



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

September 27, 1999

J. H. Swailes, Vice President of
Nuclear Energy
Nebraska Public Power District
P.O. Box 98
Brownville, Nebraska 68321

SUBJECT: COOPER NUCLEAR STATION INSPECTION REPORT 50-298/99-07

Dear Mr. Swailes:

This refers to the inspection conducted July 18 through August 28, 1999, at the Cooper Nuclear Station. The enclosed report presents the results of this inspection.

The inspectors examined activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspectors examined a selection of procedures and representative records, observed activities, and conducted interviews with personnel. Specifically, the inspectors focused on the implementation of your reactor safety and emergency preparedness programs. During this inspection, the inspectors did not identify any significant findings.

The results of this inspection were discussed on August 26, 1999, with you and other members of your staff.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/s/

Charles S. Marschall, Chief
Project Branch C
Division of Reactor Projects

Docket No.: 50-298
License No.: DPR-46

Enclosure:

NRC Inspection Report
50-298/99-07

cc w/enclosure:

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-298
License No.: DPR-46
Report No.: 50-298/99-07
Licensee: Nebraska Public Power District
Facility: Cooper Nuclear Station
Location: P.O. Box 98
Brownville, Nebraska
Dates: July 18 through August 28, 1999
Inspectors: M. Miller, Senior Resident Inspector
M. Hay, Resident Inspector
G. Pick, Sr. Project Engineer, Project Branch E
W. Sifre, Resident Inspector, South Texas Project
R. Azua, Project Engineer, Project Branch B
Approved By: Charles S. Marschall, Chief, Project Branch C

ATTACHMENT: Supplemental Information

SUMMARY OF FINDINGS

Cooper Nuclear Station NRC Inspection Report 50-298/99-07 (DRP)

The report covers a 6-week period of baseline resident inspection.

The body of the report is organized under the broad categories of Reactor Safety, Emergency Preparedness, and Other Activities as listed in the summaries below.

No significant findings.

Report Details

The plant operated at 100 percent power, except for a routine downpower of about 3 percent to shift the control rod pattern.

1. REACTOR SAFETY

1R01 Adverse Weather Preparations

a. Inspection Scope

The inspectors reviewed the licensee's procedures for addressing adverse weather (specifically high wind conditions including tornados) to limit the risk of weather-related initiating events and to adequately protect mitigating systems from adverse weather-related effects.

b. Observations and Findings

The inspectors did not identify any findings during this inspection.

1R03 Emergent Work

a. Inspection Scope

On July 14 and August 19, inspectors observed emergent work to replace selected cells of the 125 Vdc and 250 Vdc batteries. Special Procedure SP 99-004, dated July 14, 1999, controlled the work. The 125 Vdc battery cell voltage had dropped to less than Technical Specification voltage requirements.

b. Observations and Findings

Although the inspectors did not identify any findings, they observed several problems relating to the quality of work associated with the cell replacement.

After workers started cell replacements, inspectors observed that the additional battery cells in parallel did not have their cell terminals covered (protected) like the installed 125 Vdc battery cells in the work area. The cells rested on the floor, behind and within 12 inches of electricians performing degraded cell removal and replacement. After the inspector questioned the vulnerability of the terminals, workers covered the terminals with protective rubber mats in a manner similar to the installed 125 Vdc battery.

Although the Station Operations Review Committee received assurances that a prejob walkdown would ensure all torque wrenches and other necessary tools were at the job site before work began, the torque wrench for seismic restraint reassembly was not specified before start of the work.

The electricians moved ahead in the maintenance instruction, as allowed by administrative procedure, leaving the seismic restraint step incomplete. Workers consulted the engineer

for each step taken out of order, except the step where electricians intended to take intercell voltage readings before disconnection of the parallel cell jumpers. As electricians proceeded with the step to measure intercell voltage, the inspector recognized the reading may not indicate valid voltage, thus invalidating comparison with the acceptance criteria. The inspector asked the job supervisor if the engineer had been consulted. The engineer recognized the vulnerability when asked and did not allow the voltage reading step to be conducted before the parallel circuit jumpers were removed. The inspectors concluded that, although procedures allowed performing steps out of order, maintenance personnel did not take sufficient action to ensure a valid test until questioned by the inspectors.

1R04 Equipment Alignments

a. Inspection Scope

The inspectors performed a complete walkdown of the reactor core isolation cooling system. The inspectors performed the complete walkdown, as described in the semiannual equipment alignment module, of the reactor core isolation cooling system, using plant procedures which indicated system lineups required for operability at power. The inspectors reviewed surveillance tests and work history to verify that the system had been maintained consistent with requirements intended to ensure it would perform its design function if called upon. The inspectors also performed a partial walkdown of the 125 V/250V dc System. The inspection included a review of the component alignments designated in System Operating Procedures 2.2.24, "250 VDC Electrical System," and 2.2.25, "125 VDC Electrical System." The inspectors verified correct component alignments during the inspection using the procedures checklists.

b. Observations and Findings

The inspectors did not identify any findings during this inspection.

1R05 Fire Protection

a. Inspection Scope

Inspectors performed fire protection walkdown on the control room, cable spreading room, vital switchgear room, diesel generator rooms, and turbine lube oil storage room.

b. Observations and Findings

The inspectors did not identify any findings during this inspection.

1R06 Flood Protection

a. Inspection Scope

Inspectors reviewed Procedure 2.4.8.7, "Turbine Building Basement Flooding," Revision 1, which responds to a turbine building flooding scenario. This procedure was developed in response to unexpected through-wall leakage on a 2.5 foot diameter unisolable turbine equipment cooling discharge pipe in June 1998. After the licensee evaluated electrical circuits, the licensee concluded that, although a plant shutdown would be required due to feed pump and other power generation equipment and electrical faults, no mitigation equipment would be affected and therefore no significant risk would be expected due to turbine building flooding.

b. Observations and Findings

The inspectors did not identify any findings during this inspection.

1R09 Inservice Testing

a. Inspection Scope

The inspectors observed the following inservice tests:

- Procedure 6.2CS.101, "Core Spray Test Mode Surveillance Operation (DIV 2) (IST)," Revision 11
- Procedure 6.PC.201, "Primary Containment Isolation Power Operated Valve Operability and Closure Timing Test (IST)," Revision 9C3

b. Observations and Findings

Testing was adequate to verify compliance with code requirements. All components met the acceptance criteria. There were no findings identified during this inspection.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed equipment conditions related to the diesel generators and Train B reactor equipment cooling.

Specifically, the following Maintenance Rule functions were reviewed:

- a. DG-PF01a Provide Train A emergency diesel power to plant equipment required for safe shutdown of the plant in emergencies
- b. DG-PF01b Provide Train B emergency diesel power to plant equipment required for safe shutdown of the plant in emergencies

- c. EC-PF01b Provide cooling to the core standby cooling areas and the residual heat removal pump bearing and seal water coolers

- b. Observations and Findings

The inspectors did not identify any findings during this inspection.

1R15 Operability Evaluations

- a. Inspection Scope

The inspectors discussed the operability evaluation of Cell 87, which had exhibited a severe failure at the start of an as-found bench test. In addition, the inspectors reviewed Operability Evaluation 4-02287, Revision 0, evaluation of the effects of thermally induced pressure locking on Valve HPCI-MO58 (high pressure coolant injection motor-operated isolation valve for suction from the suppression pool).

- b. Observation and Findings

The inspectors did not identify any findings during this inspection.

1R16 Operator Workarounds

- a. Inspection Scope

The inspectors reviewed Operating Instruction 15, "Operator Work Arounds and Operations Priority Items," Revision 6. The inspectors reviewed temporarily installed Auxiliary River Temperature Indicator MI-TI-ART and associated Problem Identification Report 4-03830 to determine if the licensee had appropriately evaluated the conditions and determined if they should be tracked as operator workarounds.

- b. Observations and Findings

The inspectors did not identify any findings during this inspection.

1R19 Postmaintenance Testing

- a. Inspection Scope

The inspectors observed and evaluated postmaintenance tests to determine whether the tests confirmed equipment operability:

- local leak rate test for Valve PC-247AV, outboard postaccident sampling system drywell atmosphere sampling isolation;

- verification of individual cell voltage, specific gravity, electrolyte level, and intercell connection resistance for Train A 250 Vdc Battery Cells 47 and 48; and
- logic and electrical connector testing for Valve SW-MO-650, the reactor equipment cooling Heat Exchanger A outlet valve.

b. Observations and Findings

The inspectors did not identify any findings during this inspection.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed surveillance tests and reviewed test data to verify that the licensee continued to maintain operability of high risk systems. The following surveillance tests were reviewed:

- Procedure 6.2DG.101, "Diesel Generator 31 Day Operability Test (DIV 2) (IST)," Revision 14, C5
- Lack of guidance to comply with limiting condition for operation "greater than 2 gpm increase in unidentified drywell leakage"
- Surveillance Procedure 6.HPCI.317, "HPCI Overspeed Hydraulic Reset Timing Calibration and Functional Test"

b. Observations and Findings

The inspectors did not identify any findings during this inspections.

Emergency Preparedness

1EP1 Drill, Exercise, and Actual Events

a. Inspection Scope

During the emergency drill on August 11, 1999, inspectors observed selected drill activities and critiques in the control room simulator, emergency operating facility, and technical support center. Inspectors reviewed classification and protective action recommendations and critique findings.

b. Observations and Findings

The inspectors did not identify any findings during this inspection.

4. OTHER ACTIVITIES

4OA4 Other

a. Inspection Scope

The staff conducted an abbreviated review of Y2K activities and documentation using Temporary Instruction 2515/141, "Review of Year 2000 (Y2K) Readiness of Computer Systems at Nuclear Power Plants."

b. Observations and Findings

The review addressed aspects of Y2K management planning, documentation, implementation planning, initial assessment, detailed assessment, remediation activities, Y2K testing and validation, notification activities, and contingency planning. The reviewers used NEI/NUSMG 97-07, "Nuclear Utility Year 2000 Readiness," and NEI/NUSMG 98-07, "Nuclear Utility Year 2000 Readiness Contingency Planning," as the primary references for this review.

The results of this review were combined with the results of other reviews in a summary report issued in August 1999.

4OA5 Meetings (Including Exit Meeting)

The inspectors presented the inspection results to Mr. Swailes and other members of licensee management at the conclusion of the inspection on August 26, 1999. The licensee acknowledged the findings presented. The licensee did not consider proprietary any material examined during the inspection.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Boyce, System Engineering Manager
J. Burton, Performance Analysis Department Manager
P. Caudill, Technical Services Senior Manager
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E. Jackson, Operations Support Group Specialist
L. Kohles, Maintenance Manager
J. McDonald, Plant Manager, in training
L. Newman, Licensing Manager
M. Peckham, Plant Manager
J. Peters, Licensing Secretary
B. Rash, Senior Manager of Engineering
A. Shiever, Operations Manager
J. Sumpter, Nuclear Licensing and Safety Supervisor
J. Swailes, Vice President, Nuclear Energy
R. Wachowiak, Risk Management Supervisor
R. Zipfel, Emergency Preparedness Manager

LIST OF ACRONYMS AND INITIALISMS USED

CFR	Code of Federal Regulations
LER	licensee event report
NCV	noncited violation
NRC	U.S. Nuclear Regulatory Commission
Y2K	Year 2000