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

July 23, 2003

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

SUBJECT: RIVER BEND STATION - NRC INTEGRATED INSPECTION REPORT 05000458/2003004

Dear Mr. Hinnenkamp:

On June 28, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your River Bend Station. The enclosed resident inspection report documents the inspection findings, which were discussed on July 9, 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 findings of very low safety significance (Green), evaluated under the risk significance determination process (SDP). One of these findings was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating this finding as a noncited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. If you contest this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for you denial, 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 River Bend Station.

Since the terrorist attacks on September 11, 2001, NRC has issued five Orders and several threat advisories to licensees of commercial power reactors to strengthen licensee capabilities, improve security force readiness, and enhance controls over access authorization. In addition to applicable baseline inspections, the NRC issued Temporary Instruction 2515/148, "Inspection of Nuclear Reactor Safeguards Interim Compensatory Measures," and its subsequent revision, to audit and inspect licensee implementation of the interim compensatory measures required by

order. Phase 1 of TI 2515/148 was completed at all commercial power nuclear power plants during Calender Year 2002. The NRC will continue to monitor overall safeguards and security controls at River Bend Station.

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 Website 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

Docket: 50-458
License: NPF-47

Enclosure:
NRC Inspection Report 50-458/03-04
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-458
License:	NPF-47
Report No:	50-458/03-04
Licensee:	Entergy Operations, Inc.
Facility:	River Bend Station
Location:	5485 U.S. Highway 61 St. Francisville, Louisiana
Dates:	April 13 through June 28, 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 05000458/2003004; 04/13/2003 - 06/28/2003; River Bend Station; Flood Protection Measures.

The report covered an 11-week period of routine inspection by resident inspectors. One Green noncited violation and one Green finding were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 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: Mitigating Systems

- Green. The inspectors identified a self-revealing finding for failure to control foreign material in the residual heat removal Train B equipment room which resulted in the failure of one of two floor drain pumps while the other floor drain pump was unavailable. The finding was of very low safety significance because the floor drain sump pump failure did not cause an actual loss of safety function for residual heat removal Train B.

  The inspectors determined that the licensee's failure to control foreign material in the Residual Heat Removal B equipment room, which resulted in the fouling and unavailability of floor drain Pump DFR-P3L while Pump DFR-P3E was also unavailable, was a performance deficiency. This self-revealing finding was more than minor because, if left uncorrected and a leak developed in the Residual Heat Removal B equipment room, the unavailability of both floor drain sump pumps could lead to a loss of RHR Train B. The inspectors reviewed the finding using Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Based on the results of the phase one screening of the finding, the inspectors determined that the finding was of very low safety significance because the floor drain sump pump failure did not increase the likelihood of a plant trip or degrade more than one train of any safety system. The finding is documented in the licensee's corrective action program as CR-RBS-2003-2368 (Section 1R06).

- Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The violation was for failure to incorporate necessary measures into station procedures to ensure that the design basis condition of the doors at the end of underground G-Tunnel was maintained.

  This finding is greater than minor because it was associated with flood protection measures and degraded the ability to meet the mitigating systems cornerstone objective. It had an adverse impact on the flooding potential of the G-Tunnel, which

opened into the base of the standby cooling tower, and challenged the availability of the standby service water system. The finding is of very low safety significance because of the actual condition of the door seals, the availability of two nonsafety-related sump pumps at the base of the standby cooling tower, the relative height of the control circuits and motor operators of the cooling tower inlet valves, and the possibility of operator action to manually initiate standby service water before the failure of the standby cooling tower inlet valves. This finding was documented in the licensee's corrective action program as CR-RBS-2003-1894 (Section 4OA5).

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status: When this inspection period began, the reactor was being started following Refueling Outage 11 with reactor power at 38 percent. Reactor power of 98 percent was reached on April 21, 2003. On April 22, 2003, reactor power was briefly lowered to 78 percent for a control rod sequence exchange and then was returned to 98 percent. On May 10, 2003, reactor power was increased to 100 percent. On June 3, 2003, reactor power was lowered to 57 percent for 2 days to allow for control rod sequence exchange and other planned maintenance. The plant operated at 100 percent for the remainder of the inspection period.

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

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

The national weather service issued severe thunderstorm warnings on June 14, 2003. A tornado warning was issued on June 15, 2003, for West Feliciana parish and River Bend Station. The inspectors reviewed the licensee's preparations for these adverse weather events. On June 16, 2003, the inspectors held discussions with the licensee staff to assess the actions taken. The inspectors observed plant conditions and evaluated them against the requirements of abnormal operating Procedure AOP-0029, "Severe Weather Operation," Revision 14B, and emergency planning Procedure EP-302, "Severe Weather Response," Revision 0. The inspectors also toured the plant grounds looking for loose debris which could become missiles during high winds.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

.1 Partial System Walkdowns. The inspectors performed four partial system walkdowns during this inspection period. On April 24, 2003, the inspectors walked down the high pressure core spray system while the low pressure core spray system was out of service for planned maintenance. On April 28, 2003, the inspectors walked down the fire protection water diesel driven pumps for restoration from previous maintenance activities. On April 28, 2003, the inspectors walked down residual heat removal (RHR) Train A while RHR Train B was out of service for planned maintenance. On April 28, 2003, the inspectors walked down containment atmosphere monitoring Train A while Train B was out of service for corrective maintenance. In each case, the inspectors verified the correct valve and power alignments by comparing positions of valves, switches, and electrical power breakers to the applicable system operating procedure listed in the attachment to this inspection report.

.2 Complete System Walkdowns.

During the week of June 2, 2003, the inspectors conducted a complete system walkdown of the control room fresh air system (CRFA), followed by a focused walkdown of CRFA with the system engineer, as part of a detailed review of the alignment and condition of the CRFA. The inspectors verified (1) proper valve and control switch alignments, (2) valves locked as required, (3) power supply lineup, and (4) that 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, hangers and support installation, and associated support systems status. The walkdowns included evaluation of system piping and supports to ensure: (1) snubbers did not appear to be leaking hydraulic fluid; (2) hangers were within design limits; and (3) component foundations were not degraded.

.3 Problem Identification and Resolution

A review of outstanding condition reports (CR) was performed to verify that the CRFA equipment alignment problems and deficiencies were being identified and recorded in the corrective action program. In addition, the inspectors reviewed the CR database to verify that the deficiencies with CRFA were being appropriately resolved.

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 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 fire protection engineer accompanied the inspectors during the walkdown of five of the areas. The areas inspected were:

- Control building and auxiliary building stairwells, following restoration from Temporary Alteration 2002-0026, on April 15, 2003

- Containment Elevation 141 foot, standby liquid control system area, Fire Zone RC-4/Z-7, on June 6, 2003

- Underground Tunnels T and C Elevation 67 foot, engineered safety feature power distribution cable runs, on April 28, 2003
- Turbine Building Elevation 67 foot, feedwater pump area, on April 28, 2003
- Division I Battery Charger - Standby DC Equipment Room 1A, Fire Zone C-26, on April 28, 2003
- Transformer Yard, main and auxiliary transformers, on April 28, 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,” Revision 16
- River Bend postfire safe shutdown analysis
- RBNP-038, “Site Fire Protection Program,” Revision 6

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors reviewed the actions taken by the licensee in response to the June 10, 2003, high sump level alarm for RHR B equipment room floor drain Sump DFR-TK3. The inspectors interviewed operations and maintenance personnel and reviewed the following documents during the inspection:

- CR-RBS-2003-2368, Entry Into EOP-0003, Secondary Containment and Radioactive Release Control, for RHR B sump level high, dated June 10, 2003
- Operations department “RHR B cubicle sump pump degradation contingency plan,” written June 10, 2003
- USAR Section 3.4.1, “Flood Protection”
- Control room operator logs for June 10, 2003
- Sump pump run time readings, March to June, 2003

b. Findings

Introduction. The inspectors identified a self-revealing finding for failure to control foreign material in the RHR B equipment room which resulted in the failure of one of two floor drain pumps while the other floor drain pump was unavailable. The finding was of very low safety significance (Green) because the floor drain sump pump failure did not cause an actual loss of safety function for RHR Train B.

Description. On June 4, 2000, operators requested that maintenance personnel investigate a low level alarm on RHR B equipment room floor drain Sump DFR-TK3E. On June 10, 2003, after troubleshooting and repairs, maintenance technicians added water to the sump to test floor drain sump level Switch DFR-LS21. As a result, a high level alarm occurred, requiring entry into emergency operating Procedure EOP-3, "Secondary Containment and Radioactive Release Control," Revision 11. Sump Pumps DFR-P3E and DFR-P3L did not lower the water level of RHR B equipment room floor drain Sump DFR-TK3E. When it was determined that the only inleakage to the sump was from the maintenance activity, the operators exited EOP-3. No other source of inleakage was found.

Maintenance technicians determined that the two sump pumps were not functional. The circuit breaker for Pump DFR-P3E had tripped on overload and Pump DFR-P3L had a sheared pump/motor coupling. Subsequent investigation by maintenance technicians determined that the impeller clearance on Pump DFR-P3E was out of tolerance and the impeller was rubbing in the pump casing. The pump impeller clearance was reset and Pump DFR-P3E was run to lower the level in the floor drain sump. After reviewing sump pump run time data, the inspectors determined that the last time Pump DFR-P3E ran successfully was March 29, 2003.

Following replacement of the pump/motor coupling of Pump DFR-P3L, maintenance technicians heard a grinding noise from the pump. When the pump was pulled from the sump, technicians found foreign material wrapped around the impeller in the pump. The plastic sheeting or part of a plastic bag was removed and Pump DFR-P3L was returned to service. Maintenance technicians then pumped down the floor drain sump and verified that there was no more foreign material in the sump. The licensee has not been able to determine when the foreign material was introduced into the RHR B equipment room floor drain sump.

Analysis. The inspectors determined that the licensee's failure to control foreign material in the RHR B equipment room, which resulted in the fouling and unavailability of floor drain Pump DFR-P3L while Pump DFR-P3E was also unavailable, was a performance deficiency. This self-revealing finding was more than minor because, if left uncorrected and a leak developed in the RHR B equipment room, the unavailability of both floor drain sump pumps could lead to a loss of RHR Train B. The inspectors reviewed the finding using Inspection Manual Chapter 0609, Appendix A, "Significance

Determination of Reactor Inspection Findings for At-Power Situations." Based on the results of the phase one screening of the finding, the inspectors determined that the finding was of very low safety significance (Green) because the floor drain sump pump failure did not increase the likelihood of a plant trip or degrade more than one train of any safety system (Finding 50-458/03-04-01). The finding is documented in the licensee's corrective action program as CR-RBS-2003-2368.

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

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

The inspectors reviewed the expected performance of the standby service water system with respect to its ultimate heat sink function. This included the ability of the standby cooling tower to transfer the anticipated postaccident heat loads to the atmosphere on a long-term basis following a design basis loss of coolant accident. The licensee was interviewed and the documents listed in the attachment to this report were reviewed.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On May 30, 2003, the inspectors observed simulator training of an operating crew, as part of the operator requalification training program, to assess licensed operator performance and the training evaluator's critique. Emphasis was placed on observing weekly 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 scenario observed was RBS-1-SIM-SMS-0531.02, "Loss of NPS-SWG1A/Loss of all Feedwater/Recirc Loop Rupture," dated 4/29/03.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed two primary containment airlock performance problems to assess the effectiveness of the licensee's maintenance efforts for structures, systems, or components (SSC) within the scope of the maintenance rule program. The inspectors verified the 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 the Technical Specifications.

- CR-RBS-2002-1832, 171 foot airlock interlock mechanism failure while 114 foot airlock was out of service
- CR-RBS-2003-0882, 171 foot airlock interlock mechanism failure caused primary containment breach

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
- Primary containment airlocks maintenance rule performance evaluations
- CR-RBS-2003-2039, Evaluation of primary containment airlock system deteriorating performance against maintenance rule performance criteria

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed maintenance activities to verify the performance of assessments of plant risk related to planned and emergent maintenance work activities.

The inspectors verified: (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-0096, "Risk Management Program Implementation and On-Line Maintenance Risk Assessment," Revision 04, for planned maintenance activities and emergent work involving SSCs within the scope of the maintenance rule. Specific work activities evaluated included planned and emergent work for the following weeks:

- Week of April 14, 2003, Reactor feed Pump C out of service
- Week of May 19, 2003, Division III Maintenance Outage
- Week of June 2, 2003, Planned reactor feedwater pump oil leak repair and reactor core isolation cooling (RCIC) maintenance
- Week of June 16, 2003, Planned Division III emergency core cooling system test while the unit was on-line

.2 Emergent Work Control

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. Three emergent work activities were evaluated:

- April 25-29, 2003, unplanned RCIC system out of service
- April 30 through May 1, 2003, Division II emergency diesel generator extended outage
- Week of June 8, 2003, normal service water Pump C out of service for pump rebuild and emergent work on main generator output breaker

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events (71111.14)

a. Inspection Scope

On May 7, 2003, the inspectors observed operations personnel response to an initiation of Division II standby service water during rotation of the running normal service water pumps. The inspectors reviewed operator logs and plant computer data to determine what occurred, how the operators responded, and if the response was in accordance with plant procedures. The inspectors also reviewed the following procedures used by the operators during the evolution:

- AOP-0053, "Initiation of Standby Service Water," Revision 6
- One time change to SOP-0042, "Standby Service Water," Revision 20, dated May 7, 2003

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

During the inspection period, the inspectors reviewed five operability determinations selected on the basis of risk insights. The selected samples are addressed in the CRs listed below. The inspectors assessed: (1) the accuracy of the evaluations; (2) the use and control of compensatory measures if needed; and (3) compliance with the Technical Specifications, Technical Requirements Manual, Updated Final Safety Analysis Report, 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-2003-2023, Failure of main steam line radiation monitors to pass channel check, Monitor D17-K601A out of service, reviewed on May 6, 2003
- CR-RBS-2003-1944, Spurious RCIC system isolation due to steam line flow instrumentation problems, reviewed on May 13, 2003
- CR-RBS-2003-2204, Loss of standby liquid control squib valve continuity indication, reviewed on May 27, 2003
- CR-RBS-2002-1243, Both divisions of standby service water operating during a postdesign basis accident, reviewed on May 29, 2003

- CR-RBS-2003-0048, Battery cell post leakage on safety-related batteries causes blacking of battery posts and interconnections, reviewed on May 30, 2003

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (IP 71111.16)

a. Inspection Scope

An operator workaround is defined as a degraded or nonconforming condition that complicates the operation of plant equipment and is compensated for by operator action. During the week of June 2, 2003, the inspectors reviewed the cumulative effect of the existing operator workarounds 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. In addition, the inspectors reviewed the cumulative effects of the operator workarounds on the ability of the operators to respond in a correct and timely manner to plant transients and accidents. The procedures and other documents reviewed by the inspectors during this inspection are listed in the attachment.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

Five maintenance action items (MAI) were inspected to ensure that testing activities were adequate to verify system operability and functional capability. The inspectors: (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 function(s) may have been affected; (3) reviewed each test procedure to verify that the procedure did adequately test the safety function(s) 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 five MAIs inspected are listed below:

- MAI 368407, Removal of time delay relay for RHR Pump B minimum flow Vale E12-MOVF064B closing circuit, conducted from April 30 through May 1, 2003.

- MAI 368031, 371620, 371655 Troubleshoot and replace RCIC steam flow isolation Transmitter E51-PDTN084A, conducted from May 12-13, 2003.

- MAI 371614, Replace RCIC steam line flow isolation time delay Relay E51A-K64, conducted on May 13, 2003

- MAI 368730, Troubleshoot and repair standby liquid control squib valve continuity indication, conducted on May 23, 2003

- MAI 355915, Replace and test standby liquid control Pump B discharge relief Valve C41-RVF029B, conducted on June 5, 2003

b. Problem Identification and Resolution

The inspectors reviewed CR-RBS-2003-1841, "Reactor Feedwater Pump FWS-P1C Outboard Thrust Bearing Failure." Maintenance performed, during Refueling Outage 11 to replace the feedwater pump seals, resulted in the failure of the feedwater pump thrust bearing during postmaintenance testing. The inspectors evaluated the CR for: (1) accurate identification of the problem, (2) consideration of generic issue and common cause evaluation, (3) identification of root and contributing causes, and (4) focus of identified corrective actions on resolution of problems identified.

c. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors verified, by witnessing and reviewing test data, that four risk-significant system and component surveillance tests met Technical Specification, USAR, and procedure requirements. The inspectors ensured that the surveillance tests demonstrated that the systems were capable of performing their intended safety functions and provided operational readiness. The inspectors specifically: (1) evaluated surveillance tests for preconditioning; (2) evaluated clear acceptance criteria, range, accuracy and current calibration of test equipment; and (3) verified that equipment was properly restored at the completion of the testing. The inspectors observed and reviewed the following surveillance tests and surveillance test procedures (STP):

- STP-051-4262, "RPS-Main Steam Isolation Valve-Closure Channel Calibration and LSFT (B21-F022B)," Revision 13A, performed on March 27, 2003

- STP-309-6306, "Division III HPCS EDG Air Start System Quarterly Valve Operability Test," Revision 8A, performed on April 23, 2003

- STP-309-0203, “Division III Diesel Generator Operability Test,” Revision 25, performed on April 23, 2003
- STP-309-0603, “Division III ECCS Test,” Revision 22, performed on June 17, 2003

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

During the week of June 16, 2003, the inspectors reviewed the current temporary plant modifications made to safety-related systems and components. The inspectors determined that all of the safety-related temporary modifications had been reviewed during previous inspection activities. As a result, the inspectors chose to evaluate the temporary modification made to the feedwater heater level controls setpoint adjustment on May 28, 2003, due to its risk significance in its potential to add positive reactivity to the core by lowering feedwater temperature. Specifically, the inspectors: (1) reviewed the temporary modification and its associated 10 CFR 50.59 screening against the system’s design basis documentation in the USAR; (2) verified that the installation of the temporary modification was consistent with the modification documents; and (3) verified that plant drawings and procedures were updated.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors verified the accuracy and completeness of the data used to calculate and report performance indicator data for the second quarter of 2002 through the first quarter of 2003. The inspectors used Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 2, as guidance and interviewed licensee personnel responsible for compiling the information. The following performance indicators were reviewed:

- Reactor coolant system specific activity
- RHR system unavailability
- Safety system unavailability - emergency ac power system

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed the two CRs listed below against the requirements of the licensee's corrective action program, as described in nuclear management manual Procedure LI-102, "Corrective Action Process," Revision 2, and 10 CFR Part 50, Appendix B, Criterion XVI.

- CR-RBS-2003-1983, Main steam line isolation valve - reactor protection system logic system function tests were not performed in accordance with procedure requirements, reviewed during the week of May 19, 2003.

- CR-RBS-2003-2410, Radwaste building north roll-up door will not close, reviewed during the week of June 15, 2003.

b. Findings and Observations

No findings of significance were identified.

4OA3 Event Followup (71153)

1. (Closed) Licensee Event Report (LER) 50-558/03-004-00, Automatic Initiation of Standby Service Water System due to Personnel Error

On March 28, 2003, the Division II standby service water system initiated while operators were realigning reactor plant closed cooling water to the spent fuel pool cooling heat exchanger. Operators failed to complete a procedural step aligning the reactor plant closed cooling water supply before opening the reactor plant closed cooling water return valve. As a result, a momentary low pressure signal initiated the Division II standby service water system, which functioned properly. Operators restored the proper cooling supply to the spent fuel pool cooling heat exchanger and returned the normal service water system lineup. The inspectors reviewed the LER and the root cause analysis and corrective actions documented in CR-RBS-2003-1436. No findings of significance were identified. This LER is closed.

4OA5 Other Activities

(Closed) Unresolved Item (URI) 50-458/03-03-01, Failure to maintain watertight integrity of severe weather doors compromised the availability of standby service water system

Introduction. The inspectors identified a noncited violation (NCV) for failure to comply with 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to incorporate necessary measures into station procedures to ensure that the design basis condition of the doors at the end of underground G-Tunnel was maintained.

Description. On February 21, 2003, during a rainstorm, the inspectors performed a visual inspection of the doors at the end of the underground G-Tunnel that open into the Unit 2 excavation area. The doors did not appear to be watertight and one was leaking enough water to overflow its opening into the G-Tunnel. The doors at the end of the G-Tunnel were described as watertight to a flooding level on 80 feet mean sea level (MSL) in the Unit 2 excavation area by engineering design Calculation G13.18.1.4*10, "Design of Doors TU066-01 and TU0670-H1 and evaluation of Stresses in G-Tunnel End Wall," dated July 17, 1991. Engineering Calculation G13.18.8.0*004, "Impact of the Construction of the Independent Spent Fuel Storage Installation in the Unit 2 Excavation Area and the Design Basis Flood Levels for RBS Structures," dated October 5, 2000, stated, in part, that "the maximum water ponding level in the Unit 2 excavation due to the Probable Maximum Flood Event is 79.94 feet MSL." During the rainstorm on February 21, 2003, the doors were leaking water across the seals at the top of the doors, and Door TU066-01 was leaking enough water to overflow its opening into the G-Tunnel.

On April 18, 2003, the inspectors were present when the doors were opened by the licensee to inspect and replace the seals. The door seals were cracked and aged in a manner that they would not stop water leaking past them into the G-Tunnel. Additionally, there was sand on the inside of the doors that had seeped past the seals at the base of the doors. The gaskets were replaced and retained for further evaluation by the licensee. Based on interviews with the licensee's maintenance department supervisors and research into the maintenance database, the inspectors determined that there was no routine task to inspect these door seals on a periodic basis. The licensee wrote CR-RBS-2003-1894 to evaluate the leak rate past the seals and for the mechanical maintenance planner to generate a routine task to periodically inspect the door seals.

Analysis. The finding was more than minor because it was associated with flood protection measures and degraded the ability to meet the mitigating systems cornerstone objective. It had an adverse impact on the flooding potential of the G-Tunnel and challenged the availability of the standby service water system. The G-Tunnel opened into the base of the standby cooling tower where Divisions I and II standby cooling tower inlet isolation Valves SWP-MOV055A and -B and Division III standby cooling tower inlet isolation Valve SWP-AOV599 were located. The inspectors

reviewed the finding using Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." The licensee's evaluation of the leak rate past the deteriorated seals on Doors TU066-01 and TU067-H1 determined that the leakage rate past the seals was within the capacity of the two sump pumps in the G- and F-Tunnels at the base of the standby cooling tower. Based on these results and with the concurrence of the regional senior reactor analyst, the inspectors determined that the finding was of very low safety significance (Green). Some of the factors used to make this determination include: (1) the actual condition of the seals, (2) the availability of two nonsafety-related sump pumps at the base of the standby cooling tower, (3) the relative height of the control circuits and motor operators of the cooling tower inlet valves, and (4) the possibility of operator action to manually initiate standby service water before the failure of the standby cooling tower inlet valves.

Enforcement. Because this failure to comply with 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to incorporate necessary measures into station procedures to ensure that the design basis condition of the doors at the end of underground G-Tunnel was maintained, was of very low safety significance and was entered into the licensee's corrective action program as CR-RBS-2003-1894, this violation is being treated as an NCV, consistent with Section IV. A of the NRC Enforcement Policy, NUREG-16000 (NCV 50-458/03-04-02).

4OA6 Management Meetings

Exit Meetings

On July 9, 2003, the inspectors presented the inspection results to you and other members of licensee management.

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

4OA7 Licensee Identified Violations

None

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

B. Allen, Manager, Emergency Planning
W. Brian, Director - Engineering
D. Burnett, Superintendent, Chemistry
C. Bush, Assistant Operations Manager
J. Fowler, Manager, Quality Programs
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
T. Lynch, Manager, Operations
J. Malara, Manager, Design Engineering
W. Mashburn, Manager, Programs and Components
J. McGhee, Manager, Plant Maintenance
P. Page, Acting Superintendent, Radiation Protection
T. Trepanier, General Manager - Plant Operations
W. Trudell, Manager, Corrective Actions

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Opened and Closed

50-458/03-04-01	FIN	Failure to control foreign material resulted in fouling of RHR pump room floor drain (Section 1RO6)
50-458/03-04-02	NCV	Failure to maintain watertight integrity of severe weather doors compromised the availability of standby service water system (Section 4OA5)

Closed

50-458/03-004-00	LER	Automatic initiation of standby service water system due to personnel error (Section 4OA3)

50-458/03-03-01	URI	Failure to maintain watertight integrity of severe weather doors compromised the availability of a safe shutdown system (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 Alignments (71111.04)

SOP-0030, "High Pressure Core Spray," Revision 20
SOP-0031, "Residual Heat Removal," Revision 40
SOP-0037, "Fire Protection Water System Operating Procedure," Revision 20
SOP-0058, "Control Building HVAC System," Revision 15a
SOP-0084, "Containment Atmosphere Monitoring," Revision 11
PID-15-01A, "Fire Protection Water & Engine Pumps," Revision 16
PID-22-09A, "HVAC - Control Building," Revision 17
USAR Section 6.4.2, "Habitability Systems, System Design," Revision 15
Technical Specifications Section 3.0.6, "LCO Applicability"
Technical Specifications Section 3.7.2, "Control Room Fresh Air System,"
Technical Specifications Section 3.7.3, "Control Room Air Conditioning System"
Technical Specifications Section 5.5.10, "Safety Function Determination Program"
CRFA health report and maintenance rule report

Section 1R07: Heat Sink Performance

Technical Specification 3.7, "Plant Systems," Revision 2-6"

CR-RBS-2002-01243, both divisions of standby service water operating during a postdesign basis accident

AOP-0004, "Loss of Offsite Power," Revision 24

AOP-0053, "Initiation of Standby Service Water," Revision 6

Calculation PM-194, "Cooling Tower Performance and Evaporation Losses Without Drywell Unit Coolers," Revision 6

USAR Chapter 2, "Site Characteristics"

Calculation G13.18.14.0*190-1, “Post-Accident Heat Load Development for Power Uprate Service Water Evaluations,” dated July 24, 2000

Calculation G13.18.13.2*088-0, “Temperature and Inventory Effects of Maximum Safeguards Operation on the Ultimate Heat Sink (Standby Cooling Tower),” dated June 21, 1996

Section 1R16: Operator Workarounds

Operations Department List of Operator Workarounds
List of Outstanding Procedure Change Notices against Operations Procedures
Equipment Status Turnover Sheets
Daily Plant Status Report
Operations Shift Turnover Sheets
List of Control Room Deficiencies
Shift Manager Tracking Report
Tracking Limiting Conditions of Operations Index

LIST OF ACRONYMS

CFR	*Code of Federal Regulations*
CR	condition report
CRFA	control room fresh air system
CR-RBS	River Bend Station Condition Report
FIN	finding
LER	licensee event report
MAI	maintenance action item
MSL	mean sea level
NCV	noncited violation
NRC	U.S. Nuclear Regulatory Commission
RCIC	reactor core isolation cooling system
RHR	residual heat removal system
SDP	significance determination process
SSC	structures, systems, or components
STP	surveillance test procedure
URI	unresolved item
USAR	Updated Safety Analysis Report