

**ENCLOSURE**

**U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV**

Docket No.: 50-285  
License No.: DPR-40  
Report No.: 50-285/99-17  
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: November 14 through December 25, 1999  
Inspector(s): W. Walker, Senior Resident Inspector  
J. Sloan, Senior 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 50-285/99-17

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 as listed in the summaries below. There were no findings identified in these areas.

## Report Details

### Summary of Plant Status

On November 16, 1999, Fort Calhoun Station started Cycle 19 of operation with a slow power increase, reaching 90 percent power on November 18. Two inaccurate incore detectors limited power. Following proper calibration of the detectors, the reactor reached 100 percent power on December 18, 1999, and remained there throughout the remainder of the inspection period.

#### **1. REACTOR SAFETY**

##### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### **1R03 Emergent Work**

##### **a. Inspection Scope**

The inspectors observed maintenance and reviewed maintenance documents to support work on a starter for the Diesel Generator 1 secondary air compressor. The inspectors assessed troubleshooting of the starter, work planning, and risk management.

##### **b. Observations and Findings**

There were no findings identified during this inspection.

#### **1R04 Equipment Alignments**

##### **a. Inspection Scope**

The inspectors performed a partial walkdown of Diesel Generator 1 during surveillance testing on Diesel Generator 2. Plant procedures and drawings were used to verify correct system lineups for Diesel Generator 1.

##### **b. Observations and Findings**

There were no findings identified during this inspection.

#### **1R05 Fire Protection**

##### **a. Inspection Scope**

Throughout the inspection period, the inspectors performed walkdowns in fire areas identified as potential high risk areas. The inspectors assessed the control of combustibles and ignition sources, assessed operability of fire barriers, verified the presence of fire detection, and mitigation equipment.

##### **b. Observations and Findings**

There were no findings identified during this inspection.

1R09 Inservice Testing

a. Inspection Scope

The inspector observed the following test:

- OP-ST-SI-3008, "Safety Injection and Containment Spray Pump Inservice Test"

The inspectors assessed the adequacy of testing to verify compliance with code requirements and observed whether components met the acceptance criteria.

b. Observations and Findings

There were no findings identified during this inspection.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the operability evaluations associated with the following condition reports (CRs):

- CR 199902552, "Redundant Light Indication for Shutdown Cooling Valves,"
- CR 199902690, "Diesel Generator Loading," and
- CR 199902585, "Calibration of Charging Pumps Discharge Header Flow Loop."

b. Observations and Findings

There were no findings identified during this inspection.

1R16 Operator Work Arounds

a. Inspection Scope

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

*Operator Work Around 99-11, Containment Isolation Actuation Signal Override Switches 43a and 43b Cannot Be Used for Accidents Other than Steam Generator Tube Leak for Postaccident Sampling, with CRs 199900129 and 199900219.*

*Operator Work Around 99-18, Low Pressure Safety Injection Header Must Be Periodically Vented to Prevent Gas Bubble Formation, with CR 199901002.*

b. Observations and Findings

There were no findings identified during this inspection.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed all or portions of the following surveillance tests:

- 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-CEA-0004, "Secondary CEA Position Indication System Test," Revision 12.

b. Observations and Findings

There were no findings documented during this inspection.

4. **OTHER ACTIVITIES**

4OA3 Event Follow Up

a. Inspection Scope

The inspectors reviewed Licensee Event Reports (LERS) and other items using Inspection Procedure 71153.

b. Observations and Findings

Closed LER 50-285/99004: loss of both station vital buses while transferring station lighting. This event was discussed in NRC Inspection Report 50-285/99-13. The LER did not reveal any new issues.

4OA5 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on December 29, 1999. 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

R. Clemens, Manager, Maintenance  
D. Dryden, Station Licensing  
M. Frans, Manager Nuclear Licensing  
R. Phelps, Division Manager, Nuclear Engineering  
M. Puckett, Manager, Radiation Protection  
J. Tills, Assistant Plant Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-285/99004	LER	Loss of Both Station Vital Buses While Transferring Station Lighting
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Discussed

None

## 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>.