

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Report: 50-298/83-01

Docket: 50-298

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: January 1-31, 1983

Inspector: D. L. DuBois 2/11/83
D. L. DuBois, Senior Resident Inspector Date

Approved: T. F. Westerman 2/16/83
T. F. Westerman, Chief Date
Reactor Project Section A

Inspection Summary

Inspection Conducted January 1-31, 1983(Report 50-298/83-01)

Areas Inspected: Routine, announced inspection of operational safety verifications, monthly surveillance and maintenance observations, licensee event followup, followup of previously identified items including violations, and TMI action plan requirements. This inspection involved 57 inspector-hours onsite by one NRC inspector.

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

DETAILS1. Persons Contacted

*L. Lessor, Plant Superintendent
P. Thomason, Assistant Plant Superintendent
K. Wire, Operations Supervisor
V. Wolstenholm, QA Supervisor
J. Sayer, C & HP Supervisor
P. Borer, Engineering Supervisor

*Indicates presence at exit meetings.

2. Operational Safety Verification

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

"A" Low Pressure Coolant Injection System
Automatic Depressurization System
"A" & "B" Core Spray Systems
Standby Liquid Control System

The NRC inspector 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 NRC inspector 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 Observation

The NRC inspector observed portions of Technical Specification required surveillance tests to verify that testing was performed in accordance with adequate 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:

- 6.1.4 - Main Steam Line Radiation Monitor Functional Test
- 6.1.29 - APRM System Functional Test
- 6.2.2.3.16 - HPCI - Logic Bus Power Monitor Functional Test
- 6.3.17.1 - Control Room Ventilation
- 6.3.9.3 - Main Steam Isolation Valves Partial Closure Test
- 6.4.5.3 - Fire Pumps Weekly Operability Test

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

- 82-496, "A" Fuel Pool Cooling Pump
- 82-812, "A" RHR Service Water Booster Pump
- 83-006, Core Spray Valve CS-MO-5B
- 83-009, "A" Fuel Pool Cooling Heat Exchanger
- 83-012, Service Water System Valve SW-MO-89B
- 83-013, "B" Fuel Pool Cooling Heat Exchanger
- 83-015, Residual Heat Removal System Valve RHR-MO-26B
- 83-018, "D" RHR Service Water Booster Pump

Included with the above were checks for availability of redundant equipment, adequate safety isolation and clearance, accomplishment of work in accordance with approved procedures and Technical Specification requirements, verification that QC checks were performed as required, cleanliness controls and health physics coverages were adequate.

No violations or deviations were identified in this area.

5. Licensee Event Followup

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

- LER 82-08 Inoperable Snubber S/N 544
- LER 82-13 Inoperable Mechanical Shock Suppressors
- LER 82-16 No. 1 Diesel Generator Trip Due to Faulty Safety Trip Valve
Overspeed Device

LER 82-17 No. 2 Diesel Generator Trip Due to Faulty Low Lube Oil Pressure Switch

LER 82-19 Failure of Drywell Equipment Sump Flow Recorder and Integrator

6. Followup of Previously Identified Items

- a. Violation Item 8125-01 (Closed), Failure to Follow Procedure for Making Temporary Changes to Procedures

The NRC inspector verified that the licensee completed all commitments discussed in their response to this violation dated February 26, 1982, and also determined that response to be adequate.

- b. Violation Item 8216-01 (Closed), Failure to Follow Procedures for Area Posting During Radiographic Operations

The NRC inspector verified licensee actions and commitments applicable to this violation. The licensee's response dated September 10, 1982, was reviewed by the NRC inspector and determined to be adequate.

- c. Violation Item 8216-02 (Closed), Failure to Follow Procedure During Reactor Vessel Head Removal

The licensee performed the following corrective actions:

- (1) Licensee Event Report (LER) 50-298/82-12, which described this event, was issued June 21, 1982.
- (2) A quantitative analysis of four vessel head studs was performed.
- (3) A qualitative analysis of the vessel studs, stud nuts, and closure head flange was performed.
- (4) The licensee discussed this violation with station maintenance personnel.
- (5) CNS Maintenance Procedure 7.4.4, titled, "Reactor Vessel Head Removal and Installation", was subsequently revised on October 20, 1982, (Revision 13).

A special NRC Inspection Report 50-298/82-17 was conducted and documented by a Region IV staff inspector on June 21, 1982. The NRC inspector reviewed and evaluated the data and analysis associated with the failure to detension and unbolt the reactor vessel head studs using a two-pass procedure. The NRC inspector independently verified analysis calculations and also reviewed the results of all applicable nondestructive examinations.

- d. Violation Item 8223-01 (Closed), Defeating a Safety Function Without a Detailed Written Procedure

The licensee performed the following corrective actions:

- (1) MOV-15 and MOV-16 power supply breakers were immediately closed.
- (2) Applicable portions of Surveillance Procedure 6.2.2.3.2, titled, "HPCI Steam Line Space Temperature Switches Functional Test", were performed to prove system operability.
- (3) NRC Inspection Report 50-298/82-23, which included a description of this violation, was routed to all shift supervisors.

The NRC inspector verified that the licensee completed the corrective actions listed above and also has determined that the licensee's response to the violation including these actions and commitments are adequate.

7. NUREG - 0737, TMI Action Plan Requirements

- a. Item II.K.3, Section 27 (Closed), Provide Common Reference Level for Vessel Level Instrumentation

NUREG - 0737, Item II.K.3 (27), requires the licensee to modify reactor vessel water level instruments so that all instruments will be referenced to the same point, e.g., either the bottom of the reactor vessel or the top of the active fuel are reasonable reference points. This item was to be implemented January 1, 1981. The implementation date was subsequently changed to July 1, 1982.

In a letter from Pilant to Eisenhut dated December 30, 1980, the licensee stated that their presently installed reactor vessel level instrumentation was adequate and that no modifications would be made. The licensee's response was based upon a report that was previously submitted to the NRC by the BWR Owner's Group. The NRC rejected the licensee's response.

In a letter from Pilant to Eisenhut dated February 27, 1981, the licensee submitted plans for providing red lines, labels, and marker plates on or adjacent to existing reactor vessel water level indicators. The markers, lines, and labels would denote a point on the level indicators equivalent to the top of active fuel (TAF). Also, the marker plates would explain how far the bottom of the applicable level indicator(s) scale reading is from the TAF. These modifications were reported completed in a letter from Pilant to Eisenhut dated June 30, 1981.

In a letter from Ippolito to Pilant dated October 15, 1981, the NRC staff found the licensee's modifications to the level indicators acceptable as an interim measure. However, the NRC staff requested the licensee to commit to and subsequently install modifications that provide an actual physical common reference level for all level instruments in lieu of level indicators red lines, labels, and marker plates.

In a letter from Pilant to Ippolito dated January 11, 1982, the licensee provided specific information to the NRC staff concerning the present physical as-built configuration of all reactor vessel level instrumentation level reference points. The licensee explained that seven of nine level

instruments have a common reference point of zero level indication, equivalent to 165 inches above TAF. The remaining two level instruments have a common reference point of zero level indication, equivalent to TAF under zero reactor pressure and no recirculation flow conditions.

The licensee met with the NRC staff on January 27, 1982, to discuss this TMI action item. In a letter from Pilant to Vassallo, dated March 5, 1982, the licensee reported that all BWR Owner's Group recommended changes to level indicators were completed, so that all level instruments are referenced to the same point.

In a letter from Vassallo to Pilant dated October 12, 1982, the NRC staff restated their approval of the existing reactor vessel level instrumentation configuration. Also, the letter considered the subject item complete, contingent upon the licensee incorporating the subject item into the control room design review, which is to be performed per NUREG - 0737, Item I.D.1.

The NRC inspector reviewed all correspondence concerning this subject item and has verified that the licensee has completed all NRC approved modifications to the reactor vessel level instrumentation system. The NRC inspector will review and verify any further modifications resulting from the licensee's performance of the control room design review. The NRC inspector has verified that the licensee is in conformance with the requirements of NUREG - 0737, item II.K.3 (27), and Task Item II.K.3 (27) of TI 2515/52.

b. Item III.D.3.4, Section 2 (Closed), Control Room Habitability - Modification

NUREG - 0737, item III.D.3.4 (2), states that licensees shall assure that control room operators will be adequately protected against the effects of accidental release of toxic and radioactive gases and that the nuclear power plant can be safely operated or shut down under design basis accident conditions. Completion date for the licensee's submittal of analysis, evaluations, findings, and proposed modifications was January 1, 1981.

The licensee responded to this item in a letter from Pilant to Eisenhut dated December 30, 1980. Enclosure 5 to the letter contained detailed analysis and evaluations of the CNS control room habitability design provisions which were reviewed against the referenced Standard Review Plan, Regulatory Guide 1.78, "Assumptions for Evaluating the Habitability of Regulatory Power Plant Control Room During a Postulated Hazardous Chemical Release", Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accident Chlorine Release", and K. G. Murphy and K. M. Campe, "Nuclear Power Plant Control Room Ventilation System Design for Meeting General Design Criterion 19 of Appendix A, to 10 CFR Part 50. The licensees indicated that no modifications are necessary.

In a letter from Vassallo to Pilant dated February 24, 1982, the NRC staff concluded that the present CNS Control Room Habitability design is acceptable.

The control room ventilation system does not automatically isolate during chlorine or toxic gas incidents. The NRC inspector verified that adequate procedures are available to provide guidance to plant personnel including necessary actions and delineated responsibilities for the continued safe operation or shutdown of the plant, should toxic gases be released in the vicinity of the plant. The NRC inspector reviewed the following procedures for technical adequacy:

- 2.2.84 - HVAC Main Control Room and Cable Spreading Room
- 2.4.8.5 - Toxic Gas in Control Room
- 5.7.1 - Emergency Plan - Base Module "Miscellaneous"

The NRC inspector's review of the presently installed equipment and related documentation verified that the licensee is in conformance with the requirements of NUREG - 0737, Item III.D.3.4 (2), and Task Item III.D.3.4 of TI 2515/58.

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.

NRC FORM 1766 (11-81) IE MC 0535	U.S. NUCLEAR REGULATORY COMMISSION INSPECTOR'S REPORT Office of Inspection and Enforcement	PRINCIPAL INSPECTOR (Name, last, first, and middle initial) DuBois, Dennis L. REVIEWER Westerman, Thomas F.
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INSPECTORS D. L. DuBois	
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LICENSEE/VENDOR Nebraska Public Power District P. O. Box 499 Columbus, NE 68601	TRANSACTION TYPE <input checked="" type="checkbox"/> I - INSERT <input type="checkbox"/> M - MODIFY <input type="checkbox"/> D - DELETE <input type="checkbox"/> R - REPLACE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits) 05000298	REPORT NO. 8301	SEQ. A B C D	NEXT INSP. DATE MO. YR.
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PERIOD OF INVESTIGATION/INSPECTION FROM TO MO. DAY YR. MO. DAY YR. 01 01 83 01 13 83	INSPECTION PERFORMED BY <input checked="" type="checkbox"/> 1 - REGIONAL OFFICE STAFF <input type="checkbox"/> 2 - RESIDENT INSPECTOR <input type="checkbox"/> 3 - PERFORMANCE APPRAISAL TEAM OTHER	ORGANIZATION CODE (OF REGION/HQ CONDUCTING ACTIVITY) (See IEM: 0530 Manpower Reporting - Weekly Manpower Reporting for code.) REGION DIVISION BRANCH 4 C A
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REGIONAL ACTION (Check one box only) <input type="checkbox"/> 1 - NRC FORM 591 <input checked="" type="checkbox"/> 2 - REGIONAL OFFICE LETTER	TYPE OF ACTIVITY CONDUCTED (Check one box only) <input checked="" type="checkbox"/> 02 - SAFETY <input type="checkbox"/> 03 - INCIDENT <input type="checkbox"/> 04 - ENFORCEMENT <input type="checkbox"/> 05 - MGMT. AUDIT <input type="checkbox"/> 06 - MGMT. VISIT <input type="checkbox"/> 07 - SPECIAL <input type="checkbox"/> 08 - VENDOR <input type="checkbox"/> 09 - MAT. ACCT. <input type="checkbox"/> 10 - PLANT SEC. <input type="checkbox"/> 11 - INVENT. VER. <input type="checkbox"/> 12 - SHIPMENT/EXPORT <input type="checkbox"/> 13 - IMPORT <input type="checkbox"/> 14 - INQUIRY <input type="checkbox"/> 15 - INVESTIGATION
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INSPECTION/INVESTIGATION FINDINGS (Check one box only) <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D 1 - CLEAR 2 - VIOLATION 3 - DEVIATION 4 - VIOLATION & DEVIATION	TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS A B C D 	ENFORCEMENT CONFERENCE HELD A B C D 	REPORT CONTAIN 2790 INFORMATION A B C D 	LETTER OF REPORT TRANSMITTAL DATE NRC FORM 591 OR REISSUED LETTER IS ISSUED REPORT SENT TO HQ FOR ACTION MO. DAY YR. MO. DAY YR. FEB 16 1983
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MODULE INFORMATION												MODULE INFORMATION																		
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B	530703	A	005							B	571709	A	009089	C																
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* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION

NRC FORM 766
11-81
IE MC 0535

U.S. NUCLEAR REGULATORY COMMISSION

PRINCIPAL INSPECTOR (Name: last, first, and middle initial)

INSPECTOR'S REPORT

Office of Inspection and Enforcement

REVIEWER

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TRANSACTION TYPE

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)

REPORT NO.

NEXT INSPEC DATE

Nebraska Public Power District

- X I - INSERT
- M - MODIFY
- D - DELETE
- R - REPLACE

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PERIOD OF INVESTIGATION/INSPECTION... INSPECTION PERFORMED BY... ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY

REGIONAL ACTION... TYPE OF ACTIVITY CONDUCTED (Check one box only)

INSPECTION/INVESTIGATION FINDINGS... TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS... ENFORCEMENT CONFERENCE HELD... REPORT CONTAIN 2790 INFORMATION... LETTER OF REPORT TRANSMITTAL DATE

FEB 16 1950

MODULE INFORMATION table with columns for REC ORD, MODULE NUMBER INSP, PRIORITY, DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION, PERCENTAGE COMPLETED TO DATE, STATUS, and MODULE REQ FOLLOWUP.

* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION