



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
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November 14, 2005

George A. Williams, Site Vice President  
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Entergy Operations, Inc.  
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Port Gibson, MS 39150

**SUBJECT: GRAND GULF NUCLEAR STATION - NRC INTEGRATED INSPECTION  
REPORT 05000416/2005004**

Dear Mr. Williams:

On September 30, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station. The enclosed inspection report documents the inspection findings, which were discussed on October 13, 2005, with you and 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.

Based on the results of this inspection, the NRC identified four findings which were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined there were violations associated with two of these findings. However, because the violations were of very low safety significance and the issues were entered into the licensee's corrective action program, the NRC is treating the findings as noncited violations, consistent with Section VI.A.1 of the NRC Enforcement Policy. The noncited violations are described in the subject inspection report. If you contest the noncited violations or their significance, you should provide a response within 30 days of the date of this inspection report, with the basis for your 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; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Grand Gulf Nuclear Station facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) 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).

Entergy Operations, Inc.

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Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

**/RA/**

Kriss M. Kennedy, Chief  
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Division of Reactor Projects

Docket: 50-416  
License: NPF-29

Enclosure:  
Inspection Report 05000416/2005004  
w/Attachment: Supplemental Information

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SISP Review Completed:  KMK  ADAMS: : Yes  No Initials:  KMK   
 : Publicly Available  Non-Publicly Available  Sensitive : Non-Sensitive

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RIV:SRI:DRP/C	RI:DRP/C	C:SPE:DRP/C	C:DRS/EB1	C:DRS/PSB
GBMiller	AJBarrett	WCWalker	CJPaulk	MPShannon
<b>E-KMK</b>	<b>E-RVAzua</b>	<b>/RA/</b>	<b>/RA/</b>	<b>/RA/</b>
11/9/05	11/10/05	11/9/05	11/8/05	11/8/05
C:DRS/OB	C:DRS/EB2	C:DRP/C		
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11/8/05	11/9/05	11/14/05		

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket: 50-416

License: NPF-29

Report: 05000416/2005004

Licensee: Entergy Operations, Inc.

Facility: Grand Gulf Nuclear Station

Location: Waterloo Road  
Port Gibson, Mississippi 39150

Dates: July 1 through September 30, 2005

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Attachment: Supplemental Information

Enclosure

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## SUMMARY OF FINDINGS

IR 05000416/2005004; 7/1/05 - 9/30/05; Grand Gulf Nuclear Station; Operability Evaluations, Access Control to Radiologically Significant Areas, Problem Identification and Resolution.

The report covered a 13-week period of inspection by resident inspectors and announced inspections by three engineering inspectors, two senior operations examiners, and a regional health physics inspector. Four Green findings, two of which were noncited violations, were identified. Two licensee-identified Green noncited violations are described in Section 4OA7 of this report. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using the 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: Initiating Events

- Green. A Green self-revealing finding was identified for the inadvertent trip of a plant service water pump due to a failure to follow procedure. In addition, the procedure did not meet its stated purpose to verify the operation of a service water pump support system, specifically the well level indication system. The licensee entered this performance deficiency in their corrective action program for resolution.

This finding is more than minor since it affected the configuration control and human performance attributes of the initiating events cornerstone and affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance (Green) since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. This finding also had crosscutting aspects associated with human performance (Section 4OA2.1).

- Green. A Green self-revealing finding was reviewed involving the failure of a newly installed corrosion monitor probe that resulted in a leak in the component cooling water system. Licensee personnel used an inadequate procedure to install the probe and therefore failed to verify the pressure retaining capability of the probe prior to installation. The licensee entered this performance deficiency in their corrective action program for resolution.

This finding is more than minor since it affected the design control attribute of the initiating events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance

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(Green) since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. This finding also had crosscutting aspects associated with human performance (Section 4OA2.1).

Cornerstone: Mitigating Systems

- Green. The inspectors reviewed a self-revealing Green noncited violation of Technical Specification 5.4.1 involving a failure to follow procedure that resulted in the disabling of required supervisory alarms on the Division II emergency diesel generator. Specifically, operators failed to reset the alarm panel following routine testing. The licensee entered this performance deficiency into their corrective action program.

This finding is more than minor since the disabling of required alarm functions for the emergency diesel generators could become a more significant safety concern if left uncorrected. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance (Green) since it did not result in an actual loss of the safety function. This finding also had crosscutting aspects associated with human performance (Section 1R15).

Cornerstone: Occupational Radiation Safety

- Green. The inspector reviewed a self-revealing noncited violation of Technical Specification 5.7.3 involving the licensee's failure to control a high radiation area with dose rates greater than 1,000 millirem per hour. Specifically, on September 22, 2005, a radiation worker was performing a visual inspection of a low pressure coolant injection pipe penetration in the drywell. The worker climbed three feet above the floor elevation, at which time the worker's electronic dosimeter alarmed with a peak dose rate of 582 millirem per hour. Radiation protection personnel performed a survey of the area and determined that dose rates were as high as 1,200 millirem per hour at one foot from the low pressure coolant injection pipe. This finding was entered into the licensee's corrective action program.

This finding is greater than minor because it is associated with the Occupational Radiation Safety Cornerstone attribute of program and process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation. The finding involves the potential for a worker's unplanned or unintended dose resulting from actions contrary to technical specifications. When processed through the Occupational Radiation Safety Significance Determination Process, the finding is of very low safety significance because it did not involve as low as reasonably achievable planning or work controls, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised (Section 2OS1).



B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

## REPORT DETAILS

### Summary of Plant Status

Grand Gulf Nuclear Station began this inspection period at full power. On August 29, 2005, power was reduced to approximately 75 percent power due to grid reliability concerns following the passage of Hurricane Katrina. The reactor plant returned to full power on September 1, 2005. On September 8, 2005, the licensee began a coastdown in power and shut the plant down for Refueling Outage 14 on September 18. The reactor plant remained shut down through the end of the inspection period.

#### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R01 Adverse Weather Protection (71111.01)

##### a. Inspection Scope

On August 28 and September 21, 2005, the inspectors reviewed Grand Gulf Nuclear Station (GGNS) site preparedness in advance of Hurricanes Katrina and Rita, respectively (two site inspection samples). The inspectors reviewed Procedures 05-1-02-VI-2, "Hurricanes, Tornadoes, and Severe Weather," Revision 106, and ENS-EP-302, "Severe Weather Response," Revision 3, and performed site walkdowns to verify the licensee had made the required preparations for severe weather conditions. Inspectors toured the plant grounds looking for loose debris that could become missiles during high winds or a tornado. The inspectors assessed plant operations to verify that systems required for safe control of the plant during adverse weather could be accessed and effectively implemented.

During the onset of summer weather conditions on August 15, 2005, the inspectors reviewed GGNS readiness to respond to hot weather conditions (one system inspection sample). The inspectors reviewed maintenance work orders and condition reports associated with hot weather protection measures to determine their impact on plant operations. The inspection also included a detailed review of the susceptible components in the pump house ventilation for the standby service water system.

##### b. Findings

No findings of significance were identified.

#### 1R04 Equipment Alignments (71111.04)

##### a. Inspection Scope

Partial System Walkdowns. The inspectors performed three partial system walkdowns of systems important to reactor safety during this inspection period in order to verify the operability of the system trains (three inspection samples). The inspectors reviewed system operating instructions, required system valve and breaker lineups, operator logs,

control room indications, valve positions, breaker positions, and control circuit indications to verify these components were in their required configuration for operability. The following walkdown inspections were conducted:

- On September 15, 2005, an inspector walked down the high pressure core spray system while the reactor core isolation cooling system was out of service for planned maintenance and surveillances.
- On September 26, 2005, an inspector walked down the Division I emergency diesel generator while the Division II diesel generator was out of service for maintenance.
- On September 30, 2005, an inspector walked down Train B of the residual heat removal system following system realignment due to planned maintenance activities.

Complete System Walkdown. The inspectors conducted a detailed review of the alignment and condition of the alternate decay heat removal system during shutdown cooling operations to determine if there were any discrepancies between the actual equipment alignment and the procedural requirements (one inspection sample). During the walkdown, the inspectors used System Operating Instruction 04-1-01-E12-2, "Shutdown Cooling and Alternate Decay Heat Removal Operation," Revision 106, to verify that major system components were correctly labeled and aligned. The inspectors also reviewed open condition reports on the system for any deficiencies that could affect the system's ability to perform its design function. The inspectors also reviewed documentation associated with operator workarounds, temporary modifications and control room deficiencies to assess their collective impact on system operation.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

Quarterly Tours. The inspectors reviewed area fire plans and performed walkdowns of six plant areas to assess the material condition and operational status of fire detection and suppression systems and equipment, the material condition of fire barriers, and the control of transient combustibles (six inspection samples). The inspectors reviewed the licensee's fire prevention Procedure 10-S-03-4, "Fire Protection: Control of Combustible Material," Revision 13, to ascertain the requirements for the required fire protection design features. Specific risk-significant plant areas included:

- Division I electrical penetration room (Room 1A407)

- Division I switchgear room (Room 1A208)
- Train A standby service water system pump House (Room 1M110)
- Division I ESF ventilation equipment room (Room OC302)
- Division I switchgear room (Room OC202)
- Low pressure core spray pump room (Room 1A119)

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

During the week of August 8, 2005, the inspectors reviewed internal flood protection features and off-normal event Procedure 05-1-02-VI-1, "Flooding," Revision 103, dealing with the potential flooding of the low pressure core spray room (one internal inspection sample). The inspectors reviewed internal flooding vulnerabilities and the protective features installed to mitigate the impact of any flooding.

During the week of August 29, 2005, the inspectors reviewed external flood protection measures associated with the projected maximum precipitation as described in Sections 2.4.2.3.3 and 2.4.10 of the Updated Safety Analysis Report (one external inspection sample). The inspectors reviewed Procedure 07-S-14-310, "Inspection of Mechanical Seals on Doors," Revision 4, and visually inspected door seals, drains, protected curbs and toe plates to ensure proper operation and material condition.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities (71111.08)

.1 Inspection Activities Other Than Steam Generator Tube Inspection, Pressurized-Water Reactor Vessel Upper Head Penetration Inspections, Boric Acid Corrosion Control

a. Inspection Scope

The inspection procedure requires review of two or three types of nondestructive examination activities and, if performed, one to three welds on the reactor coolant system pressure boundary. It also requires review of one or two examinations with recordable indications that have been accepted by the licensee for continued service.

The inspectors directly observed the following non-destructive examinations:

<u>System</u>	<u>Component/Weld Identification</u>	<u>Examination Method</u>
RPV	Longitudinal seam welds BG & BR	Ultrasonic
RPV	Nozzle N16 flange closure bolts	VT-1

The inspectors reviewed records related to the following non-destructive examinations:

<u>System</u>	<u>Component/Weld Identification</u>	<u>Examination Method</u>
RPV Internals	CS Piping bracket to RPV attachment weld lower: Item 27	VT-3 (Video reviewed)
RPV Internals	CS Piping bracket to RPV attachment weld upper: Item 28	VT-3 (Video reviewed)
RPV Internals	CS Piping bracket to RPV attachment weld upper: Item 29	VT-3 (Video reviewed)
RPV Internals	CS Piping bracket to RPV attachment weld upper: Item 30	VT-3 (Video reviewed)
RPV	FLG LIG 51-76 Vessel Flange Ligaments	Ultrasonic
RPV	1E22C001-SB-4 Pump Casing Weld/Internal Surface	Magnetic Particle
RPV Internals	Surveillance sample bracket to RPV attachment weld CCW side upper	VT-1 (Video reviewed)
RPV Internals	Surveillance sample bracket to RPV attachment weld lower	VT-1 (Video reviewed)
RPV Internals	Surveillance sample bracket to RPV attachment weld CW side upper	VT-1 (Video reviewed)
RPV Internals	CS piping bracket to RPV attachment weld upper	VT-3, EVT-1 (Video reviewed)
Reactor Recirc	1E51G004-21-8-6 Circ pipe-to-pipe weld	Ultrasonic
Reactor Recirc	1B21G230-01-08-2 Circ pipe-to-Tee fitting	Magnetic Particle

During the review and observation of each examination, the inspectors verified that activities were performed in accordance with American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements and applicable

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procedures. No defects or reportable flaws were detected during the examinations. The inspectors verified that the qualifications of all non-destructive examination technicians performing the inspections were current.

Records from two examples of welding on the reactor coolant system pressure boundary (class 2) were examined as follows:

<u>System</u>	<u>Component/Weld Identification</u>
Reactor Recirc	05-915 (FSK-S-1078A-067-C R/17) 503 (spare)
Reactor Recirc	05-918 (FSK-S-1078A-112-C R/19) 504 (spare)

Examination and testing of the welding repair conformed to ASME Code requirements.

There were no examinations with recordable indications during this or the previous outages, thus the inspectors were unable to verify that the licensee's action in such instances conformed with ASME Code.

b. Findings

No findings of significance were identified.

.2 Identification and Resolution of Problems

a. Inspection scope.

The inspection procedure requires review of a sample of problems associated with inservice inspections documented by the licensee in the corrective action program for appropriateness of the corrective actions.

The inspectors reviewed four corrective action reports which dealt with inservice inspection activities and found the corrective actions were appropriate. From this review the inspectors concluded that the licensee had an appropriate threshold for entering issues into the corrective action program and has procedures that direct a root cause evaluation when necessary. The licensee also had an effective program for applying industry operating experience.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

.1 Quarterly Inspection (71111.11Q)

a. Inspection Scope

On August 22, 2005, the inspectors observed licensed operator requalification training activities in the simulator to assess the licensee's effectiveness in conducting licensed operator training and to verify that licensed operators received the appropriate level of training required to maintain their licenses (one inspection sample). The observed training scenario included GSMS-LOR-00178, Revision 1, "Feedwater Line Break in the Drywell," which simulated an unisolable loss of coolant accident. The inspectors observed high-risk operator actions and operator activities associated with the emergency plan and reviewed previous lessons-learned items. These items were evaluated to ensure that operator performance was consistent with protection of the reactor core during postulated accidents.

b. Findings

No findings of significance were identified.

.2 Biennial Inspection

a. Inspection Scope

The inspectors interviewed five personnel, including two operators, two instructors/evaluators, and a operations support person, regarding the policies and practices for administering requalification examinations. The inspectors also reviewed operator performance on the written and operating examinations. Examination results were assessed to determine if they were consistent with the guidance contained in NUREG 1021 and Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process."

The review included an assessment of 12 operating examination job performance measures and 3 scenarios that were used in the biennial requalification cycle to determine if they provided adequate discrimination at the minimum acceptable level of operator performance.

The results of the examinations were assessed to determine the licensee's appraisal of operator performance and the feedback of performance analysis to the requalification training program. The inspectors interviewed members of the training department and reviewed minutes of training review group meetings to assess the responsiveness of the licensed operator requalification program.

Additionally, the inspectors assessed the GGNS plant-referenced simulator for compliance with 10 CFR 55.46, Simulator Facilities, using Baseline Inspection Procedure 71111.11 (Section 03.11). This assessment included the adequacy of the licensee's simulation facility for use in operator licensing examinations and for satisfying experience requirements as prescribed by 10 CFR 55.46. The inspectors reviewed a sample of simulator performance test records (transient tests, surveillance tests, and malfunction tests,) simulator deficiency report records, and processes for ensuring simulator fidelity commensurate with 10 CFR 55.46. The inspectors reviewed selected simulator deficiency reports generated by the licensee that did not result in changes to the configuration of the simulator to assess the responsiveness of the licensee's simulator configuration management program. The inspectors also interviewed members of the licensee's simulator configuration control group as part of this review.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

.1 Resident Inspector Baseline Quarterly Reviews (71111.12Q)

a. Inspection Scope

The inspectors reviewed performance-based problems involving two selected in-scope structures, systems or components (SSCs) to assess the effectiveness of the licensee's Maintenance Rule Program (two inspection samples). Reviews focused on: (1) proper Maintenance Rule scoping in accordance with 10 CFR 50.65; (2) characterization of failed SSCs; (3) safety significance classifications; (4) 10 CFR 50.65 (a)(1) and (a)(2) classifications; and (5) the appropriateness of performance criteria for SSCs classified as (a)(2) and goals and corrective actions for SSCs classified as (a)(1). Also, the inspectors reviewed the system functional failures for the last 2 years. The following systems were reviewed:

- Control rod drive hydraulic system (C11)
- Suppression pool makeup system (E30)

b. Findings

No findings of significance were identified.



.2 Biennial Maintenance Rule Implementation (71111.12B)

a. Inspection Scope

Periodic Evaluation Reviews

The inspectors reviewed the licensee's overall implementation of the Maintenance Rule, 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The inspectors reviewed the licensee's Maintenance Rule periodic assessment for January 1 - December 31, 2003. The resulting adjustments to the balance of equipment reliability and availability were also evaluated.

The inspectors reviewed systems and functions that had suffered some degraded performance or condition to assess the licensee's periodic evaluation activities. The inspectors selected the following four systems for a detailed review:

- Reactor Core Isolation Cooling
- Agastat Relays
- Condensate Storage Tank
- Instrument Air

For these systems, the inspectors reviewed the use of performance history and operating experience in adjusting preventive maintenance, (a)(1) goals, and (a)(2) performance criteria. The inspectors also reviewed adjustments to the scope of the Maintenance Rule Program and adjustments to the definitions of availability hours and required available hours.

b. Findings

No findings of significance were identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The inspectors evaluated the use of the Corrective Action Program within the Maintenance Rule Program. The review was accomplished by the examination of a sample of corrective action documents and work orders. The purpose of the review was to determine that the identification of problems and implementation of corrective actions were acceptable. On September 27, 2005, an additional followup inspection was performed to confirm acceptability of the Condensate Storage Tank structural inspection.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

Throughout the inspection period, the inspectors reviewed weekly and daily work schedules to determine when risk-significant activities were scheduled. The inspectors discussed five selected activities with operations and work control personnel regarding risk evaluations and overall plant configuration control (five inspection samples). The inspectors discussed emergent work issues with work control center personnel and reviewed the prioritization of scheduled activities. The inspectors verified the performance of plant risk assessments related to planned and emergent maintenance activities as required by 10 CFR 50.65(a)(4) and plant Procedure 01-S-18-6, "Risk Assessment of Maintenance Activities," Revision 3. Specific maintenance work orders (WO) reviewed during this period included:

- WO 56580, ESF Transformer 12 maintenance
- WO 51003378, Hydrogen analyzer valve troubleshooting
- WO 35463, Residual heat removal system heat exchanger flush
- WO 44604, Low pressure core spray Valve E21F012 replacement
- WO 55742, Reactor recirculation system Valve B33F067B replacement

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Non-Routine Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors reviewed operator response to two nonroutine events during the inspection period (two inspection samples). In addition to direct observation of operator performance, the inspectors reviewed procedural requirements, operator logs, and plant computer data to determine whether the response was in accordance with plant procedures and training. The following two events were reviewed:

- On July 2, 2005, the inspectors observed control room personnel as they reduced power to exercise the control rod drive mechanisms and to perform turbine stop valve and control valve testing. The inspectors observed control room shift personnel performing the pre-evolution brief, establishing prerequisites, adjusting recirculation flow, and maneuvering control rods.

- On August 29, 2005, the inspectors observed operations personnel perform a power reduction to approximately 75 percent power at the request of the load dispatcher due to grid reliability concerns following the passage of Hurricane Katrina. The inspectors observed operator procedural compliance and response throughout the evolution.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected six operability evaluations performed by the licensee during the report period involving risk-significant SSCs (six inspection samples). The inspectors evaluated the technical adequacy of the operability determinations, determined whether appropriate compensatory measures were implemented, and determined whether the licensee considered all other pre-existing conditions, as applicable. Additionally, the inspectors evaluated the adequacy of the licensee's problem identification and resolution program as it applied to operability evaluations as specified in Procedure 01-S-06-44, "Operability Assessment," Revision 106. Specific operability evaluations reviewed are listed below.

- CR-GGN-2005-2968, Reactor recirculation system flow control Valve A
- CR-GGN-2005-2880, Division II emergency diesel generator jacket water heater
- CR-GGN-2005-3051, Division II emergency diesel generator lube oil level
- CR-GGN-2005-3055, Refueling platform main hoist
- CR-GGN-2005-3167, Standby service water system fan motors
- CR-GGN-2005-3290, Standby service water system Pump A discharge valve

b. Findings

Introduction. The inspectors reviewed a self-revealing Green noncited violation of Technical Specification (TS) 5.4.1 involving the licensee's failure to follow a procedure that resulted in the disabling of required supervisory alarms on the Division II emergency diesel generator.

Description. The emergency diesel generators at GGNS are each provided with a local alarm panel that monitors 50 separate alarm conditions on the diesel generators. In the event an alarm condition is received for any of the monitored parameters, a local alarm is generated and remote annunciation is provided in the control room in the form of a diesel generator "Trouble" alarm. Should an alarm condition render the diesel generator incapable of responding to an emergency start signal, a separate "Auto Start Not Available"

annunciator is received in the control room, except for the case of a loss of control air pressure. Per Section 8.3.1.1.4.1 of the Updated Safety Analysis Report, a loss of control air pressure will only result in a diesel generator "Trouble" alarm despite rendering the diesel generator incapable of starting in an emergency.

A GGNS operator completed the daily required rounds for the Division II diesel generator during the night shift on July 24, 2005. Procedure 02-S-01-35, "Outside Rounds," Revision 26, directed the operator to test the annunciators on the diesel alarm panel in accordance with Attachment II of the same procedure. Although Attachment II instructed the operator to reset the annunciators after testing, the operator did not depress the reset button after he completed the test.

Later in the day, on July 24, 2005, a security officer performing rounds in the diesel building discovered that all the annunciator windows were lit on the Division II diesel generator local alarm panel. An operator and a technician dispatched from the control room to investigate determined that the alarm panel had not been reset following the last test of the annunciators. The operator and technician also discovered that with the panel in test, both the local alarms and the remote control room "Trouble" alarm were disabled. Consequently, the control room had no indication of alarm conditions for the diesel generator during the time the panel was in test, including a loss of control air pressure which could have rendered the diesel incapable of starting in an emergency.

Analysis. The failure to follow station procedures was a performance deficiency which affected the Mitigating Systems Cornerstone since it was associated with mitigating equipment. This finding was more than minor since the disabling of required supervisory alarm functions for the emergency diesel generators could become a more significant safety concern if left uncorrected. Based on the results of a Significance Determination Process Phase 1 evaluation, this finding was of very low safety significance (Green) since it did not represent an actual loss of safety function. This finding had crosscutting aspects associated with human performance.

Enforcement. Technical Specification 5.4.1 (a) requires written procedures to be implemented as recommended by Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Appendix A recommends procedures governing log entries. Attachment II of Procedure 02-S-01-35, "Outside Rounds," Revision 26, directs operators to reset the emergency diesel generator annunciator panel at the completion of testing. Contrary to this requirement, an operator failed to reset the annunciator panel which disabled required alarm functions for the diesel generator as described in the Updated Safety Analysis Report. Because this violation was of very low safety significance and was entered in the corrective action program as CR-GGN-2005-2880, this violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000416/2005004-01, Disabling of Diesel Generator Alarms Due to Failure to Follow Procedure.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed postmaintenance test procedures and associated testing activities for five selected risk-significant mitigating systems (five inspection samples). In each case, the associated work orders and test procedures were reviewed against the attributes in Inspection Procedure 71111.19 to determine the scope of the maintenance activity and to determine if the testing was adequate to verify equipment operability. The reviewed activities were:

- WO 47714, Diesel driven fire pump maintenance
- WO 50603, Secondary containment isolation Valve T42F012 actuator rebuild
- WO 62939, Secondary containment isolation Valve M41F008 actuator rebuild
- WO 70881, Standby gas treatment system accident monitor
- WO 70050, Standby liquid control continuity monitoring circuit

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

The inspectors evaluated the licensee's outage activities associated with Refueling Outage 14 to ensure that: risk was considered in developing the outage schedule; administrative risk reduction methodologies were implemented to control plant configuration; mitigation strategies were developed for losses of key safety functions; and the operating license and TS requirements were satisfied to ensure defense-in-depth. Specific activities observed included:

- Reactor plant shutdown and cooldown operations
- Operation of the alternate decay heat removal system
- Spent fuel pool cooling operations during low water level conditions
- Refueling floor operations including reactor internal disassembly
- Reactor water inventory controls during containment upper pool drain down
- Initial drywell entry inspections

- Reviews of the outage safety assessment, Revision 1, and shutdown operations protection plan, Revision 6

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed performance of surveillance test procedures and reviewed test data for six selected risk-significant SSCs (six inspection samples) to assess whether the SSCs satisfied the TSSs, Updated Final Safety Analysis Report, Technical Requirements Manual, and licensee procedural requirements and to determine if the testing appropriately demonstrated that the SSCs were operationally ready and capable of performing their intended safety functions. The following tests were inspected:

- 06-OP-1C11-V-0003, "Rod Withdrawal Limiter Rod Block Functional Test," Revision 101
- 06-OP-1E61-M-0001, "Post-LOCA Drywell Vacuum Breaker Operability," Revision 102
- 06-IC-1C11-R-0002, "Scram Discharge Volume High Water Level Calibration," Revision 102
- 06-OP-1P41-Q-0004, "Standby Service Water System A Valve Operability Test," Revision 115
- 06-OP-1C11-M-0001, "Control Rod Operability," Revision 103
- 06-OP-1P81-M-0002, "Division III Standby Diesel Generator Operability," Revision 118

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the three temporary alterations listed below (three inspection samples) to assess the following attributes: (1) the adequacy of the safety evaluation; (2) the consistency of the installation with the modification documentation; (3) the updating of drawings and procedures, as applicable; and (4) the adequacy of post-installation testing.

- Temporary Alteration 2005-0033, Alternate Supply for Radial Well #3
- Temporary Alteration 2005-0036, Bypass Zone Interlocks for the Refuel Bridge
- Temporary Alteration 2005-0035, Bypass Refuel Bridge Reverse Collision Limit Switch

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Observation (71114.06)

a. Inspection Scope

The inspectors observed one planned emergency preparedness quarterly drill conducted on July 20, 2005. The inspectors reviewed the drill scenario to determine if it reflected realistic plant configurations. The inspectors observed GGNS personnel at various locations during the drill including the control room simulator, the technical support center, the emergency operations facility, and the operations support center. The inspectors focused on the ability of the emergency response organization to properly classify the simulated emergencies using the emergency action levels, their ability to activate the station emergency plan and procedures, and their ability to make proper and timely notifications as appropriate.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety [OS]

2OS1 Access Control To Radiologically Significant Areas (71121.01)

a. Inspection Scope

This area was inspected to assess the licensee's performance in implementing physical and administrative controls for airborne radioactivity areas, radiation areas, high radiation areas, and worker adherence to these controls. The inspector used the requirements in 10 CFR Part 20, the TSs, and the licensee's procedures required by TSs as criteria for determining compliance. During the inspection, the inspector interviewed the radiation protection manager, radiation protection supervisors, and radiation workers. The inspector performed independent radiation dose rate measurements and reviewed the following items:

- Performance indicator events and associated documentation packages reported by the licensee in the Occupational Radiation Safety Cornerstone

- Controls (surveys, posting, and barricades) of radiation, high radiation, or airborne radioactivity areas
- Radiation work permit, procedure, and engineering controls, and air sampler locations
- Conformity of electronic personal dosimeter alarm set points with survey indications and plant policy; workers' knowledge of required actions when their electronic personal dosimeter noticeably malfunctions or alarms
- Barrier integrity and performance of engineering controls in airborne radioactivity areas
- Physical and programmatic controls for highly activated or contaminated materials (non-fuel) stored within spent fuel and other storage pools
- Self-assessments, audits, licensee event reports, and special reports related to the access control program since the last inspection
- Corrective action documents related to access controls
- Licensee actions in cases of repetitive deficiencies or significant individual deficiencies.
- Radiation work permit briefings and worker instructions
- Adequacy of radiological controls such as required surveys, radiation protection job coverage, and contamination controls during job performance
- Dosimetry placement in high radiation work areas with significant dose rate gradients
- Controls for special areas that have the potential to become very high radiation areas during certain plant operations.
- Posting and locking of entrances to all accessible high dose rate - high radiation areas and very high radiation areas
- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Adequacy of the licensee's internal dose assessment for any actual internal exposure greater than 50 millirem CEDE.
- Changes in licensee procedural controls of high dose rate - high radiation areas and very high radiation areas.

The inspector completed 21 of the required 21 samples.



b. Findings

Introduction. The inspector reviewed a Green self-revealing noncited violation of TS 5.7.3 related to the licensee's failure to control a high radiation area with dose rates greater than 1000 millirem per hour.

Description. On September 22, 2005, a radiation worker was asked by his supervisor to perform visual inspection of the N6C low pressure coolant injection pipe penetration located approximately 11 feet above the 147-foot elevation of the drywell. The inspection required the worker to raise himself approximately three feet above the floor of the 147-foot elevation. The worker's electronic dosimeter went into a dose rate alarm, and upon logging out it was discovered that the dosimeter had received a peak dose rate of 582 millirem per hour. Radiation protection personnel performed a survey of the work area and determined that dose rates were as high as 1,200 millirem per hour at one foot from the low pressure coolant injection pipe. Although the worker did not enter this area, there were no controls in place to prevent entry.

Analysis. The failure to control a locked high radiation area is a performance deficiency. This finding is greater than minor because it affects the Occupational Radiation Safety Cornerstone objective to ensure adequate protection of the worker health and safety from exposure to radiation and is associated with the cornerstone attribute of program and process. The finding involved the potential for a worker's unplanned or unintended dose resulting from actions contrary to TSs. When the finding was processed through the Occupational Radiation Safety Significance Determination Process it was determined to be of very low safety significance (Green) because it was not associated with as low as reasonably achievable (ALARA) planning or work controls, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.

Enforcement. Technical Specification 5.7.3, states, in part, that individual high radiation areas with radiation levels greater than or equal to 1000 millirem per hour, accessible to personnel, that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, or that is not continuously guarded, shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device. On September 22, 2005, a radiation worker had the potential to be exposed to a radiation field greater than 1000 millirem per hour because the licensee failed to post, barricade, and activate a flashing light as a warning device in the area. Because the finding was of very low safety significance and has been entered into the corrective action program as Condition Report CR-GGN-2005-03642, this violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy: NCV 50-416/200504-02, Failure to Control a High Radiation Area with Dose Rates Greater than 1000 Millirem per Hour.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification

###### a. Inspection Scope

The inspector sampled licensee submittals for the performance indicators listed below for the period from March 2004 through September 2005. To verify the accuracy of the performance indicator data reported during that period, performance indicator definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the basis in reporting for each data element.

###### Occupational Radiation Safety Cornerstone

###### Occupational Exposure Control Effectiveness Performance Indicators

Licensee records reviewed included corrective action documentation that identified occurrences in high radiation areas with dose rates greater than 1,000 millirem per hour at 30 centimeters (as defined in TSSs), very high radiation areas (as defined in 10 CFR 20.1003), and unplanned personnel exposures (as defined in NEI 99-02). Additional records reviewed included "as low as is reasonably achievable" records and whole body counts of selected individual exposures. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the performance indicator data. In addition, the inspector toured plant areas to verify that high radiation and very high radiation areas were properly controlled.

###### Public Radiation Safety Cornerstone

###### Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences

Licensee records reviewed included corrective action documentation that identified occurrences for liquid or gaseous effluent releases that exceeded performance indicator thresholds and those reported to the NRC. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the performance indicator data.

###### b. Findings

No findings of significance were identified.

##### 4OA2 Identification and Resolution of Problems (71152)

###### .1 Annual Sample Review

###### a. Inspection Scope

The inspectors selected Condition Reports CR-GGN-2005-2575, -2783, and -3016 for detailed review (three inspection samples). These condition reports were associated with

an inadvertent trip of a plant service water pump, an unposted high radiation area, and a partial loss of component cooling water, respectively. The inspectors evaluated the condition reports and corrective actions taken against the requirements of the licensee's corrective action program as described in Administrative Procedure EN-LI-102, "Corrective Action Process," Revision 1, and the requirements of 10 CFR Part 50, Appendix B.

b. Findings and Observations

In addition to the following findings, one licensee-identified very low safety significance violation was reviewed and is documented in Section 4OA7 of this report.

(1) Inadvertent Plant Service Water Pump Trip

Introduction. The inspectors reviewed a self-revealing Green finding related to the inadvertent trip of a plant service water pump due to a failure to follow procedure. In addition, the procedure did not adequately verify the capability of the service water well level indicating system.

Description. The plant service water (PSW) system at GGNS supplies cooling water for various nonessential heat loads throughout the plant. The system is supplied with well water from four wells containing two pumps each. The water level in the wells is determined by a pressurized air bubbler system that is maintained by two air compressors. None of the components in the PSW system are safety-related.

For much of 2005, one well and its associated pumps were unavailable due to maintenance to refurbish the well internals. This significantly challenged the ability of the remaining pumps to supply sufficient cooling water for the plant to remain at full rated thermal power during the late summer when ambient temperatures were high and the Mississippi River level (driving force for water to fill the wells) was low. During these periods, all six pumps were required to operate for the plant to remain at full rated thermal power.

On July 3, 2005, an operator was dispatched to perform Equipment Performance Instruction (EPI) 04-1-03-P44-1, "PSW Caisson Compressor/Receiver Checks," Revision 6, to verify the performance of the two air compressors used to measure well level. The procedure was intended to verify that each compressor was capable of maintaining sufficient air receiver pressure for the well level bubbler system independent of the other compressor. After completing the procedure at Well #3, the operator questioned how the procedure had adequately tested both compressors. While marking up his copy of the procedure with recommended changes, the operator failed to reopen the discharge valve for one of the compressors.

Within two hours of performing the EPI on Well #3, one plant service water pump at the well tripped due to an indicated low well water level. The operator responded to the well and noticed that the air receiver pressure was low, resulting in a false indication of low well water level. Although one air compressor was running, it was unable to maintain pressure in the air receiver. The operator opened the discharge valve for the second air compressor, which then started and restored air receiver pressure. Level indication then returned and the plant service water pump was restarted.

The licensee determined that the cause of the loss of level was human performance error in that the operator did not restore the air compressors to service in accordance with the EPI following testing. As a result of this event, the licensee discovered that the EPI did not adequately verify the capability of the installed air compressors. Corrective actions included a revision to the EPI to more accurately test the air compressors and replacement of the degraded air compressor.

Analysis. The performance deficiency associated with this finding was a failure to follow procedure in restoring the air compressors to service following testing. Additionally, the procedure itself was inadequate in that it failed to identify a degraded air compressor, resulting in an inadvertent trip of a plant service water pump when the operator failed to reopen the discharge valve for the other compressor. This finding was more than minor since it affected the configuration control and human performance attributes of the initiating events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding was of very low safety significance (Green) since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood.

This finding had crosscutting aspects associated with human performance. The operator failed to open the discharge valve of the second air compressor as required by the procedure. Additionally, the procedure used by the operator was not adequate for its intended purpose in that it did not demonstrate the capability of each air compressor operating independently.

Enforcement. The components affected by this finding were not safety-related; therefore, no violation of regulatory requirements occurred. The licensee entered this finding into the corrective action program as CR-GGN-2005-2575. This finding is identified as FIN 05000416/2005004-03, Inadvertent Plant Service Water Pump Trip.

## (2) Improper Maintenance Results in Partial Loss of Component Cooling Water (CCW)

Introduction. A self-revealing Green finding was reviewed related to the failure of a newly installed corrosion monitor probe that resulted in a leak in the CCW system.

Description. The CCW system at GGNS is a nonsafety-related system that provides cooling water to several nonessential heat exchangers in the auxiliary building. The water in the CCW system is chemically treated to limit corrosion of system components. A corrosion rack mounted downstream of the CCW pumps is installed to monitor the corrosion rate within the CCW system. The corrosion rack consists of four ports, of which two or three are usually occupied with a metallic plate or "coupon." A plug is installed in the unoccupied spare ports. The corrosion rack manufacturer supplies an electronic corrosion monitoring probe that can be installed in one of the spare ports.

On August 3, 2005, a GGNS water specialist accompanied by an operator and a vendor representative installed a corrosion monitoring probe on the corrosion rack in the CCW system. Since the details of the corrosion rack were not shown on the system drawings,

system engineering informed the water specialist that the installation of the probe was not a configuration change, so the requirements of Procedure 01-S-06-48, "Configuration Control Program," Revision 0, to obtain a full engineering review of the installation did not apply. Since no design package was required, the water specialist utilized Chemistry Instruction 08-S-04-909, "Changing Coupons in Closed Loop Cooling Systems," Revision 1, to install the probes, even though this procedure did not specifically discuss the installation of a probe in place of a coupon in the corrosion rack ports.

Approximately twelve hours after installation, the corrosion monitoring probe in the CCW system was ejected, resulting in low CCW pressure and surge tank level alarms in the control room. Operators responded promptly and were able to isolate the corrosion rack before a total loss of CCW occurred. Subsequent investigation determined that the corrosion monitoring probe was ejected because it was not designed for the typical CCW system operating pressure. The probe was rated for 100 pounds per square inch pressure, whereas the typical CCW system operating pressure is about 110 pounds per square inch.

Analysis. The use of an inadequate procedure for the installation of corrosion monitor probes was a performance deficiency which affected the Initiating Events cornerstone. The procedure used to install the probes was not adequate in that it did not contain any description of the probes or instructions for probe installation in lieu of a coupon. This finding was more than minor since it affected the design control attribute of the initiating events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding was of very low safety significance (Green) since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. This finding had crosscutting aspects associated with human performance in that no procedure was available for the installation of corrosion monitoring probes which led directly to the human performance error.

Enforcement. The components affected by this finding were not safety-related; therefore, no violation of regulatory requirements was identified. The licensee entered this finding into the corrective action program as CR-GGN-2005-3016. This finding is identified as FIN 05000416/2005004-04, Improper Maintenance Results in Partial Loss of Component Cooling Water.

## .2 Daily Condition Report Review

### a. Inspection Scope

In order to identify repetitive equipment failures or specific human performance issues for followup, the inspectors performed a daily screening of all items entered into the licensee's corrective action program. This review also assessed whether the licensee was identifying issues at an appropriate threshold for entry into the corrective action program.

### b. Findings and Observations

No findings of significance were identified.

#### 40A6 Meetings, including Exit

On July 30, 2005, the inspectors briefed Mr. J. Miller, Nuclear Training Manager, and other members of the licensee's management of the results of the biennial operator requalification inspection. After final review of the overall biennial requalification exams, the inspectors conducted a teleconference exit with the licensee on September 13, 2005. The inspectors verified that no proprietary information was provided during the inspection.

On August 26, 2005, the inspector presented the biennial maintenance rule inspection results to Mr. G. Williams, Vice President, Operations and members of his staff. On October 3, 2005, after review of additional information provided by the licensee, the inspector presented the final inspection results to Mr. C. Bottemiller, Manager, Plant Licensing, who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On September 30, 2005, the inspectors presented the results of this Inservice Inspection to Mr. G. Williams, Vice President, Operations, and other members of licensee management, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

On September 30, 2005, the health physics inspector presented his inspection results to Mr. G. Williams, Vice President, Operations, and other members of his staff, who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On October 13, 2005, the senior resident inspector presented the inspection results to Mr. G. Williams, Vice President, Operations, and members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspections by the resident inspectors.

#### 40A7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy for being dispositioned as noncited violations.

- Technical Specification 5.7.1 states, in part, that each high radiation area shall be barricaded and conspicuously posted as a high radiation area. During a plant tour on July 7, 2005, licensee personnel discovered that a required high radiation area posting sign was missing. The posting was for the turbine building roof and should have been on a roof access ladder located inside the turbine building. The roof hatch was not used for any normal access and was properly posted as a Controlled Access Area exit. Use of the hatch would have required notification of Radiation Protection for access and notification of Chemistry to ensure proper monitoring controls for the open hatch. The hatch had not been opened since posting was established following the last refueling outage. This event is documented in the licensee's corrective action program as

CR-GGN-2005-2738. This finding is of very low safety significance because it did not involve ALARA planning and controls, there was no personnel overexposure, there was no substantial potential for overexposure, and the finding did not compromise the licensee's ability to assess dose.

- 10 CFR 20.1904(a) requires that licensed material bears a durable, clearly visible label bearing the radiation symbol and the words "Caution Radioactive Material." Contrary to this requirement, on October 18, 2004, the licensee identified two pieces of wrapped radioactive equipment located in the auxiliary building that did not bear a clearly visible "Caution Radioactive Material" label. The radioactive equipment had a radioactive material label, but it was underneath the equipment and was not clearly visible to workers. This event was documented in the corrective action program as Condition Report CR-GGN-2004-03789. This violation is of very low safety significance because no overexposure or substantial potential for overexposure to personnel occurred.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee Personnel

C. Abbott, Supervisor, Quality Assurance  
D. Barfield, Manager, Outage  
C. Bottemiller, Manager, Plant Licensing  
M. Causey, Senior Lead Technical Specialist  
R. Collins, Manager, Operations  
R. Bryan, General Manager, Plant Operations  
L. Eaton, Senior Lead Engineer  
C. Ellsaesser, Manager, Planning and Scheduling  
M. Guynn, Manager, Emergency Preparedness  
S. Humphries, Emergency Planner  
J. Ingram, Ironworker Foreman, Maintenance and Support  
M. Krupa, Director, Nuclear Safety Assurance  
M. Larson, Senior Licensing Engineer  
M. Rohrer, Manager, System Engineering  
F. Rosser, Supervisor, Radiation Protection  
G. Sparks, Manager, Design Engineering  
P. Stokes, Radioactive Waste Specialist  
R. Sumrall, Emergency Planner  
D. Wicks, Senior Health Physicist, Radiation Protection  
G. Williams, Vice President, Operations  
D. Wiles, Director, Engineering  
D. Wilson, Supervisor, Design Engineering  
R. Wilson, Superintendent, Radiation Protection  
P. Worthington, Supervisor, Engineering  
H. Yeldell, Manager, Maintenance

#### NRC Personnel

W. Walker, Senior Project Engineer, Reactor Project Branch C  
R. Azua, Project Engineer, Reactor Project Branch C

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

#### Opened and Closed

05000416/2005004-01	NCV	Disabling of Diesel Generator Alarms Due to Failure to Follow Procedure (Section 1R15)
05000416/2005004-02	NCV	Failure to Control a High Radiation Area with Dose Rates Greater Than One Rem per Hour (Section 2OS1)
05000416/2005004-03	FIN	Inadvertent Plant Service Water Pump Trip (Section 4OA2)
05000416/2005004-04	FIN	Improper Maintenance Results in Partial Loss of Component Cooling Water (Section 4OA2)



## LIST OF DOCUMENTS REVIEWED

### Procedures

EN-LI-102, "Corrective Action Process," Revision 1  
 01-S-06-44, "Operability Assessment," Revision 106  
 01-S-18-6, "Risk Assessment of Maintenance Activities," Revision 3  
 01-S-06-05, "Reportable Events or Conditions," Revision 106  
 CE-P-05.11 "EOOS Model Development and Control," Revision 1  
 EN-WM-101, "On-Line Work Management Process," Revision 0  
 ENS-DC-121, Maintenance Rule, Revision 2  
 ENS-EP-302, "Severe Weather Response," Revision 3  
 02-S-01-17, "Control of Limiting Conditions for Operability," Revision 111  
 05-1-02-VI-2, "Hurricanes, Tornadoes, and Severe Weather," Revision 106  
 05-1-02-VI-1, "Flooding," Revision 103  
 05-1-02-I-4, "Loss of AC Power," Revision 32  
 05-1-02-V-11, "Loss of Plant Service Water," Revision 26  
 10-S-03-4, "Control of Combustible Materials," Revision 13  
 04-1-01-E22-1, "High Pressure Core Spray System," Revision 107  
 04-1-01-E12-1, "Residual Heat Removal System," Revision 126  
 04-1-01-E12-2, "Shutdown Cooling Operation," Revision 106  
 04-1-01-P75-1, "Standby Diesel Generator System," Revision 68  
 01-S-08-2, "Exposure and Contamination Control," Revision 115  
 08-S-02-20, "Establishing and Posting Controlled Areas," Revision 19  
 RP-108, "Radiation Protection Posting," Revision 2  
 08-S-02-50, "Radiological Surveys and Surveillances," Revision 113  
 08-S-02-75, "Coverage and Control of Refueling Operations," Revision 9  
 17-S-02-301, "NNM Movement and Inventory Control," Revision 2  
 CEP-NDE-0111, Certification of Ultrasonic Examination Personnel, Revision 0  
 CEP-NDE-0112, Certification of Visual Testing (VT) Personnel, Revision 1  
 CEP-NDE-0110, Certification of NDE Personnel, Revision 1  
 NDE-1, Training, Examination and Certification of NDE Personnel, Revision 18  
 CEP-NDE-0404, Ultrasonic Examination of Ferritic Piping Welds (ASME Sec. XI), Revision 0  
 CEP-NDE-0411, Manual Ultrasonic Examination of RPV Welds, Revision 0  
 CEP-NDE-0426, Ultrasonic Manual Examination of Class 1 Reactor Vessel Welds, Revision 0  
 CEP-NDE-0901, Program Section for VT-1 Inspections, Revision 0  
 CEP-NDE-0902, Program Section for VT-2 Inspections, Revision 0  
 CEP-NDE-0903, Program Section for VT-3 Inspections, Revision 0  
 CEP-NDE-0641, Liquid Penetrant Examination for ASME Section XI, Revision 1  
 CEP-NDE-0731, Magnetic Particle Examination (ASME Sec. XI), Revision 0  
 CEP-NDE-0424, Manual Ultrasonic Examination of the RPV Flange Ligament Areas, Revision 0  
 GE-VT-206, In-vessel Visual Inspection (IVVI) of BWR 6 RPV Internals, Revision 7

### Work Orders / Maintenance Action Items

35463	50603	56580	60752	70050
35963	51003378	58977	62934	70881
44604	55679	59847	63563	70928
47714	55742	60303	68005	

### Condition Reports

CR-GGN-2003-0914	CR-GGN-2004-2649	CR-GGN-2005-2580
CR-GGN-2003-1228	CR-GGN-2004-2977	CR-GGN-2005-2583
CR-GGN-2003-1234	CR-GGN-2004-3016	CR-GGN-2005-2738
CR-GGN-2003-1709	CR-GGN-2004-3284	CR-GGN-2005-2783
CR-GGN-2003-2122	CR-GGN-2004-3666	CR-GGN-2005-2880
CR-GGN-2004-0321	CR-GGN-2004-3689	CR-GGN-2005-2968
CR-GGN-2004-0361	CR-GGN-2004-3766	CR-GGN-2005-3016
CR-GGN-2004-0377	CR-GGN-2004-3789	CR-GGN-2005-3035
CR-GGN-2004-0378	CR-GGN-2004-3800	CR-GGN-2005-3049
CR-GGN-2004-0401	CR-GGN-2004-3881	CR-GGN-2005-3051
CR-GGN-2004-0954	CR-GGN-2004-4158	CR-GGN-2005-3055
CR-GGN-2004-0991	CR-GGN-2005-0150	CR-GGN-2005-3167
CR-GGN-2004-1096	CR-GGN-2005-0155	CR-GGN-2005-3257
CR-GGN-2004-1119	CR-GGN-2005-0160	CR-GGN-2005-3262
CR-GGN-2004-1212	CR-GGN-2005-0175	CR-GGN-2005-3290
CR-GGN-2004-1224	CR-GGN-2005-0930	CR-GGN-2005-3508
CR-GGN-2004-1385	CR-GGN-2005-0962	CR-GGN-2005-3541
CR-GGN-2004-1574	CR-GGN-2005-1082	CR-GGN-2005-3634
CR-GGN-2004-1583	CR-GGN-2005-1172	CR-GGN-2005-3642
CR-GGN-2004-1601	CR-GGN-2005-1341	CR-GGN-2005-3659
CR-GGN-2004-1626	CR-GGN-2005-1354	CR-GGN-2005-3732
CR-GGN-2004-1708	CR-GGN-2005-1908	CR-GGN-2005-3744
CR-GGN-2004-1843	CR-GGN-2005-2545	CR-GGN-2005-3752
CR-GGN-2004-1858	CR-GGN-2005-2575	CR-GGN-2005-4031

### Miscellaneous Documents

Rolling 18 Month Unavailability - E51 (RCIC)  
Rolling 18 Month Unavailability - Unit 1 Compressor (IA)  
Rolling 18 Month Unavailability - Unit 2 Compressor (IA)  
Entergy South Quarterly Failure Trending for Relays  
Maintenance Rule Periodic Assessment for 2003  
QA-8-2003-GGNS-1, Quality Assurance Audit Report  
LER 2004-001 Unplanned Loss of Alternate Decay Heat Removal System Operability  
OE 18132 600 VAC Molded Case Circuit Breaker Failure  
Training Evaluation Action Requests: 2005-225; 278; 338; 339  
Training Revisioniew Group Meeting Minutes from 9/20/04; 10/27/04; 3/9/05; 3/25/05; 6/14/05  
Simulator Deficiency Reports 05-0126; 05-0115; 05-0130; 05-149  
ER-GG-2005-0051-000, Revision 0  
ER-GG-2001-2-7-000, Revision 0  
E-P8-T A8, Argon Welding Procedure Specification (WPS), Revision 0

### Welding Documents

WPS E-P1-T-A1, Welding Procedure Specification, Revision 1  
PQR 015, Procedure Qualification Record, Revision 1  
PQR 029, Procedure Qualification Record, Revision 1  
PQR 330, Procedure Qualification Record, Revision 1  
PQR 331, Procedure Qualification Record, Revision 1  
PQR 107, Procedure Qualification Record, Revision 1

PQR 170, Procedure Qualification Record, Revision 1  
MAI No. 64811, Filler Material Withdrawal Authorization, Revision 1

### Audits and Self-Assessments

QA-14-2005-GGNS-1 Quality Assurance Audit Report Radiation Protection  
LO-GLO-2005-0079  
LO-GLO-2005-0011  
LO-GLO-2005-0042

### Radiation Work Permits

2004-1017 Routine Locked High Radiation Area Entries for Surveillances and Calibrations.  
2004-1508 RF13 Under Vessel Work Activities (LPRMs, CRDM, SRM/IRM, Tip Indexer)  
2004-1516 ISI/NDE all areas during RF13  
2005-1033 Install Furmanite Boxes and Furmanite 1N11D001A/1C  
2005-1513 Air Operated Valve Motor Operated Valve Work in the Drywell  
2005-1527 Recirculation System Preventative Maintenance in the Drywell  
2005-1532 Stem/disc replacement of B33F067 A/B

### Job Performance Measures (JPMs)

GJPM-OPS-E5101, RCIC [Reactor Core Isolation Cooling] Manual Startup, Revision 00

GJPM-OPS-E6102, Hydrogen Recombiner Operation, Revision 00

GJPM-OPS-B3303, Reactor Recirc [Recirculation] System Startup, Revision 00

GJPM-OPS-P7507, Starting and Paralleling D/G [Diesel Generator] 11(12) - Remote,  
Revision 0

GJPM-OPS-EAL09, Emergency Event Classification JPM, Fuel Failure (GE), Revision 00

GJPM-OPS-B3301, Establish Recirc Pump Seal Flow, Revision 00

GJPM-OPS-E2103, Perform LPCS [Low Pressure Core Spray] Quarterly Jockey Pump  
Surveillance, Revision 00

GJPM-OPS-EOP13, Defeat Containment Vent Path Isolation Interlocks, Revision 00

GJPM-OPS-B2104, Close Steam Valves Prior to Opening MSIVs [Main Steam Isolation Valves]  
Revision 00

GJPM-OPS-C4105, Fill and Vent for SBLC [Standby Liquid Control] A, Revision 00

GJPM-OPS-E1204, Startup Suppression Pool Cooling B (Faulted), Revision 00

GJPM-OPS-P7509, Starting and Paralleling D/G 11(12) - Remote (Faulted), Revision 0

GJPM-OPS-C11026, Control Rod Operability Surveillance: Four Rods Drift (Faulted),  
Revision 00

GJPM-OPS-E2104, Perform Quarterly Valve Surveillance in the C/R [Control Room], Revision 00

GJPM-OPS-EAL12, Emergency Event Classification JPM, RCS [Reactor Coolant System] Leakage w/ Low Level, Revision 00

GJPM-OPS-B3304, Reactor Recirc System Startup (Faulted #2), Revision 00

GJPM-OPS-C11207, Control Rod Operability Surveillance: Two Rods Scram (Faulted), Revision 00

GJPM-OPS-B21-3, Placing Reference Leg Purge in Service, Revision 00

GJPM-OPS-3306, Shifting Reactor Recirc Pumps to Fast Speed (Faulted), Revision 00

GJPM-OPS-P8101, Start and Parallel D/G 13 with Offsite - Remote, Revision 0

GJPM-OPS-N2109, Placing RFP [Reactor Feedwater Pump] on FW [Feedwater] Master Level Controller, Revision 0

GJPM-OPS-P7508, Starting and Separating D/G 11(12) - Remote, Revision 0

GJPM-OPS-P8102, Start and Separate D/G 13 from Offsite - Remote, Revision 0

GJPM-OPS-P7505, Placing the Diesel-Driven Air Compressor in Service, Revision 00

GJPM-NLO-C41-3, Draining the SLC Storage Tank, Revision 00

GJPM-OPS-B3312, Surveillance 06-OP-1B33-V-0005, Revision 00

GJPM-OPS-EOP12, Defeat SDC [Shutdown Cooling] Injection Valve Isolation Interlocks, Revision 00

GJPM-OPS-E5102, RCIC Manual Startup - Normal (Faulted #1), Revision 00

GJPM-OPS-C11202, Control Rod Operability Surveillance: CRD [Control Rod Drive] Pump Trip, Revision 00

GJPM-OPS-C4101, Mixing SBLC [Standby Liquid Control] Solution, Revision 00

GJPM-OPS-E2105, Fill and Vent Low Pressure Core Spray System, Revision 00

GJPM-OPS-EOP3, Defeat All RCIC Isolation and Trip Interlocks, Revision 00

GJPM-OPS-P4101, Manual Start SSW [Station Service Water] A, Revision 00

GJPM-OPS-N2108, Reactor Feed Pump Startup Control Room, Revision 0

GJPM-OPS-EAL02, Emergency Event Classification JPM, RCS Leakage, Revision 00

GJPM-OPS-EAL17, Emergency Event Classification JPM, AC Electrical Failures, Revision 00

GJPM-OPS-E5104, RCIC Manual Startup - Normal (Faulted #3), Revision 00

GJPM-OPS-C11201, Control Rod Operability Surveillance, Revision 00

GJPM-OPS-EAL04, Emergency Event Classification JPM, Gaseous Release (GE), Revision 00

GJPM-OPS-EAL06, Emergency Event Classification JPM, Fire w/Electrical Failures,  
Revision 00

GJPM-OPS-E1201, Starting Shutdown Cooling A - Feedwater Flowpath, Revision 00

GJPM-OPS-EAL15, Emergency Event Classification JPM, Gaseous Release (Alert), Revision  
00

#### Scenarios

GSMS-LOR-AEX04, Revision 02

GSMS-LOR-AEX01, Revision 02

GSMS-LOR-AEX19, Revision 02

GSMS-LOR-AEX03, Revision 02

GSMS-LOR-AEX11, Revision 02

GSMS-LOR-AEX17, Revision 05

GSMS-LOR-AEX05, Revision 03

GSMS-LOR-AEX02, Revision 03

GSMS-LOR-AEX06, Revision 03

GSMS-LOR-AEX07, Revision 07

GSMS-LOR-AEX02, Revision 08

GSMS-LOR-AEX09, Revision 04

GSMS-LOR-AEX12, Revision 02

GSMS-LOR-AEX13, Revision 04

GSMS-LOR-AEX14, Revision 06

GSMS-LOR-AEX15, Revision 03

GSMS-LOR-AEX16, Revision 05

GSMS-LOR-AEX18, Revision 05

GSMS-LOR-AEX20, Revision 03

#### Written Examinations

2005 LORQT Biennial Exam Number 1 - Senior Reactor Operator

2005 LORQT Biennial Exam Number 1 - Reactor Operator

2005 LORQT Biennial Exam Number 2 - Senior Reactor Operator

2005 LORQT Biennial Exam Number 2 - Reactor Operator

2005 LORQT Biennial Exam Number 3 - Senior Reactor Operator

2005 LORQT Biennial Exam Number 3 - Reactor Operator

2005 LORQT Biennial Exam Number 4 - Reactor Operator

2005 LORQT Biennial Exam Number 4 - Senior Reactor Operator

2005 LORQT Biennial Exam Number 5 - Reactor Operator

2005 LORQT Biennial Exam Number 5 - Senior Reactor Operator