UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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January 16, 2003

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

SUBJECT: NRC INTEGRATED INSPECTION REPORT 50-458/02-04

Dear Mr. Hinnenkamp:

On December 28, 2002, the NRC completed an inspection at your River Bend Station. The enclosed report documents the inspection findings which were discussed on December 30, 2002, with Dwight Mims, General Manager, Plant Operations, and other members of your staff.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, 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/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Docket: 50-458
License: NPF-47

Enclosure:
NRC Inspection Report
50-458/02-04

cc w/enclosure:
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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	50-458
License:	NPF-47
Report No.:	50-458/02-04
Licensee:	Entergy Operations, Inc.
Facility:	River Bend Station
Location:	5485 U.S. Highway 61 St. Francisville, Louisiana
Dates:	September 29 through December 28, 2002
Inspectors:	P. J. Alter, Senior Resident Inspector M. O. Miller, Resident Inspector
Approved By:	D. N. Graves, Chief, Project Branch B
ATTACHMENT:	Supplemental Information

SUMMARY OF FINDINGS

River Bend Station
NRC Inspection Report 50-458/02-04

IR 05000458-02-04; Entergy Operations, Inc; on 09/29/2002-12/28/2002; River Bend Station. Routine Resident Inspection Report. No findings of significance were identified.

The inspections were conducted by the resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html.

A. Inspector Identified Findings

No findings of significance were identified.

B. Licensee Identified Findings

None.

Report Details

Summary of Plant Status: The reactor was operated at 100 percent power from the beginning of the inspection period until October 3, 2002, when reactor power was reduced to 75 percent as Hurricane Lili approached the site. The reactor was returned to 100 percent power on October 4, 2002. On October 21, 2002, reactor power was reduced to 83 percent for a short period of time to perform maintenance in the station switchyard. The reactor was operated at 100 percent power until November 25, 2002, when reactor power was reduced to 60 percent to perform a control rod pattern adjustment and other on-line maintenance. On December 7 and 17, 2002, reactor power was reduced to 65 percent to perform fuel power suppression testing in response to indications of an apparent fuel element failure. The reactor operated at 100 percent power for the remainder of the inspection period.

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

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

During the week of September 30, 2002, the inspectors observed the licensee's implementation of plant procedures to protect mitigating systems from Hurricane Lili. Specifically, the inspectors: (1) verified that the plant operators exercised control over planned and emergent work on risk significant structures, systems, and components (SSC) as weather conditions deteriorated; (2) verified that SSCs that were subject to high wind conditions were properly secured or stored within secured buildings; (3) evaluated implementation of the severe weather preparation procedures and compensatory measures for affected SSCs during the approach of Hurricane Lili on October 3, 2002; and (4) observed portions of the plant power reduction when hurricane force winds were anticipated on site. The inspectors reviewed the following documents and procedures as part of this assessment:

- GOP-0002, "Power Decrease/Plant Shutdown," Revision 25
- RBNP-089, "Hurricane Readiness," Revision 3
- AOP-0029, "Severe Weather Operation," Revision 14

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

.1 Division II Emergency Diesel Generator System Walkdown

On November 5, 2002, the inspectors performed a partial system walkdown of the Division II emergency diesel generator while the Division III emergency diesel generator was out of service for planned maintenance. The inspectors reviewed System Operating Procedure SOP-0053, "Standby Diesel Generator and Auxiliaries," Revision 35, to determine the correct system lineup. Then the inspectors walked down critical portions of the system to identify any discrepancies between the existing equipment lineup and the correct lineup.

.2 Reactor Core Isolation Cooling (RCIC) System Walkdown

On November 6 and 7, 2002, the inspectors performed a partial system walkdown of RCIC while the high pressure core spray system was out of service for planned maintenance. The inspectors reviewed System Operating Procedure SOP-0035, "Reactor Core Isolation Cooling System," Revision 21, to determine the correct system lineup. Then the inspectors walked down critical portions of the system to identify any discrepancies between the existing equipment lineup and the correct lineup.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

.1 Fire Protection Area Walkdowns

Throughout the period, the inspectors toured six plant areas important to reactor safety to observe conditions related to: (1) licensee control of transient combustibles and ignition sources; (2) the material condition, operational lineup, and operational effectiveness of fire protection systems, equipment and features; and (3) the material condition and operational status of fire barriers used to prevent fire damage or fire propagation.

- Division II emergency diesel generator room, Fire Zone DG-4/Z-1, on November 4, 2002
- Auxiliary building 114 foot elevation, west penetration area, Fire Zone AB-1/Z-3, on November 7, 2002
- Division III emergency diesel generator room, Fire Zone DG-5/Z-1, on November 13, 2002

- Fuel Building 70 foot elevation, control rod drive hydraulic pump area, Fire Zone FB-1/Z-1, on December 10, 2002

- Auxiliary building 114 foot elevation, east penetration area, Fire Zone AB-15/Z-3, on December 10, 2002

- Division I emergency diesel generator room, Fire Zone DG-6/Z-1, on December 17, 2002

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

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On November 20, 2002, 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 evaluation 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, including recent modifications implemented in the plant. The inspectors reviewed Simulator Lesson Plan RBS-1-SIM-SMS-0606.06, "Relief Valve Fails Open, Anticipated Transient Without Scram," dated October 22, 2002, as part of the inspection.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed two SSC performance problems to assess the effectiveness of the licensee's maintenance efforts for SSCs scoped under the licensee's maintenance rule program. The inspectors verified the licensee's implementation of the maintenance rule (10 CFR 50.65) for the performance problems reviewed by answering the following questions: (1) was the SSC scoped for monitoring in accordance with 10 CFR 50.65; (2) was the SSC assigned the proper safety significance; (3) were the problems characterized properly; (4) as a result of the problems, was the SSC assigned the

proper classification under 10 CFR 50.65; and (5) were the appropriate performance criteria established for the SSC or, when necessary, were appropriate goals set and corrective actions taken to restore the SSC status under the maintenance rule. The following performance problems were evaluated:

- Condition Report CR-RBS-2002-1755, Through-wall leak discovered at makeup water inlet to controlled building chilled water compression Tank HVK-TK1A, reviewed December 24, 2002

- Condition Report CR-RBS-2002-1687, Diesel-driven fire protection water Pump FPW-P1A failed to start during postmaintenance testing, reviewed December 20, 2002

The following documents were reviewed as part of this assessment:

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

- River Bend maintenance rule function list

- River Bend maintenance rule performance criteria list

- Control building chilled water system functional failure determinations

- Fire protection water functional failure determinations

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.

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 01, 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 weeks of September 30, 2002 (during approach of Hurricane Lili), and November 4, 2002 (during extended maintenance outage for Division III emergency diesel generator).

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

1. Unexpected Level Transient while Removing Feedwater Regulating Valve C (FRV C) from Service for Planned Maintenance

The inspectors reviewed operator performance during an unexpected lowering of reactor water level while removing FRV C from service for planned maintenance on November 25, 2002. The inspectors also reviewed Abnormal Operating Procedure AOP-0006, "Condensate/Feedwater Failures," Revision 13, used by the operators during the event. The inspectors reviewed operator logs and plant computer data to determine what occurred and that operators responded in accordance with plant procedures and training. In addition, the inspectors reviewed the temporary change made to Abnormal Operating Procedure AOP-0001, "Reactor Scram," Revision 19, and "just-in-time" training given to the operating crews in response to the failure of FRV C to close more than 80 percent of full open.

2. Apparent Fuel Element Failure

The inspectors reviewed and observed operations and reactor engineering personnel performance in response to an unexpected rise in off-gas pretreatment radiation levels on December 2, 2002. Subsequent radiochemistry analysis of off-gas pretreatment and reactor coolant samples indicated that there was an apparent fuel element failure. The inspectors observed portions of and reviewed the results of two fuel power suppression tests conducted on December 7 and 17, 2002. The inspectors continue to review chemistry tracking of off-gas pretreatment and reactor coolant radiochemical analysis to monitor the condition of the reactor fuel. In addition, the inspectors continue to review contingency plans for continued operation until the next refueling outage.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed two operability evaluations performed by the licensee for risk significant systems to determine that the operability was justified, such that availability was assured and no unrecognized increase in risk has occurred. Specific areas evaluated included: (1) the technical adequacy of the evaluation; (2) whether other existing degraded conditions were considered; and (3) if operability was based on compensatory measures, were these measures in place and would they work.

- CR-RBS-2002-1616, Failure of RCIC steam supply drain trap bypass Valve E51-F054, reviewed October 31, 2002

- LCO 2002-1469, Division III emergency diesel generator out of service for major engine overhaul, reviewed November 13, 2002

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 December 2, 2002, 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 the operator workarounds have on the ability of the operators to respond in a correct and timely manner to plant transients and accidents.

As part of the inspection, the inspectors reviewed the following documents:

- Operations Department Standing Orders and Policies
- Operations Department “One Time” Procedure Action Requests
- Operations Department Equipment Status Turnover Sheets
- Operations Shift Manager Turnover Checklists

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the postmaintenance testing requirements specified for five Maintenance Action Items (MAI) listed below to ensure that testing activities were adequate to verify system operability and functional capability:

- MAI 362280, Replace Division III emergency diesel generator motor-driven fuel oil booster Pump EGF-P2C, performed on November 9, 2002, reviewed November 19, 2002

- MAI 363555, Division III emergency diesel generator outage postmaintenance engine run, performed November 12, 2002, reviewed on November 20, 2002

- MAI 360134, Rebuild hydraulic control unit for control Rod 28-41, performed on November 25, 2002, reviewed on December 12, 2002
- MAI 364065, Inspect Division II hydrogen ignitors power transformer, performed on December 12, 2002, reviewed on December 18, 2002
- MAI 366517, Troubleshoot suppression pool cleanup inlet isolation Valve RHS-AOV063 unexpected closure, performed on December 19, 2002, reviewed on December 20, 2002

b. 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 surveillance tests demonstrated that the systems were capable of performing their intended safety functions and provided operational readiness. The inspectors specifically evaluated surveillance tests for preconditioning, clear acceptance criteria, range, accuracy, and current calibration of test equipment and verified that equipment was properly restored at the completion of the testing. The inspectors reviewed and or observed the following surveillance tests and surveillance test procedures (STP):

- STP-000-0102, “Power Distribution Alignment Check,” Revision 3A, performed on November 5, 2002, at 11:30 a.m., reviewed November 5, 2002
- STP-309-0203, “Division III Emergency Diesel Generator Monthly Operability Test,” Revision 24A, performed on November 11, 2002, reviewed December 10, 2002
- STP-309-6308, “Division II Emergency Diesel Generator Rear Bank Air Start System Quarterly Valve Operability Test,” Revision 3, performed on November 13, 2002, reviewed on December 19, 2002
- STP-256-6304, “Standby Service Water B Loop Valve and Pump Operability Test,” Revision 15, performed on December 8 and 13, 2002, reviewed on December 20, 2002

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

During the week of December 17, 2002, 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 already been reviewed during previous inspection activities. As a result, the inspectors chose to evaluate the temporary modification made to the isophase bus duct cooling system on December 20, 2002, due to its risk significance in reducing unnecessary plant transients resulting from erroneous indications of a loss of isophase bus duct cooling. 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; (3) verified that plant drawings and procedures were updated; and (4) reviewed the postinstallation test results to confirm the actual impact of the temporary modification on the affected system had been adequately verified.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA5 Other Activities

The inspectors completed a review of the January 2001 Institute of Nuclear Power Operations evaluation of River Bend Station.

4OA6 Management Meetings

a. Exit Meeting

The inspectors presented the inspection results to Dwight Mims, General Manager, Plant Operations, and other members of licensee management at the end of the inspection period on December 30, 2002.

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

b. Regulatory Performance Meeting

The Chief, Project Branch B, Division of Reactor Projects, conducted a regulatory performance meeting with licensee management following the resident inspection exit meeting to discuss the corrective actions associated with a White inspection initially identified and documented in NRC Inspection Report 50-458/02-05. The licensee provided the status of implementation of the remaining corrective actions.

ATTACHMENT

SUPPLEMENTARY INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

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W. Brian, Director, Engineering
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J. McGhee, Manager, Maintenance
D. Mims, General Manager, Plant Operations
T. Trepanier, Assistant General Manager, Plant Operations
W. Trudell, Manager, Corrective Action and Assessment

LIST OF ACRONYMS AND INITIALISMS USED

CFR	Code of Federal Regulations
FRV C	Feedwater Regulating Valve C
MAI	maintenance action item
NRC	U.S. Nuclear Regulatory Commission
RCIC	Reactor Core Isolation Cooling System
USAR	Updated Safety Analysis Report
SSC	structures, systems, and components
STP	surveillance test procedure