

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

Report No. 50-298/78-13

Docket No. 50-298

License No. DPR-46

Licensee: Nebraska Public Power District
P. O. Box 499
Columbus, Nebraska 68601

Facility Name: Cooper Nuclear Station

Inspection At: Cooper Nuclear Station, Nemaha County, Nebraska
and Columbus, Nebraska Corporate Offices

Inspection Conducted: August 15-18, 1978

Principal Inspector: E. H. Johnson 8/25/78
E. H. Johnson, Reactor Inspector Date

Other Accompanying D. L. Kelley for 8/28/78
Personnel: D. L. Kelley, Reactor Inspector Date

Approved By: G. L. Madsen for 8/28/78
G. L. Madsen, Chief, Reactor Operations & Date
Nuclear Support Branch

Inspection Summary

Inspection on August 15-18, 1978 (Report No. 50-298/78-13)

Areas Inspected: Routine, unannounced inspection of operations review and audit program; Corporate office design change and document control practices; follow up on items of noncompliance; follow up on unresolved items and inspector identified open items; and follow up on IE Circular 78-08. The inspection involved twenty-two (22) inspector-hours on-site and twenty-three (23) inspector-hours at the Corporate offices by two (2) inspectors.

Results: Of the five areas inspected, no items of noncompliance or deviations were noted in two areas. Four items of noncompliance (Infraction - failure to record the type of inspection or observation and the results for quality

control inspections performed during maintenance activities, paragraph 4; Infraction - failure of the Safety Review and Audit Board to review certain activities as required by the Technical Specifications, paragraph 6; Infraction - failure to follow procedures in the review of design change documentation packages and failure to maintain those design change packages as required by internal document control procedures, paragraph 7; Infraction - failure to complete the required surveillance testing for mechanical vacuum pump isolation valves following maintenance, paragraph 8) were noted in three areas.

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DETAILS

Persons Contacted

Cooper Nuclear Station Personnel

L. F. Bednar, Electrical Engineer
R. Brungardt, Shift Supervisor
C. R. Noyes, Engineering Supervisor
*P. V. Thomason, Assistant to the Station Superintendent
M. G. Williams, Operations Supervisor

Corporate Office Personnel

*R. S. Kamber, Assistant General Manager
*L. G. Kunc1, Assistant General Manager
*B. A. Blatchford, Assistant General Manager
*J. M. Pilant, Director, Licensing & Quality Assurance
*R. E. Buntain, Director of Power Supply
*R. D. Boyle, Engineering Manager
*F. E. Williams, Quality Assurance Manager
*S. D. Anderson, Records Manager
J. S. Larson, Quality Assurance Engineer

*Present at the exit interview.

In addition to the above technical and supervisory personnel, the inspector held discussions with various maintenance, operations, technical support and administrative members of the licensee's staff.

1. Plant Status

During the period of this inspection, the plant was in routine power operation at approximately 95 percent power. The inspectors conducted a tour of the reactor building and no abnormal plant conditions were noted.

2. Follow Up on Previously Identified Items of Noncompliance

The purpose of this inspection effort was to review the licensee's corrective action for previously identified items of noncompliance. This review was made to determine that the on-site staff had received the licensee's response to the item of noncompliance and that responsibility for the corrective action had been assigned. Further, this review determined whether or not the corrective action and completion date committed to in the licensee's response letter to each item had been accomplished as described.

No items of noncompliance or deviations were noted during this review.

The following item of noncompliance was reviewed:

<u>Report</u>	<u>Item</u>	<u>Status</u>
78-07	Infraction B	Closed

3. Follow Up on Unresolved Items and Inspector Identified Open Items

Resolved. Unresolved Item 7715-5, Breaker and Fuse Lineups. The inspector discussed this item with the licensee representative who indicated that the appropriate sign-off blocks had been added to the breaker and fuse lineup sheets for essential systems. The inspector reviewed General Operating Procedure 2.2.9 for the core spray system and 2.2.67 for the reactor core isolation cooling system. Appendix C of each of these procedures contained the breaker and fuse lineup checklist and the inspector noted the appropriate sign-offs had been included.

Resolved. Unresolved Item 7810-3, Hydraulic Snubber MS-S-76. The licensee had evaluated the installation of this snubber and determined it to be satisfactory. The licensee's engineering supervisor indicated that the concrete fastener apparently had been knocked aside by a reinforcing bar upon installation. However, the mounting plate is firmly attached to the bulkhead.

Resolved. Unresolved Item 7710-1, QC Inspection of Maintenance. This item has been upgraded to an item of noncompliance. See paragraph 4 below.

Closed. Reference IE Report 78-07, Details, paragraph 5. Revision 2 to the licensee's policy document for compliance to 10 CFR 21 has been issued to resolve the apparent discrepancies.

The following unresolved and open items were reviewed, however, were not closed out. Their status is indicated below.

Unresolved Item 7802-2, Procedures for Primary Containment Access. The licensee has not yet issued the access procedure and this item remains unresolved.

Unresolved Item 7810-2, Corrective Action on NCR 1428. Minor design change 78-28 has been issued for the addition of air line lubricators for the mechanical vacuum pump isolation valves and Malfunction/Work Request 78-7-104 has been issued for the installation of the minor design change, however, the work has not yet been completed. This item remains unresolved.

Reference IE Report 77-15, Details, paragraph 12. The licensee has compiled a list of all valves identified in the FSAR as locked valves and has placed lock wires on them. However, no formal procedure governing control of locked valves has yet been issued. This item remains open.

Reference IE Report 78-07, Details, paragraph 5. The licensee has not yet changed Administrative Procedure 1.10 to delete the reference to the Station Superintendent as the "designated responsible officer." This item remains open.

4. Quality Control of Maintenance Activities

The objective of this inspection effort was to review recently completed essential maintenance activities to determine if the licensee had instituted proper quality control over these activities.

Section 4.1.1 of the licensee's Quality Assurance Manual specifies the requirements for quality control inspection and states in part, "The QC inspectors shall identify the specific work which is to be subject to inspection or verification and shall provide, in detail, the elements of work to be inspected which include:

- "1. Identity of the inspector data recorder
- "2. Type of inspection or observation
- "3. Results (data to be recorded)
- "4. Acceptance (qualitative or quantitative) criteria"

The inspector selected the below listed essential Malfunction/Work Requests (MWR) that had been completed during the previous two months to determine that the above quality control inspections were conducted as required.

<u>System</u>	<u>MWR</u>
Control Rod Drive	78-7-49 78-7-36
Diesel Generator	78-8-53
High Pressure Coolant Injection	78-6-10
Residual Heat Removal	78-7-196 78-7-162 78-7-86

Section 4 of each of the above essential MWR's indicated that quality control inspection was required. However, the inspector noted that none of the above MWR's contained any indication as to what was inspected or the results of the inspection. The only indication that quality control activities had occurred for these maintenance activities was a signature in Section 6 of the MWR indicating, "Quality Control Inspection Completed."

Criterion XVII of Appendix B to 10 CFR 50 requires in part, "Inspection and test records shall, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted" This criterion is amplified in Section 2.17 and Section 4.1.1 of the licensee's Quality Assurance Program, the latter section (quoted above), details the specific items to be recorded.

The failure to record the type of observation and the results of the quality control inspections for the above essential maintenance activities is contrary to these requirements. This item is an infraction.

No other items of noncompliance or deviations were noted in this area.

5. Follow Up on IE Circular 78-08

On May 31, 1978 the NRC issued IE Circular 78-08, "Environmental Qualification of Safety Related Electrical Equipment at Nuclear Power Plants." This Circular detailed some specific deficiencies that have been noted with regard to the environmental qualification of electrical components and requested that each licensee determine the status of the qualification of electrical components at its facility.

The inspector discussed this Circular with licensee's engineering staff and determined that the licensee was aware of the contents of IEC 78-08. A program for verification of electrical components had not yet been undertaken as the licensee's engineering staff was actively engaged in two significant plant modifications. Following these modifications the verification program indicated in IEC 78-08 would be commenced. The inspector had no further questions on this matter at this time and indicated that this item would be followed up on during future inspections.

6. Review and Audit

The objective of this inspection effort was to ascertain whether the review activities of the licensee's off-site review committee (Safety Review and Audit Board - SRAB) were in conformance with the

Technical Specifications. This completes the inspection effort begun in inspection 78-09 (reference IE Report 50-298/78-09, Details, paragraph 3) of the licensee's review and audit program.

The inspector reviewed the following licensee records:

SRAB Audit Reports

Conformance with Regulations Involving Nuclear Safety and Operating Licenses Provisions - March 13, 1978

Major Maintenance and ISI - February 9, 1978

Minor Design Change/Design Change File Audit - July 26, 1977

Physical Security Plan - January 11, 1978

Fuel Handling and Accountability - December 21, 1977

Industrial Safety Follow Up Audit - October 17, 1977

SRAB Review Files

Licensee Event/Nonconformance Status Reports -
May 1977 through July 1978

Station Operations Review Committee Meeting Minutes
Review File - May 1977 through July 1978

Licensee Event Report Review File - May 1977 through
July 1978

IE Inspection Report Review File - May 1977 through
July 1978

The review responsibilities of the SRAB are delineated in Technical Specification 6.2.B.4. The SRAB review of the activities described in this Technical Specification is accomplished by routing the material to SRAB members who indicate on the routing sheet whether they desire a discussion of the item at the next SRAB meeting.

Among the items requiring SRAB review in accordance with the above Technical Specification are the following:

- "a. The safety evaluation for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of Section 50.59, 10 CFR, to verify that such actions did not constitute an unreviewed safety question.

. . .

"e. Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having safety significance.

. . .

"i. Minutes of meetings of the Station Operations Review Committee to determine if matters considered by the committee involve unreviewed safety questions or changes to the operating license.

. . .

"l. Security and emergency plans and their implementing procedures.

. . .

"o. Review of events covered under e, . . . above include reporting to appropriate members of management on the results of investigations and recommendations to prevent or reduce the probability of recurrence."

In review of the SRAB meeting minutes and SRAB review files, the inspector could find no indication that the following activities had been reviewed:

- a. SORC Meeting Minutes for meetings number 141 and 142.
- b. SRAB review of the security plan and of the revision to the emergency plan.
- c. The safety evaluations for minor design changes to essential systems that were completed under the provisions of 10 CFR 50.59.
- d. The licensee's response to items of noncompliance identified in IE inspection reports. Such responses constitute the licensee's investigation and recommendations to prevent or reduce the probability of recurrence.

The inspector discussed these items with a licensee representative who indicated that some of the above material was routinely routed to SRAB members. However, no formal system was in effect to allow SRAB members to indicate that they wish to review these matters in the committee meetings as required by the Technical Specifications.

The inspector indicated that the failure of the SRAB to review the above indicated activities constituted an item of noncompliance.

No other items of noncompliance or deviations were identified in this area.

7. Corporate Office Design Change and Document Control Practices

The objective of this inspection effort was to review the design change and document control practices in effect at the Corporate office to determine if they were in compliance with the requirements of the Quality Assurance Program.

The inspector reviewed the below listed minor design change and design change packages in this inspection effort:

<u>MDC/DC No.</u>	<u>Title</u>
MDC 77-94	Neutron Monitoring Bypass Switch
MDC 77-100	CRD Return Line Nozzle Capping
MDC 77-103	HPCI Control Valve Lift Rod
DC 77-01	Spent Fuel Pool Modification
MDC 77-130	Blind Flanges on Scram Discharge Header
MDC 78-05	ADS Logic Change
MDC 78-28	Control Air Line Modification

The following licensee procedures that govern the control of design changes and completed design change record packages were reviewed by the inspector:

GEP-11 "Design Control"

QAP-1700 "Quality Assurance Plan - Design Changes
(Major and Minor)"

QAI-7 "Quality Assurance Records - Retention, Storage and
Disposition"

In review of the above indicated design change and minor design change packages, the inspector noted the following areas where the requirements of the above procedures and the licensee's Quality Assurance Program were not followed:

- a. There was no indication that a Quality Assurance Department review of completed design change packages had been conducted. Such a review is required by Section 6 of QAP-1.
- b. The Corporate Engineering Department maintains an active file of major and minor design change packages. This active file contained all design change packages for the years 1975, 1976, 1977 and 1978. QAI-7 specifies that the active file may contain completed design changes for one year, after which time they are to be sent to the document control center for storage.
- c. The Corporate office files of design changes and minor design changes do not contain a copy of the "as accomplished" design change or minor design change procedure. The licensee's Quality Assurance Program, Section 2.6, requires a redundant record file at the Corporate office.

Criterion V of Appendix B to 10 CFR 50 requires that activities affecting quality be accomplished in accordance with instructions, procedures or drawings. This requirement is amplified by the licensee's Quality Assurance Program, Section 2.5.

The failure to handle design change packages in accordance with the requirements of QAP-1700, QAI-7 and the Quality Assurance Program constitutes an item of noncompliance with the requirements specified immediately above.

No other items of noncompliance or deviations were noted in this area.

In his review of GEP-11, the inspector noted that Section 6.0 of this procedure conditionally requires that revisions to design changes that were originally approved by SRAB and the NRC may be reviewed by the Station Operations Review Committee (SORC). The inspector was informed that all design change revisions are reviewed by the SORC. The inspector indicated that the conditional requirement for SORC to review revisions to design changes as specified in GEP-11 is not in accordance with Criterion III to 10 CFR 50, Appendix B, which requires that design changes be reviewed by the organization that performed the original design unless the licensee designates another responsible organization. In any case, a review of the revision is mandatory. A licensee representative indicated that GEP-11 would be changed to indicate the actual practice employed for design changes. This item will remain unresolved pending review of revised procedure (Unresolved Item 7513-1).

8. Surveillance Testing of AR Valves

On April 15, 1978, during the performance of surveillance procedure 6.2.7.1, "Mechanical Vacuum Pump Isolation Logic - Functional Test," the licensee noted that the valves AR 153AV and AR 154AV failed to shut. This licensee event (LER 78-18) was followed up on inspection 78-10, during which time the inspector noted that the licensee had not yet completed the minor design change to install air line lubricators as part of the corrective action. This item was identified as an unresolved item (Unresolved Item 7810-2) and LER 78-18 was left open.

During this inspection, the inspector reviewed the maintenance performed on these valves and the status of the modifications to their operators.

The inspector noted that following the maintenance on the mechanical vacuum pump isolation valves, the valves were "functionally" tested by exercising them via the control room control switch. The inspector could find no evidence that Surveillance Procedure 6.2.7.1 was rerun either in whole or part to verify the isolation logic through to actual valve isolation. The control room control switch is parallel to the isolation logic.

Technical Specification 4.2.D requires that the mechanical vacuum pump isolation logic be functionally tested once per operating cycle. This specification is satisfied by the performance of Surveillance Procedure 6.2.7.1.

The failure to rerun the appropriate portion of SP 6.2.7.1 following repair of the valves AR 153AV and AR 154AV thus constitutes a failure to perform the isolation logic test as required by TS 4.2.D. This is an infraction.

9. Unresolved Items

Unresolved Items are matters about which more information is required to ascertain whether they are acceptable items, items of noncompliance or deviations. The following unresolved item was identified during this inspection.

7813-1 Requirements for Review of Revised Design Changes

(paragraph 7)

10. Exit Interview

The inspectors met with the Assistant to the Station Superintendent at the conclusion of the inspection activities conducted at the Cooper Nuclear Station. The scope of the inspection and the findings above were discussed. The Assistant to the Station Superintendent acknowledged the findings relative to the items of noncompliance detailed above. The inspectors met with the Assistant General Manager, Power Production, and other members of the licensee's staff following the conclusion of inspection activities conducted at the Corporate office. The scope of the inspection and the findings above were discussed. The licensee representatives present at the exit interview acknowledged the findings relative to the items of noncompliance and unresolved item detailed above and indicated that these items would be reviewed and the appropriate corrective action initiated.