



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064**

April 19, 2001

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: FORT CALHOUN STATION NRC INSPECTION REPORT 50-285/00-11 AND
NOTICE OF VIOLATION**

Dear Mr. Gambhir:

This refers to the inspection conducted on December 31, 2000, through March 31, 2001, at the Fort Calhoun Station facility. The enclosed report presents the results of this inspection. The resident inspectors discussed their inspection findings on April 2, 2001, with Mr. Clemens and other members of your staff. The inspection also included input in specific areas by regional specialists.

This inspection examined 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 selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that a violation of NRC requirements occurred. The violation was evaluated in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because plant staff did not properly control the use of nonload shed welding receptacles even though your staff was informed of the noncompliance with temporary modification requirements on December 10, 1999.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

Additionally, the NRC has also identified one issue of very low safety significance (Green). The issue involved a violation of NRC requirements. Because of the very low safety significance associated with this finding, and because it has been entered into your correction action program, the NRC is treating this issue as a noncited violation (NCV), consistent with

Section VI.A.1 of the Enforcement Policy. If you deny the noncited violation, you should provide a response with the basis for your denial within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Fort Calhoun Station facility.

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 made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

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: 50-285
License: DPR-40

Enclosures:

1. Notice of Violation
2. NRC Inspection Report
50-285/00-11

cc w/enclosures:

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- Scott Morris (**SAM1**)
- NRR Event Tracking System (**IPAS**)
- FCS Site Secretary (**NJC**)
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ENCLOSURE 1

NOTICE OF VIOLATION

Omaha Public Power District
Fort Calhoun Station

Docket: 50-285
License: DPR-40

During an NRC inspection conducted on December 31, 2000, through March 31, 2001, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

10 CFR Part 50, Appendix B, Criterion XVI, states, in part, that "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Contrary to the above, on January 24, 2001, the licensee's corrective actions established in December 1999 to require a temporary modification evaluation prior to the use of safety-related buses for nonsafety-related loads were not effective. This caused a repetition of nonsafety-related equipment being tied to safety-related buses through welding receptacles.

This is a Severity Level IV violation (Supplement 1). This violation is associated with a green SDP finding.

Pursuant to the provisions of 10 CFR 2.201, Omaha Public Power District is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available to the public, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within 2 working days.

Dated this 19th day of April 2001

ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets: 50-285

Licenses: DPR-40

Report: 50-285/00-11

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 31, 2000, through March 31, 2001

Inspectors: W. Walker, Senior Resident Inspector
C. Osterholtz, Resident Inspector
P. Elkmann, Emergency Preparedness Inspector
L. Ellershaw, Senior Reactor Inspector
R. Deese, Reactor Inspector
P. Goldberg, Reactor Inspector

Approved By: Charles S. Marschall, Chief, Project Branch C

ATTACHMENTS: Supplemental Information

SUMMARY OF FINDINGS

IR 05000285-00-11; 12/31/2000, through 03/31/2001, Omaha Public Power District, Fort Calhoun Station, Integrated Resident & Regional Report. Operability Evaluations.

The inspection was conducted by resident inspectors and regional specialists. The inspection identified two findings. The significance is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process," (SDP) or via IMC 0610*, "Threshold for Documentation" process for no color findings.

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Severity Level IV violation for failure to take adequate corrective actions to prevent the use of nonload shed welding receptacles without a proper evaluation (10 CFR Part 50, Criterion XVI).

The finding was of very low safety significance because the diesel generator load limit margins were not exceeded, the welding receptacles had adequate fault protection, and the diesel generators remained operable (Section 1R15).

- Green. The inspectors identified a noncited violation for failure to take adequate action to correct a valve actuator deficiency. The corrective action did not ensure that component cooling water inlet isolation valves would fully open on demand for all plant conditions (10 CFR Part 50, Criterion XVI).

The finding was of very low safety significance because the deficiencies were corrected prior to significant system degradation and the system was only vulnerable to the deficiency for very brief periods of time during the operating cycle

Report Details

The Fort Calhoun Station began this inspection period at 100 percent power and maintained that level until February 19, 2001, when a power reduction from 100 percent to 90 percent was initiated to maintain reactor coolant system activity below administrative limits established due to leaking fuel pins in the reactor core. On February 26, a planned power reduction to 70 percent was completed to facilitate refueling outage preparations. On March 1, 2001, a further planned power reduction to 30 percent was completed with the reactor shut down and breakers open on March 16, 2001. The graduated power reduction was to improve radiological conditions due to failed fuel. The Cycle 19 refueling outage commenced on March 16, 2001, and continued throughout the rest of the inspection period.

1. REACTOR SAFETY Initiating Events, Mitigating Systems, Barrier Integrity

1R02 Changes to License Conditions and Safety Analysis Report (71111.02)

a. Inspection Scope

The inspector reviewed eight safety evaluations to verify that the licensee had appropriately considered the conditions under which they may make changes to the facility or procedures or conduct tests or experiments without prior NRC approval.

The inspector reviewed 11 safety evaluation screenings, in which the licensee determined that safety evaluations were not required, to ensure that excluding a full evaluation was consistent with the requirements of 10 CFR 50.59.

The inspector reviewed condition reports and other related documents that addressed problems or deficiencies associated with 10 CFR 50.59 to ensure that appropriate corrective actions were being taken.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Partial Equipment Alignment

a. Inspection Scope

The inspectors performed a partial inspection of Emergency Diesel Generator 2, shutdown cooling alignment, reactor coolant system midloop alignment, and electrical alignment during refueling to verify alignment and identify any discrepancies that could impact redundant system operability. The inspectors used the following procedures while performing the alignments:

- OI-DG-2, "Diesel Generator No. 2," Revision 35
- OI-SC-1, "Shutdown Cooling Initiation," Revision 30

- OI-RC-2A, "RCS Fill and Drain Operations," Revision 26
- OI-EG-1, "345KV Grid System Normal Operation," Revision 10
- OI-EG-2, "161KV Grid System Normal Operation," Revision 11

b. Findings

No findings of significance were identified.

.2 Semiannual System Alignment Verification (Raw Water System)

a. Inspection Scope

The raw water system provides cooling water to the component cooling water (CCW) system. This system is capable of providing cooling to essential equipment during shutdown and accident conditions. Four raw water pumps provide river water to the CCW heat exchangers. The following documents were reviewed during the inspection of the raw water system:

- Updated Safety Analysis Report Section 9.8, "Raw Water System"
- System Design Basis Document, "SDBD-AC-RW-101," for the Raw Water System
- Operating Instruction OI-RW-1, "Raw Water System Normal Operation"
- Abnormal Operating Procedure AOP-18, "Loss of Raw Water"

b. Findings

No findings of significance were identified.

- .3 (Closed) IFI 50-285/98-027-02: Flooding Induced Door Failure. This item was opened pending NRC review of a supplemental calculation for PRA-CALC-1, Number T7CJT793, referenced in Licensee Condition Report 199900022. Engineers performed the supplemental calculation to demonstrate that a fire door (971-1A) that provides access to a room devoid of safe shutdown equipment (Room 23) would collapse under design basis flooding conditions. This would preclude flooding of the safety injection system pump rooms should a design basis flood occur.

The inspectors reviewed the supplemental calculation and test data used to support the calculation. The inspectors determined that the calculation provided adequate information to conclude that Door 971-1A would fail on a design basis flood event. This item is closed.

1R05 Fire Protection

a. Inspection Scope

The inspectors performed inspections of the following areas to determine if proper fire protection controls for combustibles and ignition sources were being effectively maintained:

- Turbine building basement
- Radwaste building
- Control room halon system room
- Diesel-driven auxiliary feedwater pump room
- Containment general areas
- Primary sample room

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

.1 Annual Review

a. Inspection Scope

The inspectors observed removal of the Heat Exchanger AC-1D end bells and the licensee inspection of the extent of fouling and blockage of tubes before cleaning. The inspectors also observed as the plant staff verified that the number of plugged tubes was within the limit for operability of the heat exchanger and then evaluated the cleaning interval for acceptability. The inspectors reviewed the results of the heat exchanger performance test and test data.

b. Findings

No findings of significance were identified.

.2 Biennial Review

a. Inspection Scope

The inspector reviewed a selected sample of safety-related heat exchanger testing or inspection, cleaning, and maintenance records to verify that the licensee had identified any potential heat exchanger deficiencies which could mask degraded performance and had identified any potential common cause heat sink performance problems which had the potential to increase risk. In addition, the inspector reviewed heat exchanger design calculations and vendor information on the heat exchangers to ensure that the heat exchangers were performing within their design basis. The inspector reviewed this data for the shutdown cooling heat exchanger, the emergency diesel generator lube oil and

jacket water heat exchangers, and the containment air cooling coils. In addition, the inspector reviewed water chemistry requirements for the heat exchangers.

The inspector reviewed 14 condition reports that addressed problems or deficiencies associated with safety-related heat exchangers to ensure that appropriate corrective actions were being taken.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

.1 Licensed Operator Simulator Training

a. Inspection Scope

The inspectors observed the following simulator training sessions for licensed operators to verify that the requalification program ensures safe plant operation by evaluating how well the individual operators and crews have mastered the training objectives:

- Long-term recovery from a steam generator tube rupture
- Recovery from a station blackout while shut down

c. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

.1 Maintenance Effectiveness

a. Inspection Scope

The inspectors verified proper implementation of the maintenance rule for the following components:

- Auxiliary Building Ventilation Air Supply Unit VA-17
- Control rod drive control element drive mechanisms
- Reactor coolant system pressurizer nozzles
- Steam Generator 2A Blowdown Isolation Valve HCV-1388B

b. Findings

No findings of significance were identified.

.2 Periodic Evaluation Reviews

a. Inspection Scope

The inspectors reviewed the licensee's report documenting the performance of the last Maintenance Rule periodic effectiveness assessment. This periodic evaluation covered a 17-month period from August 1998 through December 1999. This periodic evaluation was prepared as required by 10 CFR 50.65(a)(3).

The inspectors determined that the licensee's program had identified and monitored risk-significant functions associated with structures, systems, and components using reliability and availability, or sometimes equipment condition. Additionally, the performance of nonrisk-significant functions were monitored using plant level criteria. The inspectors reviewed the conclusions reached by the licensee in regard to the balance of reliability and unavailability for specific Maintenance Rule functions. This review was conducted by examining the licensee's evaluation of all risk-significant functions that had exceeded performance criteria during the evaluation periods. The inspectors also examined the licensee's evaluation of program activities associated with placement of Maintenance Rule Program risk-significant functions in Categories (a)(1) and/or (a)(2). This review was conducted by the examination of periodic evaluation conclusions reached by the licensee for functions of the auxiliary coolant system, auxiliary feedwater system, circulating water system, emergency core cooling system, electrical distribution system, engineered safety features actuation, main feedwater system, chemical and volume control system, reactor coolant system, radiation monitoring system, and ventilation and air conditioning system.

b. Findings

No findings of significance were identified.

.3 Effectiveness of Maintenance Rule Program

a. Inspection Scope

The inspectors reviewed Maintenance Rule Expert Technical Panel conclusions with an emphasis on issues associated with functions of the auxiliary cooling water (CCW pumps), engineered safety features actuation (lockout relays), safety injection (air accumulator check valves), and chemical and volume control systems (charging pumps). For the identified functions, the inspectors followed up by obtaining the needed documentation (listed in Attachment 1) and assessing the Maintenance Rule Program performance related to:

- Program adjustments made in response to unbalanced reliability and availability.
- Cause determination of degraded performance or failure to meet performance criteria.

- Functional failure evaluation and determination of maintenance preventable functional failures.
- Adequacy of corrective action and goal setting.
- Monitoring of established goals for functions placed in Category (a)(1).
- Program revisions to scoping and risk-significance.
- Creation of new risk-significant functions to improve performance monitoring.
- Assessment of plant level performance.

In order to validate that the licensee was identifying programmatic issues from outside of the Maintenance Rule program, the inspectors reviewed self-assessments of the Maintenance Rule program conducted on September 1-3, 1999, and October 2-6, 2000, and the control room logs since July 2000.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspectors evaluated the use of the corrective action system within the Maintenance Rule program. This evaluation was accomplished by reviewing the condition reports, work orders, and control room logs listed in the attachment. The purpose of this review was to establish that the corrective action program was entered at the appropriate threshold for the purposes of:

- Starting the evaluation and determination of the corrective action process when performance criteria were exceeded.
- Correction of performance-related issues or conditions identified during the periodic evaluation.
- Correction of generic issues or conditions identified during programmatic audits or assessments.

The inspectors verified that the identification and implementation of corrective actions were acceptable.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the licensee's risk assessment for equipment outages as a result of planned and emergent maintenance to evaluate the licensee's effectiveness in assessing risk for planned and emergent maintenance. The inspectors also discussed the planned and emergent work with planning and maintenance personnel. They observed and reviewed emergent work on the following systems/components/activities:

- Activities performed in response to a failure of the automatic control on the feedwater regulating valve
- Repairs performed to resolve the internal rust observed on Hydrogen Purge Blower VA-80B
- CCW Pump AC-3A failure to start during equipment rotation

b. Findings

No findings of significance were identified.

.2 Request for Notice of Enforcement Discretion for Fort Calhoun Technical Specification 2.4(1)b

On November 22, 2001, a Notice of Enforcement Discretion was granted to the Fort Calhoun Station for Technical Specification 2.4(1)b to allow an additional 14 days from the expiration of the 7-day limiting condition for operation of CCW Pump AC-3A. The enforcement discretion was not needed due to the fact that the licensee was able to make the pump operable prior to the 7-day expiration of the limiting condition for operation.

1R14 Personnel Performance During Nonroutine Plant Evolutions

a. Inspection Scope

The inspectors observed operator response to evaluate and isolate a steam leak in containment from the Steam Generator A blowdown sample line.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following operability evaluations for technical adequacy, applicable compensatory measures, and impact on continued operations:

- Operability for shutdown cooling heat exchangers (Condition Report 200100310)
- Operability for postaccident containment sump level transmitter (Condition Report 200100359)
- Operability for 13.8 kV emergency power supply (Condition Report 200100514)
- Operability for chemical volume control system piping (Condition Report 200100589)

b. Findings

No findings of significance were identified.

.1 Diesel Loading and Weld Receptacles

a. Inspection Scope

The inspectors reviewed the diesel generator loading calculations to determine the impact of having nonload shed heating elements connected to a safety-related motor control center.

b. Findings

The inspectors determined that plant personnel did not implement adequate corrective actions for control of nonload shed welding receptacles in response to a noncited violation identified on December 10, 1999. This constitutes a Severity Level IV violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," but was of very low safety significance and is being characterized as a green cited violation in accordance with the NRC enforcement policy.

During a tour of the turbine building on January 24, 2001, the inspectors identified that power welding machines and heating elements were connected to nonload shed welding receptacles without being properly evaluated as a temporary modification. The licensee had previously received a noncited violation for using nonload shed welding receptacles in December 1999 (see NRC Inspection Report 50-285/00-02). The licensee's corrective actions for the 1999 noncited violation were to require a temporary modification evaluation prior to using nonload shed receptacles to evaluate the effect on diesel generator loading. There was no immediate explanation as to why the temporary

modification evaluation was not performed, and the licensee subsequently performed a separate evaluation to demonstrate that diesel generator limit margins had not been exceeded and that the diesel generators had remained operable.

This finding was determined to have a credible impact on safety because uncontrolled loading of nonload shed welding receptacles has the potential to overload the diesel generators and impact their ability to successfully mitigate a design basis accident. However, because no diesel generator load limit margins were actually exceeded, the welding receptacles had adequate fault protection and the diesel generators remained operable, this finding is considered to be of very low safety significance (Green). The licensee's failure to effectively preclude repetition of use of the welding receptacles without a proper evaluation constituted a Severity Level IV violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions" (50-285/0011-01).

.2 (Closed) Licensee Event Report (LER) 2000-003-01: Failure of CCW System Valves by a Potential Common Mode

a. Inspection Scope

The inspectors reviewed an operability evaluation for CCW inlet and Outlet Isolation Valves HCV-489A/B through HCV-492A/B (Condition Report 199901951) and LER 2000-003-01. This review was performed to better understand why AC-1C CCW Heat Exchanger Inlet Valve HCV-491A did not fully open when placing the heat exchanger in operation and AC-1B CCW Heat Exchanger Inlet Valve HCV-490A failed to open on demand on October 23, 2000.

b. Findings

The inspectors determined that the failure of HCV-491A to fully open constituted a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," but was of very low safety significance and is being characterized as a green noncited violation in accordance with the NRC enforcement policy.

Following the failures of HCV-491A and HCV-490A, the licensee performed a failure investigation that was documented in LER 2000-003-01. The investigation concluded that the failure of HCV-490A was due to internal mechanical binding and was an isolated failure. The investigation also concluded that HCV-491A failed to fully open due to a combination of packing torque and marginally sized 80-pound actuator springs.

The failure of CCW inlet valves to fully open due to marginally sized actuators have previously occurred, but only with two CCW pumps running. In a two pump alignment, higher flow and pressure are present in the vicinity of the valves, causing a greater torque demand on the valve actuator to fully open them. All eight CCW heat exchanger inlet and outlet isolation valves have the same actuator configuration, but the licensee concluded that the inlet valves require more actuator opening torque because of the system hydraulic flow characteristics. In 1982, the spring actuators for the inlet isolation valves were increased from 60 to 80 pounds. The same modification was performed on the outlet valves in 1991.

The failure analysis concluded that the failures were of very low safety significance because, even on a common mode failure with two inlet valves failing to fully open (a worst case scenario with two CCW heat exchangers always in service), the CCW system could still fulfill its design basis requirements. The inspectors also noted that the system is only vulnerable when two CCW pumps are running, which only occurs during testing and during the weekly shifting of CCW pumps.

The licensee's corrective actions included replacing all eight 80-pound actuator springs with 100-pound actuator springs and performing diagnostic tests of all eight valves to measure their operating parameters, including packing torque.

This finding was determined to have a credible impact on safety because, if left uncorrected, it could lead to a degradation of the CCW system's ability to mitigate an accident. However, since the deficiency was corrected prior to such degradation, and the system was only vulnerable to the deficiency for very short periods of time during the operating cycle, the finding is considered to be of very low safety significance (Green).

The inspectors also determined that the licensee previously had opportunities to correct the deficiency that were only partially successful, constituting a violation of 10 CFR Part 50 Criterion XVI, "Corrective Actions." However, because of the very low safety significance of the item and because the licensee has included this item in their corrective action program (Condition Report 200002087), this violation is being treated as a Noncited Violation (NCV 50-285/00-011-02), and LER 2000-003-01 is closed.

.3 CCW Pump AC-3A

a. Inspection Scope

The inspectors reviewed an operability evaluation for CCW Pump AC-3A (Condition Report 200100490) after the pump exhibited increased discharge flow and pressure following a surveillance test.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors performed a programmatic review of the operator workaround program to evaluate the cumulative effects of operator workarounds on the reliability and availability of mitigating systems.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing

a. Inspection Scope

The inspectors reviewed or observed postmaintenance testing on the following equipment to verify that procedures and test activities were adequate to verify system operability:

- Work Order 68883 east raw water header weld repair of a piping throughwall leak
- Work Order 70672 charging pump flow indicator replacement
- Work Order 74187 for diesel-driven feedwater pump bearing replacement
- Work Order 71647 for instrument air dryer filter and valve maintenance
- Work Order 74057 for inspection of the overspeed trip mechanism on Diesel Generator 1
- Work Order 59032 for inspection and maintenance of control element drive mechanism clutch power supplies
- Work Order 54398 for inspection of the station output distribution system
- Work Order 57062 for functional checkout of protective relays in the main generator and 345 kV bus control circuits

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage

.1 Refueling Outage Inspections

a. Inspection Scope

The inspectors reviewed the following activities related to the refueling outage for conformance to applicable procedures and witnessed selected activities associated with each evolution.

- reactor shutdown
- reactor cooldown and initiation of shutdown cooling system
- draindown to midloop and floodup from midloop

- core offload
- shutdown risk evaluations

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed all or part of the following surveillance activities to confirm that the licensee effectively controlled the associated risk:

- Surveillance Test Procedure OP-ST-SI-3008, "Safety Injection and Containment Spray Pump In Service Test and Valve Exercise Test," Revision 26
- Surveillance Test Procedure IC-ST-SI-0001, "Safety Injection and Refueling Water Tank Low Level Test," Revision 4
- Surveillance Test Procedure OP-ST-ESF-0009, "Channel A Safety Injection," Containment Spray and Recirculation Actuation Signal Test, Revision 34
- Surveillance Test Procedure OP-ST-ASP-0001, "Alternate Shutdown Capability Instrumentation Functional Check," Revision 12
- Surveillance Test Procedure SS-ST-MS-3005, "Main Steam Safety Valves Set Pressure Testing using Furmanite's Trevitest Equipment," Revision 6

b. Findings

No findings of significance were identified.

Emergency Preparedness (EP)

1EP1 Exercise Evaluation

a. Inspection Scope

The inspectors observed a licensed operator's evaluation and implementation of the emergency plan during a training scenario on loss of shutdown cooling. The inspectors reviewed the emergency plan against the operator's implementation after the scenario's conclusion.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The inspector performed an in-office review of the following documents submitted under the requirements of 10 CFR 50.54(q) and Appendix E:

- Radiological Emergency Response Plan, Section B, Revision 25, submitted September 13, 2000
- Radiological Emergency Response Plan, Section E, Revision 23, submitted September 13, 2000
- Radiological Emergency Response Plan, Section F, Revision 15, submitted September 13, 2000
- Radiological Emergency Response Plan, Section H, Revision 29, submitted September 13, 2000
- Radiological Emergency Response Plan, Appendix A, Revision 16, submitted November 21, 2000
- Radiological Emergency Response Plan, Appendix C, Revision 12, submitted November 21, 2000
- Procedure EPIP OSC-1, "Emergency Classification," Revision 33, submitted September 13, 2000
- Procedure EPIP OSC-1, "Emergency Classification," Revision 34, submitted September 27, 2000

b. Findings

No findings of significance were identified.

4OA6 Exit Meeting Summary

- .1 On April 2, 2001, the inspectors presented the resident inspector's results in a meeting with Mr. Clemens and other members of your staff.
- .2 The inspectors presented the evaluation of change, test, or experiment (50.59) inspection results to Mr. Clemens and other members of licensee management at an exit meeting on February 23, 2001.

- .3 The inspector presented the results of the biennial heat sink inspection to Mr. Gates and other members of licensee management at the conclusion of the inspection on February 16, 2001.
- .4 The inspectors presented the Maintenance Rule implementation inspection results to Mr. Clemens and other members of licensee management on March 2, 2001.
- .5 The inspector presented the inspection results to Mr. Simmons during a telephone exit conference call on January 16, 2001.

The licensee acknowledged the findings as presented for each of the exit meetings described above.

ATTACHMENT

KEY POINTS OF CONTACT

Licensee

D. Bannister, Manager, Operations
G. Cavanaugh, Supervisor, Nuclear Licensing
J. Chase, Division Manager, Nuclear Assessment
R. Clemens, Plant Manager
M. Core, Manager, System Engineering
D. Dryden, Licensing Specialist, Nuclear Licensing
M. Frans, Manager, Nuclear Licensing
S. Gambhir, Division Manager, Nuclear Operations
W. Gates, Vice President Nuclear
R. Haug, Manager, Chemistry
R. Jaworski, Acting Supervisor, Nuclear Licensing
R. Lentz, Licensing Specialist, Nuclear Licensing
J. McManis, Manager, Design Engineering
D. Montgomery, Quality Control Supervisor
R. Phelps, Division Manager, Nuclear Engineering
M. Puckett, Manager, Radiation Protection
C. Simmons, Supervisor, Emergency Planning
J. Spilker, Manager, Corrective Action Group
M. Tesar, Division Manager, Nuclear Support Services
R. Westcott, Manager, Training

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-285/00-011-01	VIO	Diesel Loading and Weld Receptacles Corrective Actions
50-285/00-011-02	NCV	Component Cooling Water Valve Corrective Actions

Closed

50-285/98-027-02	IFI	Flooding Induced Door Failure
50-285/00-011-02	NCV	Component Cooling Water Valve Corrective Actions
50-285/00-003-00	LER	Failure of Component Cooling Water System Valves by a Potential Common Mode, Revision 0
50-285/00-003-01	LER	Failure of Component Cooling Water System Valves by a Potential Common Mode, Revision 1

DOCUMENTS REVIEWED

Safety Evaluations Associated with the Following:

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
DCN 10218	Instrument Loop 0417 Minor Modification	0
DCN 10235	RC-3A Lube Oil Cooler CCW Supply Piping Replacement	0
DCN 10252	CH-24 Letdown Strainer Plugging Modification	0
DCN 10282	FW-10 Improvements	0
DCR 11151	SO-G-103, Fire Protection Operability Criteria and Surveillance Requirements	8
EC 14983	M-22 Penetration Inside Containment	0
EC 25494	Auxiliary Feedwater USAR changes	0
EC 25696	Cold Leg 2A Temperature Reactor Regulating Instrumentation Loop	0

50.59 Screenings Associated with the Following:

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
DCN 2826	Redundant Position Indication Lights for HCV-347 and HCV-348	0
DCN 5301	Mainstream Calorimeters In-place Abandonment	0
DCN 10122	FP Pump Test Flow Discharge Header Piping Cross Connection	0
DCN 10271	M-22 Penetration Inside Containment Manual Valve - Testing	0
DCR 11816	OI-DG-1 (Diesel Generator No. 1)	28
DCR 12037	OP-FT-DG-0002 (Emergency Diesel Generator Endurance Functional Test)	7
DCR 12374	OI-SI-1 (Safety Injection, Normal Operation)	44
EC 25183	OI-SI-1 (Safety Injection, Normal Operation)	45
EC 25368	OI-ES-1 (Engineered Safeguards Controls Normal Mode 1, 2, and 3 Alignment Check)	4

EC 25694	OP-FT-DG-0002 (Emergency Diesel Generator Endurance Functional Test)	8
Temporary Modification 10375/10333	Bypass FW-10 positioner YC-1039-2	0

Condition Reports

1997-00246
1998-01226
1999-02638
1999-02746
2000-00517
2000-00558
2000-02206

Miscellaneous Documents

PRC Meeting Minutes, Meeting 00-002; January 10, 2000
PRC Meeting Minutes, Meeting 00-11; February 28, 2000