, this portion of the inspection will be completed during the next inspection period.

No violations or deviations were identified.

7. Monthly Maintenance Observation

The NRC inspector reviewed station maintenance activities of safety-related systems and components to verify the maintenance was conducted in accordance with approved procedures, regulatory requirements, and the Technical Specifications. The following items were considered during the reviews:

- . The limiting conditions for operation were met while systems or components were removed from service.
- . Approvals were obtained prior to initiating the work.
- . Activities were accomplished using approved maintenance orders (MO) and were inspected, as applicable.
- . Functional testing and/or calibrations were performed prior to returning components or systems to service.
- . Quality control records were maintained.
- . Activities were accomplished by qualified personnel.
- . Parts and materials used were properly certified.
- . Radiological and fire prevention controls were implemented.

The NRC inspector reviewed the following maintenance activities:

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

- . Repairing of a gasket leak on high pressure safety injection valve HCV-383-4 (MO 854112).
- . Repairing of a fire barrier penetration (MO 854210).
- . Cleaning of letdown control valve LCV-101-1 (MO 854227).
- . Rebuilding air regulator for steam supply to auxiliary feed pump valve YCV-1045A (MO 857014).
- . Repairing seal leaks on charging pump CH-1A (MO 861214).
- . Packing leak repair on high pressure safety injection valve HCV-315 (MO 854361).
- . Repairing of jockey fire pump discharge check valve (MO 861214).
- . Adjusting alarm on containment stack monitor RM-051 (MO 854586).
- . Repairing of high pressure safety injection isolation valve HCV-2987 (MO 860725).

No violations or deviations were noted.

8. Monthly Surveillance Observation

The NRC inspector observed the Technical Specification required surveillance testing on safety-related systems and components. The NRC inspector verified the following items during the testing:

- . Testing was performed using approved procedures.
- . Test instrumentation was calibrated.
- . Limiting conditions for operation were met.
- . Removal and restoration of the affected system and/or component were accomplished.
- . Test results conformed with Technical Specification and procedure requirements.
- . Test results were reviewed by personnel other than the individual directing the test.
- . Deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The NRC inspector witnessed the following surveillance test activities. The procedures used for the test activities are noted.

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

- . Containment monitoring isolation valves (ISI-VA-1-F.1).
- . Process monitors (ST-RM-2-F.5).
- . Emergency diesel generator monthly test (ST-ESF-6-F.2).

The NRC inspector also reviewed the results of other surveillance tests performed during this inspection period. The review was performed to verify the tests were completed as required by the Technical Specifications, regulations, and procedure. No problems were noted with the 27 completed surveillance tests reviewed.

No violations or deviations were identified.

9. Review of Plant Procedures Program

The NRC inspector performed a review of the plant procedures program to verify overall plant procedures are in accordance with regulatory requirements, temporary procedures and procedure changes are made in accordance with Technical Specification requirements, and the technical adequacy of the reviewed procedures is consistent with desired actions and modes of operation. The review included the following items:

- . Procedure changes were made to reflect Technical Specification or license revisions.
- . Changes made to procedures were in conformance with 10 CFR Part 50.59 requirements.
- . Temporary procedures were properly approved and did not conflict with Technical Specification requirements.

The NRC inspector reviewed the procedures listed below:

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OP-1	Master Checklist for Startup or Trip Recovery	24
OP-3	Plant Startup from Hot Standby to Minimum Load	22
OI-SI-1	Safety Injection (Normal Operation)	34
OI-CH-1	Chemical and Volume Control System (Normal Operation)	12
OI-MS-2	Operating Instructions in Steam System Cold Startup	14
OI-RC-4	Reactor Coolant System Normal Shutdown	42

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.

OI-RPS-1	Reactor Protective System (Normal Operation)	7
AOP-6	Emergency Fire Procedure	0
AOP-18	Loss of Raw Water	0
AOP-1	Acts of Nature	0
AOP-7	Forced Evacuation of Control Room	0
OP-10-A1	Raw Water Supply Header Flow Low	8
G-17	Maintenance Orders	35
O-22	Containment Access & Egress	2
MP-CH-24	Letdown Strainer Cleanout	1
MP-IC-2	Incore Instrumentation Guide Tube Cleaning	1
MP-MS-1	Main Steam Safety Valve Inspection and Repair	11
MP-NOZDAM-1	Steam Generator Nozzle Dam Installation Procedure	2
MP-SCIV-1-B	Repacking of HCV-347 and HCV-348	1

No violations or deviations were identified.

10. Exit Interview

The NRC inspector met with Mr. R. L. Andrews and other members of the OPPD staff at the end of this inspection. At this meeting, the inspector summarized the scope of the inspection and the findings.

ENCLOSURE CONTAINS
SAFEGUARDS INFORMATION.
UPON SEPARATION THIS
PAGE IS DECONTROLLED.