

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

Report No. 50-298/78-17

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

Inspection Conducted: October 2-5, 1978

Principal
Inspector:

E. H. Johnson

E. H. Johnson, Reactor Inspector

10/27/78
Date

G. L. Constable
G. L. Constable, Reactor Inspector

10/27/78
Date

Approved By:

G. L. MacKen
G. L. MacKen, Chief, Reactor Operations &
Nuclear Support Branch

10/27/78
Date

Inspection Summary

Inspection on October 2-5, 1978 (Report No. 50-298/78-17)

Areas Inspected: Routine, unannounced inspection of offgas system; requalification training program; safety limits, limiting safety system settings and limiting conditions for operation; maintenance activities; and follow up on IE Circular 78-08. The inspection involved thirty-nine (39) inspector-hours on-site by two (2) NRC inspectors.

Results: Of the five areas inspected, no items of noncompliance or deviations were noted in three areas. Two items of noncompliance (Infraction - failure to follow the locked valve procedure for the control of valves in the standby liquid control system, paragraph 5; Deficiency - failure to schedule requalification lectures for licensed operators as required by the requalification program, paragraph 4) were noted in two areas.

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DETAILS

Persons Contacted

P. L. Ballinger, Reactor Engineer
L. F. Bednar, Electrical Engineer
P. J. Borer, Technical Assistant to the Station Superintendent
R. D. Creason, Shift Supervisor
W. F. Gilbert, Training Coordinator
L. C. Lessor, Station Superintendent
D. E. Mayer, Mechanical Engineer
E. R. Noyes, Engineering Supervisor
J. L. Peaslee, Shift Supervisor
R. W. Seier, Quality Assurance Supervisor
*P. V. Thomason, Assistant to the Station Superintendent
M. G. Williams, Operations Supervisor

*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 90% power. The inspectors conducted a walk-through of accessible areas of the plant. Several minor material discrepancies were noted and brought to the attention of the Shift Supervisor.

The inspectors noted that walk-through radiation monitors are installed in various locations of the plant where radioactive contamination is possible. However, these monitors did not appear to be regularly used by Station personnel when leaving such areas. The inspectors discussed this item with the Assistant Station Superintendent at the exit interview and expressed their concern that there does not appear to be clear guidance on the use of these walk-through radiation monitors.

2. Review of Offgas System

The objective of this inspection effort was to review the design, operation, maintenance, and installation of the offgas system in response to a request from NRC IE Headquarters for this information.

The specific items reviewed were the physical location and installation of offgas system piping and components, system controls, loop seals, ventilation and gas monitors associated with the offgas piping areas

and licensee procedures for conducting maintenance on offgas piping and handling abnormal conditions with the offgas system.

No items of noncompliance or deviations were noted in this area. The information gathered in this portion of the inspection has been forwarded to NRC IE Headquarters.

3. Environmental Qualification of Safety-Related Electrical Equipment

The objective of this inspection effort was to review the licensee's action on IE Circular 78-08, "Environmental Qualification of Safety-Related Electrical Equipment."

The licensee has received all the reference material associated with this Circular and has assigned responsibility to the Quality Assurance Supervisor for reviewing the references and assembling the available on-site documentation to support the environmental qualification of safety-related electrical equipment. The QA Supervisor is being assisted by the on-site engineering staff. A formal schedule for completion of the review has not been established, but a licensee representative indicated to the inspector that review should be substantially completed by December 1, 1978. The inspector noted that the licensee has not yet established any areas requiring corrective action.

The inspector indicated that this area would receive further follow-up during subsequent inspections.

4. Requalification Training

The objective of this inspection effort was to ascertain whether the licensed operator requalification training program is effective and in conformance with regulatory requirements.

The inspector reviewed the ongoing requalification training program including the following training records.

- Annual Examination for 1978
- Lecture Schedule
- Attendance Records
- Records of On-the-Job Training
- Records of Control Manipulations
- Records of Supervisory Evaluations

The annual requalification examination was given in March 1978. The average grade was 91.6%. The lowest average grade was 88%. Five individuals made less than 80% but greater than 70% on individual sections of the exam. Attendance at the requalification lecture

series is generally required of all licensed operators and senior operators. All training is conducted at the senior operator level of understanding. The lectures are given at random intervals during the year as plant workload permits when two or more operators and an instructor are available. As of the date of the inspection, eleven lectures were listed on the attendance record. The Training Coordinator stated that additional lectures were planned for later in the year.

Within the scope of this inspection effort one item of noncompliance was identified.

The operator and senior operator requalification program for Cooper Nuclear Station requires that an annual written examination be given to all licensed operators and senior operators to determine areas in which requalification training is needed. A planned lecture series is required where the annual examination indicates a need for additional training. A minimum grade of 80% on each section is needed to exempt an operator or senior operator from required attendance at the lecture on that section. Contrary to the above, five individuals made less than 80% (but greater than 70%) on four sections of the annual exam, yet lectures on these sections were not scheduled nor was there any indication of a requirement for these five individuals to attend the required lectures.

Prior to the completion of the inspection, the inspector was presented with a revised requalification schedule that was expanded to include lectures on the required subjects and indicated the required attendance at these lectures. Since this constitutes the corrective action for this item, no written response will be necessary for this noncompliance. The completion of the required training by the licensed personnel noted above will be reviewed during a future inspection.

5. Standby Liquid Control System Valves

During this inspection the inspector conducted a walk-down of the standby liquid control system to determine that system valves were in the proper start positions. The inspector noted that valve SLC-10, Standby Liquid Control Outlet Valve, from the storage tank was not lock-wired open as required by Process and Instrument Drawing 2045. A broken lock wire was found in the vicinity of this valve. A check of the Valve Seals Log (Attachment E to Procedure 1.4) indicated that valve SLC-10 was to have been lock-wired open with the serialized lead seal lock wire noted by the inspector. The check of the Shift Supervisor's Log revealed that on September 25, 1978 a surveillance procedure had been performed on the Standby Liquid Control System which required the removal of the valve seal on SLC-10; however, the

valve was not resealed following completion of the surveillance test. Procedure 1.4 requires that whenever a seal is broken for any reason, the Shift Supervisor be notified and the seal returned to him. He will then update the valve seals log and ensure that the valve is resealed when returned to its normal position.

Criterion V to 10 CFR 50, Appendix B, requires that activities affecting quality be prescribed by written approved procedures and that these activities be accomplished in accordance with these procedures. This requirement is amplified in the licensee's Quality Assurance Manual, Section 2.5.

The failure to control the removal and reinstallation of the valve seal on valve SLC-10 is contrary to the requirement stated above and is an item of noncompliance.

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

During the above review of valves in the Standby Liquid Control System, the inspector noted that valve SLC-28 did not have a "locked closed" tag on the valve, nor was the valve lock-wired. Process and Instrumentation Drawing 2045 indicates that the valve is locked closed. This apparent discrepancy was brought to the attention of the Shift Supervisor who entered the valve in the Valve Seals Log and issued a lock wire for the valve in accordance with the procedure.

6. Safety Limits, Limiting Safety System Settings, Limiting Conditions for Operation

The objective of this inspection effort was to review the licensee's adherence to Technical Specification requirements for safety limits, limiting safety system settings and limiting conditions for operation. The inspector reviewed licensee procedures, records of calibration, recorder charts, selected maintenance activities, records of completed surveillance tests and conducted inspections of selected safety systems to determine conformance to Technical Specification requirements.

The Technical Specification items reviewed are indicated below.

<u>Requirement</u>	<u>TS</u>	<u>Items Reviewed</u>
MCPR \geq 1.07	1.1.A	P-2 computer printouts 9/1/78 through 10/4/78
LPRM Operability	3.1.1	Same as above

<u>Requirement</u>	<u>TS</u>	<u>Items Reviewed</u>
SBLC Operability	3.4	1978 maintenance activities on SBLC Visual inspection of SBLC system valves Selected SBLC system surveillance test records
Reactor Heatup Rate $\leq 100^{\circ}\text{F/hr}$	3.6.A.1	Recirculation temperature recorder charts 5/1-4/78 & 5/31/78
Reactor Periods on Startup	6.2.7.A.4	Source range/intermediate range level recorders 5/1-4/78 & 5/31/78
LCO for Recirculation Pump Startup	3.6.A.5	GOP 2.1.15 data sheet dated 10/1/78
HPCI System Lineup for Standby	3.5.C	Valve and switch lineup on control room panel
Core Spray System Lineup for Standby	3.5.A	Valve and switch lineup on control room panel
Operability of SW Subsystems with Inoperable Service Water Pump	3.12.C.2	SP 6.3.18.1 data sheet dated 10/2/78 to verify operability of remaining SW pumps
Operability of Diesel Generator & associated ECCS Components with one Diesel Out-of-Service	3.5.F	Surveillance procedure data sheets to verify remaining diesel and associated ECCS Components operable for period 9/12-15/78
Diesel Generator Lineup for Standby	3.9.A.2	Inspection of diesel generator and control room panels for normal lineup and system parameters

No items of noncompliance or deviations were noted in this area, except as described in paragraph 5 above.

7. Source Range Indications for Startup

During the review of source range level of recorder charts for reactor startups performed on May 1, 1978, the inspector noted the following discrepancies which were discussed with the Assistant Station Superintendent at the exit interview.

Upon reviewing the source range level recorder chart the inspector noted that the only annotations contained on this chart were the time the chart was put on and removed from the recorder. Such other information as time of reactor criticality, and shifting recorder speeds from slow to fast were not recorded. The inspector expressed his concern that the lack of such information on recorder charts prevents any adequate reconstruction of events. The Assistant to the Station Superintendent indicated that the necessity of properly annotating recorder charts would be stressed to operating personnel. This item will remain unresolved pending review of licensee's actions on this matter. (Unresolved Item 7817-1)

The source range recorder chart is a two panel recorder, each panel capable of recording either of the two source range channels. It was noted that during the training criticals being performed on May 1, 1978, at approximately 0800, one of the two source range level recorder pens was not recording. Chart indications show that one of the two pens was stuck. The inspector expressed his concern that this condition was not noted by the operating staff for some period of time, although training criticals were in progress. The inspector reviewed the licensee's procedures for reactor startup and determined that there are no administrative controls to ensure that monitoring instrumentation is recording as required. The Assistant to the Station Superintendent indicated that this item would be reviewed. This item will remain unresolved pending results of the licensee's review. (Unresolved Item 7817-2)

8. Maintenance

The objective of this inspection effort was to review the qualification of selected maintenance personnel to determine that these personnel were adequately prepared to perform safety-related maintenance by virtue of previous experience or training provided by the licensee.

The general requirements for such training are contained in ANSI Standard 18.7-1972.

The inspector reviewed the personnel records and training records for selected maintenance personnel. No items of noncompliance or deviations were noted in this area.

9. Unresolved Items

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

7817-1 Recorder Chart Annotation (paragraph 7)

7817-2 Operability of Instrumentation Recorders (paragraph 7)

10. Exit Interview

The inspector met with the Assistant to the Station Superintendent at the conclusion of the inspection. The scope of the inspection and the findings were discussed. The Assistant to the Station Superintendent acknowledged the findings relative to the items of noncompliance, and unresolved items detailed above and indicated that these items would be reviewed and corrected. The inspector indicated that the corrective action had been reviewed for the item of noncompliance noted in paragraph 4 above and no further response would be required for this item.