



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
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February 17, 2000

S. K. Gambhir, Division Manager  
Nuclear Operations  
Omaha Public Power District  
Fort Calhoun Station FC-2-4 Adm.  
P.O. Box 399  
Hwy. 75 - North of Fort Calhoun  
Fort Calhoun, Nebraska 68023-0399

SUBJECT: NRC INSPECTION REPORT NO. 50-285/99-18

Dear Mr. Gambhir:

This refers to the inspection conducted on December 26, 1999, through February 5, 2000, at the Fort Calhoun Station facility. The enclosed results were discussed with Mr. Solymossy and other members of your staff. The enclosed report presents the results of this inspection.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. As identified in the report, no findings were identified during this inspection.

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

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

Sincerely,

/RA/

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

Docket No.: 50-285  
License No.: DPR-40

Enclosure:  
NRC Inspection Report No.  
50-285/99-18

cc w/enclosure:  
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P.O. Box 399  
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E-Mail report to D. Lange (DJL)  
 E-Mail report to NRR Event Tracking System (IPAS)  
 E-Mail report to Document Control Desk (DOCDESK)  
 E-Mail report to J. D. Wilcox (JDW)  
 E-Mail report to Frank Talbot (FXT)

E-Mail all documents to Jim Isom for Pilot Plant Program (JAI)  
 E-Mail all documents to Sampath Malur for Pilot Plant Program (SKM)

E-Mail notification of report issuance to the FCS SRI and Site Secretary (WCW, NJC).

E-Mail notification of issuance of all documents to Nancy Holbrook (NBH).

bcc to DCD (IE01)

bcc distrib. by RIV:

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**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No.: 50-285  
License No.: DPR-40  
Report No.: 50-285/99-18  
Licensee: Omaha Public Power District  
Facility: Fort Calhoun Station  
Location: Fort Calhoun Station FC-2-4 Adm.,  
P.O. Box 399, Hwy. 75 - North of Fort Calhoun  
Fort Calhoun, Nebraska  
Dates: December 26, 1999, through February 5, 2000  
Inspectors: W. Walker, Senior Resident Inspector  
C. Osterholtz, Resident Inspector  
Approved By: Charles S. Marschall, Chief, Project Branch C

**ATTACHMENTS:**

Attachment 1: Supplemental Information  
Attachment 2: NRC's revised reactor oversight process

## SUMMARY OF FINDINGS

Fort Calhoun Nuclear Station  
NRC Inspection Report 50-285/99-18 (DRP)

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

The body of the report is organized under the broad categories of Reactor Safety and Other Activities. There were no findings identified in these areas.

## Report Details

### Summary of Plant Status

The Fort Calhoun Station began this inspection period at 100 percent power and maintained that level throughout the inspection period.

A significant activity the inspectors are continuing to monitor is the licensee's development of contingency plans to address leaking fuel pins. At the end of this inspection period, the licensee estimated that 35 fuel pins were leaking.

### **1. REACTOR SAFETY** **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### 1R03 Emergent Work

##### Diesel Generator 2 Secondary Air Compressor Outlet Solenoid Valve Replacement

###### a. Inspection Scope

The inspectors reviewed the work order and observed troubleshooting related to the replacement of the air compressor solenoid valve. The inspectors discussed the licensee's work prioritization and risk determination associated with this activity to verify that necessary steps were planned, controlled, and executed.

###### b. Observations and Findings

No findings were identified and documented through this inspection.

#### 1R04 Equipment Alignments

###### a. Inspection Scope

The inspectors performed a partial walkdown of Auxiliary Feedwater Pump FW-6 during surveillance testing on Auxiliary Feedwater Pump FW-10. Plant procedures and drawings were used to verify correct system lineups for FW-6.

###### b. Observations and Findings

The inspectors did not identify any findings.

1R05 Fire Protection

Monthly Routine Inspection

a. Inspection Scope

The inspectors performed fire protection walkdowns to assess the material condition of plant fire protection equipment and proper control of transient combustibles. Specific risk significant areas inspected included the air compressor and auxiliary feedwater pump room.

b. Observations and Findings

The inspectors did not identify any findings.

1R08 Inservice Inspection

a. Inspection Scope

The inspectors reviewed the licensee's actions in determining the potential for cracking and subsequent mechanical binding of control rod drive mechanisms due to reactor coolant system in-leakage.

b. Observations and Findings

The inspectors did not identify any findings.

1R12 Maintenance Rule Implementation

Routine Reviews

a. Inspection Scope

The inspectors reviewed the licensee's maintenance rule implementation for several equipment performance problems, including:

- Design deficiency in auxiliary building ventilation which allows too much bypass flow around heating coils.
- Frequent tripping of switchgear room ventilation units.

b. Observations and Findings

The inspectors did not identify any findings.

1R13 Maintenance Work Prioritization

a. Inspection Scope

Throughout the inspection period, the inspectors reviewed weekly and daily work schedules to determine when risk significant activities were scheduled. The inspectors discussed selected activities with operations and work control personnel regarding risk evaluations and overall plant configuration control. The inspectors discussed emergent work issues with work control personnel and reviewed the potential risk impact of these activities. Specific items reviewed during this period included diesel generator surveillance testing, diesel-driven auxiliary feedwater postmaintenance testing, and diesel-driven fire pump modification and installation of Inverter D bypass transformer.

b. Observations and Findings

The inspectors did not identify any findings.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors reviewed the following operator work-arounds and the associated corrective action documents:

- Operator Work Around 99-23, "Charging Header Flow, FIA-236, Reads Approximately 3 gallons per minute (gpm) to 7 gpm Low," with CR 199902585, and
- Operator Work Around 00-02, "Letdown Temperature Control Valve, TCV-2897A Leaks By Approximately 200 gpm," with CRS 200000016 and 200000086.

b. Observations and Findings

The inspectors did not identify any findings.

1R19 Postmaintenance Testing

a. Inspection Scope

The inspectors observed or evaluated the following postmaintenance tests to determine whether the test adequately confirmed equipment operability:

- Work Order 28436 for testing of Inverter D bypass transformer following installation of new transformer, and
- Work Order 24824-01 for disassembly, cleaning, and repair of Component Cooling Water Heat Exchanger AC-1A.

b. Observations and Findings

The inspectors did not identify any findings.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed all or part of the following surveillance activities:

- Surveillance Test Procedure OP-ST-SI-3008, "Safety Injection and Containment Spray Pump In Service Test and Valve Exercise Test," Revision 25,
- Surveillance Test Procedure OP-PM-AFW-0004, "Third Auxiliary Feedwater Pump Operability Verification," Revision 20, and
- Surveillance Test Procedure OP-ST-CCW-3012, "AC-3B Component Cooling Water Pump Inservice Test," Revision 10.

b. Observations and Findings

The inspectors did not identify any findings.

**4. OTHER ACTIVITIES (OA)**

4OA4 Other

- .1 (Closed) LER 285/98-002-00: Qualified Life for Plant Components. This LER was a minor issue and was closed.
- .2 (Closed) IFI 50-285/98004-01: This issue involved the inadvertent tripping of a component cooling water pump breaker due to the shape of the reset mechanism plate. The inspectors verified that the licensee conducted satisfactory troubleshooting and replacement of the component cooling water pump breaker and appropriately evaluated other breakers which were susceptible to the same failure mechanism.
- .3 The inspectors monitored the activities associated with the transitions of automated systems to the year 2000 (Y2K). The inspectors reviewed the Y2K checklists and contingency plans. The inspectors also conducted control room observations during the transition period.

4OA5 Exit Meeting Summary

On February 4, 2000, the inspectors conducted a meeting with licensee management and presented the inspection results. The licensee acknowledged the findings presented. The licensee did not consider any material examined during the inspection proprietary.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Frans, Manager, Nuclear Licensing  
B. Hansher, Supervisor, Station Licensing  
R. Phelps, Division Manager, Nuclear Engineering  
J. Spilker, Manager, Corrective Action Group  
J. Solymossy, Plant Manager  
D. Trausch, Manager, Nuclear Safety Review Group

ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

50-285/99018-01	NCV	Incorrectly Calculated and Verified Qualified Life of Components Inside Containment Hydrogen Monitoring Panels (Section 4OA4)
50-285/98002	LER	Technical Specification Violation Due to Exceeding Qualified Life for Plant Components (Section 4OA4)
50-285/98004-01	IFI	Inadvertent Tripping of a Component Cooling Water Pump Breaker (Section 4OA4)

## ATTACHMENT 2

### **NRC'S REVISED REACTOR OVERSIGHT PROCESS**

The federal Nuclear Regulatory Commission (NRC) revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>•Initiating Events</li><li>•Mitigating Systems</li><li>•Barrier Integrity</li><li>•Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>•Occupational</li><li>•Public</li></ul>	<ul style="list-style-type: none"><li>•Physical Protection</li></ul>

To monitor these seven cornerstones of safety, the NRC used two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW OR RED. GREEN findings are indicative of issues that, while they may not be desirable, represent little effect on safety. WHITE findings indicate issues with some increased importance to safety, which may require additional NRC inspections. YELLOW findings are more serious issues with an even higher potential to effect safety and would require the NRC to take additional actions. RED findings represent an unacceptable loss of safety margin and would result in the NRC taking significant actions that could include ordering the plant shut down.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing incremental degradation in safety: GREEN, WHITE, YELLOW, AND RED. The color for an indicator corresponds to levels of performance that may result in increased NRC oversight (WHITE), performance that results in definitive, required action by the NRC (YELLOW), and performance that is unacceptable but still provides adequate protection to public health and safety (RED). GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. As a licensee's safety performance degrades, the

NRC will take more and increasingly significant action, as described in the matrix. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.