UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

January 29, 2004

EA-03-077

Paul D. Hinnenkamp
Vice President - Operations
River Bend Station
Entergy Operations, Inc.
P.O. Box 220
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION - NRC INTEGRATED INSPECTION REPORT 05000458/2003006

Dear Mr. Hinnenkamp:

On December 31, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your River Bend Station facility. The enclosed integrated inspection report documents the inspection findings, which were discussed on January 7, 2003, with you and other members of your staff.

The 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents two self-revealing findings of very low safety significance (Green).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publically Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.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/

David N. Graves, Chief
Project Branch B
Division of Reactor Projects

Dockets: 50-458
License: NPF-47

Enclosure:
NRC Inspection Report 05000458/2003006
w/attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-458
License:	NPF-47
Report No:	05000458/2003006
Licensee:	Entergy Operations, Inc.
Facility:	River Bend Station
Location:	5485 U.S. Highway 61 St. Francisville, Louisiana
Dates:	September 28 through December 31, 2003
Inspectors:	P. J. Alter, Senior Resident Inspector, Project Branch B M. O. Miller, Resident Inspector, Project Branch B
Approved By:	D. N. Graves, Chief, Project Branch B Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000458/2003006; 09/28/2003 - 12/31/2003; River Bend Station; Event Followup.

The report covered a 3-month period of routine inspection by resident inspectors. Two Green findings were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. A self-revealing finding was identified and determined to be of very low safety significance. A human performance error caused the isolation of the air release valve for normal service water Pump C. The air release valve for a normal service water pump served as a high point vent on the system while the pump was secured. As a result, normal service water Pump C became air bound while in standby and failed to develop discharge pressure when started during a manual swap of running normal service water pumps on September 1, 2003. The inspectors determined that the finding did not represent a noncompliance because it occurred on a nonsafety-related normal service water system.

  The inspectors determined that the failure to maintain the normal service water Pump C discharge air release valve isolation valve open was more than minor because it was associated with an increase in the likelihood of an initiating event. The finding was of very low safety significance because there was only a small increase in the likelihood of a loss of normal service water with one of the three 50 percent capacity normal service water pumps unavailable and because the standby service water system was available throughout the time normal service Pump C was air bound (Section 4OA5).

Cornerstone: Mitigating Systems

- White. As documented in NRC special inspection Report 05000458/2002007, the inspectors identified a violation of Technical Specification 5.4.1.a. for failure to properly lock open condensate prefilter vessel bypass flow control Valve CNM-FCV200. As a result, when the reactor automatically scrammed, the valve closed and feedwater flow was lost to the reactor. The operators were able to provide makeup water to the reactor using the reactor core isolation cooling system.

  The final significance determination was completed and documented in "Final Significance Determination for a White Finding and Notice of Violation," (EA-03-077) dated December 29, 2003. The finding was determined to be of low to moderate safety significance because of the combination of: (1) risk associated

with a loss of feedwater and (2) external events, such as a fire in conjunction with a loss of the feedwater system, over a period of approximately 126 days (Section 4OA5).

C. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status: The reactor was operated at 100 percent power for the entire inspection period, with the exception of routine reductions in reactor power for control rod exercising and turbine testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

During the weeks of November 10 and December 8, 2003, the inspectors reviewed the licensee's implementation of plant procedures to protect mitigating systems from freezing weather conditions. Specifically, the inspectors: (1) verified that risk-significant structures, systems, and components (SSC) were prepared to remain functional when challenged by cold weather conditions; (2) verified that cold weather features such as heat tracing and space heaters were operable and monitored; (3) verified that plant features for operation of the ultimate heat sink during cold weather conditions were appropriate; and (4) evaluated implementation of the cold weather preparation procedures for affected SSC before the onset of cold weather. The inspectors reviewed the operations section Procedure OSP-0043, "Freeze Protection and Temperature Maintenance," Revision 4, including the attachments completed for cold weather conditions during November and December 2003.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

During the week of November 3, 2003, the inspectors conducted a complete system walkdown of the reactor recirculation system flow control system. The inspectors verified: (1) proper valve and control switch alignments, (2) valves were locked as required, (3) power supply lineup, and (4) alarms and indications in the main control room were as specified in the procedures and drawings listed in the attachment to this inspection report.

The inspectors also verified electrical power requirements, labeling, and hanger and support installation. Operating pumps were examined to ensure that any noticeable vibration was not excessive, pump leakoff was not excessive, bearings were not hot to the touch, and the pumps were properly ventilated. The walkdowns also included

evaluation of system piping and supports to ensure piping and pipe supports did not show evidence of water hammer and component foundations were not degraded.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors walked down accessible portions of six areas important to safety described below to assess: (1) the licensee's control of transient combustible material and ignition sources; (2) fire detection and suppression capabilities; (3) manual firefighting equipment and capability; (4) the condition of passive fire protection features, such as electrical raceway fire barrier systems, fire doors, and fire barrier penetration; and (5) any related compensatory measures. The areas inspected were:

- Diesel generator building, 98 foot elevation, Division II emergency diesel generator control room, Fire Zone DG-4/Z-1, on October 20, 2003
- Control building, 116 foot elevation, Division III standby 125 Vdc battery room, Fire Zone C-20, on October 20, 2003
- Reactor building, 162 foot elevation, containment unit coolers area, Fire Zone RC-F/Z-13, on October 21, 2003
- Auxiliary building, 95 foot elevation, reactor water cleanup unit cooler area, Fire Zone AB-4/Z-2, on October 21, 2003
- Auxiliary building, 95 foot elevation, reactor building component cooling system heat exchanger area, Fire Zone AB-1/Z-2, on October 21, 2003
- Standby cooling tower, 118 foot elevation, Division II standby service water pump room, Fire Zone PH-2, on October 23, 2003

The inspectors reviewed the following documents during the fire protection inspections:

- Pre-Fire Strategy Book
- Updated Safety Analysis Report (USAR), Section 9A.2, "Fire Hazards Analysis"
- River Bend postfire safe shutdown analysis
- RBNP-038, "Site Fire Protection Program," Revision 06A

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On October 22, 2003, the inspectors observed one requalification program simulator training session of an operating crew, as part of the operator requalification training program, designed to improve licensed operator performance and the training evaluator's critique. Emphasis was placed on observing training exercises of high risk, licensed operator actions, operator activities associated with the emergency plan, and lessons learned from industry and plant experiences. In addition, the inspectors compared simulator control panel configurations with the actual control room panels for consistency. The simulator training scenarios observed were: (1) RSMS-OPS-618, "Main Turbine Trip/ATWS/SLC Failure/RWCU Leak in Steam Tunnel With Failure to Isolate," Revision 3, and (2) RSMS-OPS-422, "Inadvertent HPCS Injection and Loss of Stator Cooling," Revision 2.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed two equipment performance problems to assess the effectiveness of the licensee's maintenance efforts for SSC within the scope of the maintenance rule program. The inspectors verified licensee's maintenance effectiveness by: (1) verifying the licensee's handling of SSC performance or condition problems, (2) verifying the licensee's handling of degraded SSC functional performance or condition, (3) evaluating the role of work practices and common cause problems, and (4) evaluating the licensee's handling of the SSC issues being reviewed under the requirements of the maintenance rule (10 CFR 50.65), 10 CFR Part 50, Appendix B, and Technical Specifications. The two equipment performance problems were:

- River Bend Station Condition Report (CR-RBS) 2003-03632, failure of residual heat removal system service water containment flood Valve 1E12-MOVF094

- CR-RBS-2003-3318, failure of Division I control room air handling unit to start automatically during start of Division I control building air conditioning system

The following documents were reviewed as part of this inspection:

- NUMARC 93-01, Revision 2, Nuclear Energy Institute Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants

- Maintenance rule function list
- Maintenance rule performance criteria list
- Residual heat removal system maintenance rule evaluations
- Control building air conditioning maintenance rule performance evaluations

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed two maintenance activities to verify the performance of assessments of plant risk related to planned and emergent maintenance work activities. The inspectors verified three items: (1) the adequacy of the risk assessments and the accuracy and completeness of the information considered, (2) management of the resultant risk and implementation of work controls and risk management actions, and (3) effective control of emergent work, including prompt reassessment of resultant plant risk.

.1 Risk Assessment and Management of Risk

On a routine basis, the inspectors verified performance of risk assessments, in accordance with administrative Procedure ADM-096, “Risk Management Program Implementation and on-line Maintenance Risk Assessment,” Revision 04, for planned maintenance activities and emergent work involving SSC within the scope of the maintenance rule. Specific work activities evaluated included planned and emergent work for the Division I workweek, September 28, 2003.

.2 Emergent Work Controls

During emergent work, the inspectors verified that the licensee took actions to minimize the probability of initiating events, maintained the functional capability of mitigating systems, and maintained barrier integrity. The inspectors also reviewed the emergent work activities to ensure the plant was not placed in an unacceptable configuration. The emergent work activity evaluated was the repair of residual heat removal system service water containment flood Valve E12-MOVF094, on November 13, 2003.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed three operability determinations selected on the basis of risk insights. The inspectors assessed: (1) the accuracy of the evaluations, (2) the use and control of compensatory measures if needed, and (3) compliance with Technical Specifications, Technical Requirements Manual, USAR, and other associated design-basis documents. The inspectors' review included a verification that the operability determinations were made as specified by Procedure RBNP-078, "Operability Determinations," Revision 7. The operability evaluations reviewed were associated with:

- CR-RBS-2003-3306, reactor recirculation loop flow control Valve B unexpectedly going in the closed direction and both hydraulic power units tripping when placing hydraulic power Unit B in lead, reviewed on October 27 and 28, 2003

- CR-RBS-2003-3451, reactor recirculation loop flow control Valve B slowly drifting open after being hydraulically locked, reviewed on November 10, 2003

- CR-RBS-2003-3440, motor-driven fire pump not starting while performing fire hydrant flow test, reviewed on December 18, 2003

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds (IP 71111.16)

a. Inspection Scope

An operator work-around is defined as a degraded or nonconforming condition that complicates the operation of plant equipment and is compensated for by operator action. During this inspection period, the inspectors reviewed the effect of three operator work-arounds on: (1) the reliability, availability, and potential for misoperation of any mitigating system; (2) whether they could increase the frequency of an initiating event; and (3) their effect on the operation of multiple mitigating systems.

- Manual venting of the service water system every shift, reviewed on November 23, 2003

- Taking temperature readings using installed Riley instrumentation, reviewed on December, 16, 2003

- Restoration of control room air handling unit with control building air conditioning chillers out of service, reviewed on December 18, 2003

The procedures and other documents reviewed by the inspectors during this inspection were:

- Plant effects report from work management computer, dated November 25, 2003
- Shift Manager Tracking Report, dated November 25, 2003
- Equipment Status Turnover Sheet, dated November 25, 2003
- Operator Burden List, dated November 25, 2003
- Unit Tracking Limiting Conditions for Operation, dated December 16, 2003
- SOP-0066, "Control Building Chilled Water System," Revision 29

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed five work order packages (WOP) to assess the adequacy of testing activities to verify system operability and functional capability. The inspectors performed the following: (1) identified the safety function(s) for each system by reviewing applicable licensing basis and/or design-basis documents; (2) reviewed each maintenance activity to identify which maintenance functions may have been affected; (3) reviewed each test procedure to verify that the procedure did adequately test the safety functions that may have been affected by the maintenance activity; (4) reviewed that the acceptance criteria in the procedure were consistent with information in the applicable licensing basis and/or design-basis documents; and (5) identified that the procedure was properly reviewed and approved. The WOPs inspected were:

- WOP 00030857, Electric-driven fire water pump did not start while system pressure was low during fire hydrant test, conducted on October 15, 2003

- WOP 00030604 01, Reactor recirculation system flow control hydraulic power Unit B solenoid operated control Valves RCS-SOV83B and RCS-SOV83D replacement, conducted October 7, 2003

- WOP 00030553 02, Reactor recirculation system flow control hydraulic power Unit B controller circuit card replacement, conducted October 7, 2003

- WOP 50365418 03, Clean, inspect, insulation test, and lubricate residual heat removal Pump C suction Valve E12-MOVF105 motor operator, conducted December 10, 2003

- WOP 00034323 04, Replace leaking Division II diesel generator fuel oil line, conducted December 11, 2003

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors assessed, by witnessing and reviewing test data, whether three risk-significant system and component surveillance tests met Technical Specification, USAR, and procedure requirements. The inspectors reviewed whether the surveillance tests demonstrated operational readiness and whether the systems were capable of performing their intended safety functions. The inspectors reviewed the following surveillance test attributes: (1) preconditioning; (2) clarity of acceptance criteria; (3) range, accuracy, and current calibration of test equipment; and (4) equipment properly restored at the completion of the testing. The inspectors observed and reviewed the following surveillance tests and surveillance test procedures (STP):

- STP-251-3203, "Motor Driven Fire Pump Monthly Operability Test," Revision 11, performed on October 15, 2003
- STP-251-3300, “Diesel Fire Pump Battery Quarterly Surveillance,” Revision 11, performed on September 21, 2003
- STP-251-3100, “Diesel Fire Pump Battery Weekly Surveillance,” Revision 15A, performed on September 21, 2003

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

During the inspection period, the inspectors reviewed two temporary plant modifications made to plant equipment and procedures listed below. The inspectors conducted the following: (1) review of the temporary modification and its associated 10 CFR 50.59 screening against the system design-basis documentation, including the USAR and Technical Specifications; (2) verification that the installation and removal of the temporary modification were consistent with the modification documents; (3) verification that plant drawings and procedures were updated; and (4) review of the postinstallation and removal test results to confirm that the actual impact of the temporary modification on the affected system had been adequately verified.

- Temporary modification to power control room instrumentation ac Bus SCM-PNL01A from reactor protection system alternate power Supply RPS-XRC10A1 in order to troubleshoot the control room instrument ac power supply, on October 7, 2003

- Procedure change request modifying abnormal operating Procedure, AOP-0031, "Shutdown From Outside the Main Control Room," Revision 17, to ensure the reactor core isolation cooling system was available if the control room was evacuated due to a fire, on November 25, 2003

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed submissions for the two performance indicators (PI) listed below spanning the period from September 28, 2002, through September 30, 2003. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI (Nuclear Energy Institute) 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the basis in reporting for each data element.

Mitigating Systems Cornerstone

- Safety System Unavailability, High Pressure Injection System
- Safety System Functional Failures

The inspector reviewed the licensee's performance indicator technique sheets to determine whether the licensee satisfactorily identified the required data reporting elements. This data was compared with the data reported to the NRC since the last verification inspection was conducted. The inspectors reviewed the information reported in licensee event reports (LERs) and sampled the maintenance rule database, portions of operator log entries, and portions of limiting conditions for operation log entries to verify the accuracy of the data reporting elements, the licensee's basis for crediting system availability, and the calculation of the average system unavailability for the previous 12 quarters. The inspectors also interviewed licensee personnel associated with the PI data collection, evaluation, and distribution.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

Cross-Reference to Problem Identification and Resolution Findings Documented Elsewhere

Section 4OA3 describes a self-revealing finding related to the failure of a main turbine control hydraulic line that lead to a manual scram and turbine trip. The licensee's root cause analysis of the February 22, 2003, event determined that the failure mechanism should have been identified during the fault analysis of a leak in a similar main turbine control hydraulic line in August 2000.

4OA3 Event Followup (71153)

(Closed) LER 05000458/2003-001-01, Unplanned Reactor Scram Due to Fluid Leak in Main Turbine Electrohydraulic Control System

a. Inspection Scope

The inspectors reviewed the subject LER and the licensee's Condition Report CR-RBS-2003-0639 to determine that the root cause for the February 22, 2003, turbine control system hydraulic line failure, which led to a manual reactor scram and turbine trip, was properly identified and that corrective actions were reasonable. The inspectors reviewed the operator response to the event to ensure that plant procedures were properly implemented and that equipment performed as required. This LER is closed.

b. Findings

Introduction. The inspectors identified a Green self-revealing finding for failure to properly diagnose a similar failure of turbine control hydraulic line failure in August 2000.

Description. On February 22, 2003, a hydraulic line for the number one turbine control valve actuator failed due to a through-wall crack. This created a hydraulic oil leak and required that the operators manually scram the reactor and trip the turbine. All safety systems responded to the event as designed. The licensee's investigation of the event found that the failure of the hydraulic line in the turbine control system was a repeat of an August 31, 2000, turbine control system hydraulic line failure. The failure cause analysis of the August 31, 2000, failure, as documented in Condition Report CR-RBS-2000-1554, was stress corrosion cracking. Further analysis, after the February 2003 failure, revealed that all the conditions necessary for stress corrosion cracking were not present for the August 2000 failure.

Following the February 2003 event, the licensee's analysis of the failed line indicated that the root cause was metal fatigue induced by system vibration. The failure occurred in an area where the heat-affected zones from closely spaced welds overlapped. Repairs to the affected line were completed with thicker walled tubing prior to plant

startup. During the subsequent refueling outage, the lines were reconfigured based on a system stress analysis to eliminate the overstress condition and to increase wall thickness.

Analysis. The inspectors determined that this problem identification and resolution finding is more than minor because the misdiagnosis of the August 31, 2000, failure contributed to the February 22, 2003, failure which resulted in a manual reactor scram and turbine trip. The finding affected the initiating events cornerstone and was considered to have very low safety significance (Green) because it did not contribute to the likelihood of a loss of coolant accident, nor the likelihood of both a reactor scram and mitigating equipment or functions being unavailable, and because there was no increased likelihood of a fire or internal/external flood (FIN 05000458/2003006-01).

Enforcement. No violation of regulatory requirements occurred. The inspectors determined that the finding did not represent a noncompliance because it occurred on nonsafety-related secondary plant equipment.

4OA4 Crosscutting Aspects of Findings

Section 4OA5 of this report documents a human performance error that caused the air release valve - high point vent - for the standby normal service water pump to be isolated contrary to the system valve lineup. The result was that the pump became air bound and failed to develop discharge pressure when started during a planned swap of running pumps.

4OA5 Other Activities

1. (Closed) AV 05000458/2003005-05, Normal Service Water (NSW) pump found to be air bound when called upon to run

Introduction. The inspectors identified a Green finding for failure to control the position of the isolation valve for the air release valve for NSW Pump C. As a result, NSW Pump C became air bound and failed to develop discharge pressure during a planned swap of running NSW pumps on September 1, 2003.

Description. In June 2003, NSW Pump C was removed from service for a planned overhaul of the pump, including impeller replacement. On June 14, 2003, the pump was filled, vented, and run successfully for postmaintenance testing. The pump remained in service for the next 16 days. On August 2, 2003, NSW Pump C was run for less than one hour to perform postmaintenance testing of work done on discharge Valve SWP-MOV170C.

On September 1, 2003, while swapping running NSW pumps, NSW Pump B was secured and NSW Pump C was started. NSW Pump C did not develop its expected discharge pressure when Valve SWP-MOV170C came completely open. Running NSW

Pump A indication showed that it was supplying all system flow. NSW Pump C was secured and NSW Pump B was restarted. System operating parameters returned to normal for two-pump operation.

On September 2, 2003, engineering, maintenance, and operations personnel examined NSW Pump C in an effort to determine the reason for its failure to develop normal discharge pressure. NSW Pump C discharge air release valve isolation Valve SWP-V3312C was found closed. The air release valve for NSW Pump C served as a high point vent on the system while the pump was secured. As a result, NSW Pump C became air bound while in standby and failed to develop discharge pressure when started the previous day. Later that day, the licensee successfully test ran NSW Pump C and swapped running pumps to NSW Pumps A and C in service with NSW Pump B secured. Final NSW system parameters were normal for two-pump operation.

Analysis. The inspectors determined that this human performance error was more than minor because it was associated with an increase in the likelihood of an initiating event. The inspectors reviewed this finding using IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." The inspectors determined that the increased likelihood of a loss of normal service water required further evaluation by the regional senior reactor analyst. The important core damage sequence was a transient involving a loss of the NSW system, followed by loss of the standby service water system and failure to recover. Using the standardized plant analysis risk model, the analyst determined that the degraded condition of NSW Pump C with its air release valve isolated to be of very low risk significance (Green). Some of the factors causing the finding to be of very low safety significance were: the short duration of time that the pump was unavailable, the other NSW pumps were available, and there was no common cause failure mode which resulted in a relatively small increase in the likelihood of a loss of normal service water.

Enforcement. The inspectors determined that no violation of regulatory requirements occurred because normal service water is not a safety-related system nor directly covered by Technical Specification-required procedures (FIN 05000458/2003006-02).

2. (Closed) AV 05000458/2002007-01 Failure to properly lock open condensate valve resulted in loss of feedwater flow following reactor scram

As documented in NRC special inspection Report 05000458/2002007, the inspectors identified a violation of Technical Specifications 5.4.1.a. for failure to properly lock open condensate prefilter vessel bypass flow control Valve CNM-FCV200. As a result, when the reactor automatically scrammed on September 18, 2002, the valve closed and feedwater flow was lost to the reactor. The operators were able to provide makeup water to the reactor using the reactor core isolation cooling system.

The final significance determination was completed and documented in "Final Significance Determination for a White Finding and Notice of Violation," (EA-03-077) dated December 29, 2003. The finding was determined to be of low to moderate safety

significance (White) because the combination of: (1) risk associated with a loss of feedwater and (2) external events, such as a fire in conjunction with a loss of the feedwater system, over a period of approximately 126 days. (VIO 05000458/2003006-03)

4OA6 Management Meetings

Exit Meetings

The inspectors presented the inspection results to Mr. P. Hinnenkamp, Vice President, Operations, and other members of licensee management on January 7, 2004.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

M. Boyle, Superintendent, Radiation Protection
D. Burnett, Superintendent, Chemistry
S. Belcher, Assistant Operations Manager
A. James, Superintendent - Plant Security
T. Gates, Manager, System Engineering
H. Goodman, Manager, Nuclear Engineering
R. Goodwin, Manager - Training and Development
J. Heckenberger, Manager, Planning and Scheduling/Outage
P. Hinnenkamp, Vice President - Operations
R. King, Director - Nuclear Safety Assurance
J. Leavines, Manager, Licensing and Acting Manager, Emergency Planning
T. Lynch, Manager, Operations
J. Malara, Manager, Design Engineering
J. McGhee, Manager, Plant Maintenance
T. Trepanier, General Manager - Plant Operations
W. Trudell, Manager, Corrective Actions and Assessment

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000458/2003006-01	FIN	Unplanned reactor scram due to fluid leak in main turbine electrohydraulic control system (Section 4OA3)
05000458/2003006-02	FIN	NSW pump found to be air bound when called upon to run (Section 4OA5)

Opened

05000458/2003006-03	VIO	Failure to properly lock open condensate valve resulted in loss of feedwater flow following reactor scram (Section 4OA5)

Closed

05000458/2003-001-01	LER	Unplanned reactor scram due to fluid leak in main turbine electrohydraulic control system (Section 4OA3)
05000458/2003005-05	AV	NSW pump found to be air-bound when called upon to run (Section 4OA5)

05000458/2002007-01	AV	Failure to properly lock open condensate valve resulted in loss of feedwater flow following reactor scram (Section 4OA5)

Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Section 1R04: Equipment Alignment

- SOP-0003, “Reactor Recirculation System,” Revision 27
- PID-25-1E, “Hydraulic Recirculation Flow Control Skid A,” Revision 1
- PID-25-1F, “Hydraulic Recirculation Flow Control Skid B,” Revision 1
- USAR Section 15.3.2, “Recirculation Flow Control Valve Failure - Decreasing”
- USAR Section 15.4.5, “Recirculation Flow Control Valve Failure With Increasing Flow”
- USAR Appendix 15B, “Accident Analysis for Cycle 12"
- Technical Specifications Section 3.4.2, “Flow Control Valves”
- Recirculation system performance indicator report

LIST OF ACRONYMS

CFR	*Code of Federal Regulations*
CR-RBS	River Bend Station Condition Report
LER	licensee event report
NSW	normal service water system
NRC	U.S. Nuclear Regulatory Commission
PI	Performance Indicators
SSC	structures, systems, or components
STP	surveillance test procedure
USAR	Updated Safety Analysis Report
WOP	work order packages