

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-298/83-15

License: DPR-46

Docket: 50-298

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

Facility Name: Cooper Nuclear Station (CNS)

Inspection At: Cooper Nuclear Station, Nemaha County, Nebraska

Inspection Conducted: June 1-30, 1983

Inspector:

D. L. DuBois  
D. L. DuBois, Senior Resident Inspector (SRI)

7/6/83  
Date

Approved:

T. F. Westerman  
for T. F. Westerman, Chief  
Reactor Project Section A

7/11/83  
Date

Inspection Summary

Inspection Conducted June 1-30, 1983 (Report 50-298/83-15)

Areas Inspected: Routine, announced inspection of operational safety verifications, monthly surveillance and maintenance observations, licensee event followup, follow up of IE Bulletins, and independent inspection effort. This inspection involved 83 inspector-hours onsite by one NRC inspector.

Results: Within the areas inspected, no violations or deviations were identified.

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PDR ADOCK 05000298  
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DETAILS1. Persons ContactedPrincipal Licensee Employees

\*P. Thomason, Acting Plant Superintendent  
 \*K. Wire, Operations Supervisor  
 V. Wolstenholm, QA Supervisor  
 J. Sayer, C & HP Supervisor  
 J. Meacham, Engineering Supervisor  
 L. Lawrence, Maintenance Supervisor  
 R. Brungardt, Surveillance Planner  
 D. Majeres, Maintenance Planner  
 L. Bednar, Electrical Engineer  
 G. Mace, Mechanical Engineer

General Electric (GE)

R. Kopriva, GE Site Manager  
 G. Craigo, GE Field Supervisor

\*Indicates presence at exit meetings.

2. Operational Safety Verification

The SRI observed control room operations, instrumentation, controls, reviewed applicable logs, and conducted discussions with control room operators. The SRI verified operability of:

"A" Residual Heat Removal System (Shutdown Cooling)  
 Numbers 1 and 2 Emergency Diesel Generators  
 Standby Liquid Control System

The SRI performed additional system line-up verifications in the primary containment and steam tunnel areas which are normally inaccessible for entry during power operation conditions. The SRI compared the as-found system line-ups with the licensee's system checklists and flow diagrams. No significant discrepancies were identified during the comparison. The following line-ups were performed:

Residual Heat Removal System  
 Main Steam System  
 Reactor Water Cleanup System  
 Reactor Core Isolation Cooling System  
 High Pressure Coolant Injection System  
 Reactor Building and Drywell Equipment Drain System  
 Reactor Building and Drywell Floor Drain System  
 Core Spray System  
 Standby Liquid Control System  
 Service and Control Air Systems

The SRI reviewed safety clearance records, including verification, that affected components were removed from and returned to service in a correct and approved manner, that redundant equipment was verified operable, and that limiting conditions for operation were adequately identified and maintained. The SRI also verified that maintenance requests had been initiated for equipment discovered to require repair or routine preventive upkeep, appropriate priority was assigned, and maintenance commenced in a timely manner commensurate with assigned priorities.

Tours of accessible areas of the facility were conducted to observe normal security practices, plant and equipment conditions including cleanliness, radiological controls, fire suppression systems, emergency equipment, potential fire hazards, fluid leaks, excessive vibration, and instrumentation adequacy.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established in the Technical Specification, 10 CFR, and administrative procedures.

No violations or deviations were identified in this area.

### 3. Monthly Surveillance Observations

The SRI observed Technical Specification required surveillance tests to verify that minimum shift crew requirements were met, test prerequisites were completed, testing was performed in accordance with approved procedures, test instrumentation was in calibration, limiting conditions for operations were met, removal and subsequent restoration of affected components was accomplished, test results conformed with Technical Specification and procedure requirements, tests were reviewed by personnel other than the person directing the test, and deficiencies identified during testing were properly reviewed and resolved by appropriate management personnel.

The following Surveillance tests were selected and observed:

- 2.1.18 - Control Rod Drive Friction Test
- 6.4.1.3 - Control Rod Drive Coupling Integrity Check

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established in the Technical Specification, 10 CFR, and administrative procedures.

No violations or deviations were identified in this area.

### 4. Monthly Maintenance Observations

The SRI observed portions of the following maintenance activities:

- MWR 83-0768 Drywell Insulation
- MWR 83-0794 Turbine Lube Oil Coolers
- MWR 83-0910 Reactor Water Level Indication

\*Maintenance Work Request

The following clearance orders were independently verified for proper placement/restoration of affected components:

83-515 Service Water Valve SW-MO-89B  
83-523 Service Water Zurn Strainers A & C

Included with the above were checks for availability of redundant equipment, adequate safety isolation and clearance, work was accomplished by qualified personnel in accordance with approved procedures and Technical Specification requirements, QC checks were performed as required, cleanliness controls and health physics coverage was adequate, and post-maintenance surveillance testing was performed to prove operability of the affected component and/or system.

No violations or deviations were identified in this area.

5. Licensee Event Followup (LER)

The following LER is closed on the basis of the SRI's inoffice review, review of licensee documentation, and discussions with licensee personnel:

LER 83-05 Failure of Scram Discharge Volume Drain Valve CRD-CV-A033  
To Close

6. IE Bulletins (IEBs)

IEB 83-02 (Open) Stress Corrosion Cracking In Large Diameter Stainless Steel Recirculation System Piping At BWR Plants

Table 1 of IEB 83-02 requires the licensee to perform specific actions prior to resuming power operations following the present refueling outage. The licensee contracted GE to perform actions required by IEB 83-02. GE has completed ultrasonic tests (UT) of 100% of all recirculation system welds. A total of 22 welds were identified as exhibiting intergranular stress corrosion cracking (IGSCC) and 15 of those were determined to require corrective measures prior to plant startup. The licensee is presently performing weld overlay operations on the 15 welds requiring repair. The licensee expects to complete weld repairs in July 1983.

Supplemental information is documented in NRC Inspection Reports 50-298/83-10 and 83-14.

No violations or deviations were identified in this area.

IEB 83-03 (Open) Check Valve Failures In Raw Water Cooling Systems of Diesel Generators

IEB 83-03 requires the licensee to review their plant Pump and Valve In-Service Test (IST) program and ensure that it includes all check valves located in the cooling water flow paths to and from the diesel generators.

Also, the licensee is required to confirm the integrity of the designated valve internals by the end of the present refueling outage. The licensee is required to submit 90 day reports to the NRC which must identify inclusion of the designated valves into this IST program and confirm that valve integrity verifications were performed.

The licensee stated in a letter from Pilant to Collins dated June 10, 1983, that four diesel generator service water coolant check valves were identified for inclusion in the IST program. Subsequently, all four check valves were disassembled, inspected and found to be functioning properly.

This item will remain open pending the licensee's submittal of a 90 day report to the NRC which will identify the procedures, methods, and conclusions of the valve integrity verification checks.

No violations or deviations were identified in this area.

#### 7. GE Type HFA 120V AC Relays

IE Information Notice 82-13, "Failures of General Electric Type HFA Relays," provided all holders of a nuclear power plant reactor operating license early notification of significant problems relating to certain GE type HFA relays. Licensee equipment history files have identified four failures of the GE type HFA relays. The first failure was not reportable but the remaining three were reported in LER's 82-21, 82-25, and 83-04.

During the present refueling outage, the licensee completed shorted turns testing of all safety systems HFA 120V AC relay coils using Special Test Procedure (STP) 83-4. Only one relay coil was found to exhibit shorted turns. The licensee is tentatively planning to replace all 120V AC HFA relays during subsequent refueling outages.

The SRI observed the performance of STP 83-4, held discussions with test personnel, and reviewed documentation applicable to HFA relay testing.

No violations or deviations were identified in this area.

#### 8. Exit Meetings

Exit meetings were conducted at the conclusion of each portion of the inspection. The plant superintendent was informed of the above findings.



INSPECTORS  
**D. L. DuBois**

LICENSEE/VENDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)	REPORT NO.	SEQ.	MO.	YR.
Nebraska Public Power District P. O. Box 499 Columbus, NE. 68601	XX I - INSERT M - MODIFY D - DELETE R - REPLACE	05000298	8315	A		

PERIOD OF INVESTIGATION/INSPECTION	INSPECTION PERFORMED BY	ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See IEMC 0530 "Manpower Reporting—Weekly Manpower Reporting" for code)
FROM: MO. DAY YR. TO: MO. DAY YR.	1 - REGIONAL OFFICE STAFF 2 - RESIDENT INSPECTOR 3 - PERFORMANCE APPRAISAL TEAM OTHER	REGION DIVISION BRANCH
060183063083		4 C A

REGIONAL ACTION (Check one box only)	TYPE OF ACTIVITY CONDUCTED (Check one box only)
1 - NRC FORM 591 X 2 - REGIONAL OFFICE LETTER	02 - SAFETY 03 - INCIDENT 04 - ENFORCEMENT 05 - MGMT. AUDIT 06 - MGMT. VISIT 07 - SPECIAL 08 - VENDOR 09 - MAT. ACCT. 10 - PLANT SEC. 11 - INVENT. VER. 12 - SHIPMENT/EXPORT 13 - IMPORT 14 - INQUIRY 15 - INVESTIGATION

INSPECTION/INVESTIGATION FINDINGS (Check one box only)	TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS	ENFORCEMENT CONFERENCE HELD	REPORT CONTAIN 2.790 INFORMATION	LETTER OF REPORT TRANSMITTAL DATE
A B C D X 1 - CLEAR 2 - VIOLATION 3 - DEVIATION 4 - VIOLATION & DEVIATION	A B C D	A B C D	A B C D	NRC FORM 591 OR REG. LETTER ISSUED REPORT SENT TO HQ FOR ACTION MO. DAY YR. MO. DAY YR.
		1 - YES	1 - YES	JUL 11 1983

MODULE INFORMATION														MODULE INFORMATION																										
REC. ORD		MODULE NUMBER INSP				PRIORITY	DIRECT INSPEC- TION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP				REC. ORD		MODULE NUMBER INSP				PRIORITY	DIRECT INSPEC- TION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP																
TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL					PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL					PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL													
B	5	3	0	7	0	3	A	0	1	1							B	5	7	1	7	1	0	A	0	2	9	1	0	0	C									
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CIRCLE SEQUENCE IF VIOLATION OR DEVIATION

\* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION