



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4125

May 4, 2010

James R. Douet
Vice President Operations
Entergy Operations, Inc.
Grand Gulf Nuclear Station
P.O. Box 756
Port Gibson, MS 39150

Subject: GRAND GULF – NRC INTEGRATED INSPECTION REPORT 05000416/2010002

Dear Mr. Douet:

On March 27, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 12, 2010 with you and other members of your staff.

The inspections examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents four self-revealing findings of very low safety significance (Green). Two of these findings were determined to involve violations of NRC requirements. Additionally, three licensee-identified violations, which were determined to be of very low safety significance, are listed in this report. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as a noncited violations, consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest the violations or the significance of the noncited violations, 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, D.C. 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd, Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Grand Gulf Nuclear Station facility. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at Grand Gulf Nuclear Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

Entergy Operations, Inc.

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records 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/

Vincent Gaddy, Chief
Project Branch C
Division of Reactor Projects

Docket: 50-416
License: NPF-29

Enclosure:
NRC Inspection Report 05000416/2010002
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000416

License: NPF-29

Report: 05000416/2010002

Licensee: Entergy Operations, Inc.

Facility: Grand Gulf Nuclear Station

Location: 7003 Baldhill Road
Port Gibson, MS 39150

Dates: January 1 through March 27, 2010

Inspectors: R. Smith, Senior Resident Inspector
A. Barrett, Resident Inspector
Wayne Sifre, Senior Reactor Inspector
Blake Rice, Reactor Inspector
Matthew Young, Reactor Inspector
Gilbert L. Guerra, CHP, Emergency Preparedness Inspector

Approved By: Vincent Gaddy, Chief, Project Branch C
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000416/2010002; 01/01/2010 – 03/27/2010; Grand Gulf Nuclear Station, Integrated Resident and Regional Report; Heat Sink Performance, and Event Follow-up.

The report covered a 3-month period of inspection by resident inspectors and announced baseline inspections by regional based inspectors. Four findings of very low safety significance were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified Findings and Self-Revealing Findings

Cornerstone: Barrier Integrity

- Green. The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1a when a fuel handling platform operator failed to move a fuel assembly in accordance with station procedures. Specifically, a new fuel assembly and the fuel handling platform mast were damaged when the platform was moved away from the fuel preparation machine prior to ensuring that the fuel assembly was clear of the machine. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-01883.

This finding is more than minor because the finding was associated with the human performance attribute of the barrier integrity cornerstone and adversely affected the cornerstone's objective to provide reasonable assurance that physical design barriers (i.e. fuel cladding) protect the public from radionuclide releases caused by accidents or events. The failure to follow the fuel handling procedures affected the cornerstone's objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1-Initial Screening and Characterization of Findings," was used to evaluate the significance of the finding. Attachment 0609.04, Table 4a, was used to evaluate the impact of the finding on fuel clad integrity. Since the finding represented a fuel handling error that did not cause damage to fuel clad integrity, the finding was determined to be of very low safety significance (Green). The finding has a cross cutting aspect in the work practices component of the human performance area because the operator performing the fuel movement and the spotter providing oversight of the fuel movement failed to employ effective self and peer checking techniques such that fuel handling activities were performed safely [H.4.(a)]. (Section 4OA3.5)

Cornerstone: Initiating Events

- Green. The inspectors reviewed a self-revealing finding for a failure to follow work instructions resulting in a loss of 480V power to a bus and a plant transient. Specifically, contract workers were directed by work instructions to enter into a motor control center via its top cable tray to run cables to a spare breaker. Contrary to this, the contract electrical workers deviated from approved work instructions, causing a phase to ground short that tripped the motor control center and resulted in a plant transient. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-01404.

This finding is more than minor because it was associated with the initiating events cornerstone attribute of human performance, and it affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during shutdown, as well as during power operations. Using the Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors concluded that the transient initiator did not contribute to both the likelihood of a reactor trip and to the likelihood that mitigation equipment or functions would not be available. As a result, the issue was of very low safety significance (Green). The cause of this finding has a crosscutting aspect in the area of human performance associated with work practices because the supervisor of the workers failed to ensure the contract workers followed the approved work instructions as required [H.4(c)]. (Section 4OA3.3)

- Green. The inspectors reviewed a self-revealing finding involving the failure of site management to ensure that adequate corrective actions were implemented to resolve the effects of a large steam leak in the turbine building. Specifically, the reactor experienced an automatic scram on low reactor water level due to the 'B' reactor feed pump minimum flow valve failing open and a subsequent trip of the 'A' reactor feed pump. The scram investigation determined that the minimum flow valve failed open due to condensation in a cable routing box. The condensation was caused by a large steam leak on the second stage moisture separator re-heater drain valve. Cable splices in the box were submerged in water and eventually caused those cables to short to ground. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-01503.

This finding is more than minor because it was associated with the initiating events cornerstone attribute of equipment performance, and it affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during shutdown, as well as during power operations. Using the Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors concluded that the transient initiator did not contribute to both the likelihood of a reactor trip and to the likelihood that mitigation equipment or functions would not be available. This is because the reactor feed pump 'B' was able to restore reactor water level post scram. As a result, the issue was of very low safety significance (Green). The cause of this

finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to prioritize and thoroughly evaluate the extent of the cause of the water grounding sensitive electronic equipment in the vicinity of the steam leak [P.1(c)].
(Section 4OA3.4)

Cornerstone: Mitigating Systems

- Green. The inspectors reviewed a self-revealing non-cited violation of Technical Specification 3.7.4 for failing to restore control room air conditioning subsystem B to operable status within the required time of 30 days. Specifically, between March 28, 2009 and June 25, 2009, the control room air conditioner subsystem B was inoperable due to the compressor capacity controller being set incorrectly. The deficiency initially revealed itself on May 14, 2009, when the air conditioner was unable to keep up with demand. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2009-3779.

This finding is more than minor since it affects because it was associated with the equipment performance attribute of the mitigating systems cornerstone, and it adversely affected the cornerstone objective of ensuring the availability, reliability and capability of safety related equipment. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding was determined to be of very low safety significance (Green) because it was not a design or qualification deficiency confirmed not to result in loss of operability or functionality, it does not represent an actual loss of a system safety function, it does not represent the actual loss of safety function of a single train for greater than its technical specification allowed outage time, it does not represent an actual loss of safety function of one or more non-technical specification of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours and it does not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The cause of this finding has a crosscutting aspect in the area of human performance associated with decision making in that the operators did not utilize conservative assumptions to determine system operability [H.1(b)].
(Section 1R07.2).

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 (condition report numbers) are listed in Section 4OA7.

REPORT DETAILS

Summary of Plant Status

Grand Gulf Nuclear Station (GGNS) began the inspection period at full rated thermal power. On January 2, 2010, operators reduced power to 80 percent to perform a control rod pattern adjustment and channel bow surveillance testing. The plant returned to rated power on January 3, 2010. On January 30, 2010, operators reduced power to perform a control rod sequence exchange and a channel bow surveillance testing. The plant returned to rated power on February 1, 2010. On the morning of February 17, 2010, operators reduced reactor power to 88 percent due to a low pressure turbine control valve closure, and returned to rated power in the evening on the same day. On February 23, 2010, operators reduced power to 80 percent to repair steam leaks on balance of plant equipment. On February 26, 2010, operators reduced power to 70 percent to perform a control rod pattern adjustment and perform a heater drain tank leak repair. The plant returned to rated power on February 27, 2010. The reactor experienced an automatic scram on March 8, 2010, on low reactor water level due to a feed pump minimum flow control valve opening. During start up from the forced outage, on March 18, 2010, the operators increased power to 97 percent and identified a steam leak in the turbine building. On the evening of March 18, 2010 plant operators reduced power to 80 percent to repair the steam leak. The plant returned to rated power on March 20, 2010. On March 21, 2010, reactor power began to coast down and trended to 97.2 percent at the end of the inspection period.

1. REACTOR SAFETY

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

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors performed a review of the adverse weather procedures for seasonal extremes (e.g., extreme high temperatures, extreme low temperatures, or hurricane season preparations). The inspectors verified that weather-related equipment deficiencies identified during the previous year were corrected prior to the onset of seasonal extremes, and evaluated the implementation of the adverse weather preparation procedures and compensatory measures for the affected conditions before the onset of, and during, the adverse weather conditions.

During the inspection, the inspectors focused on plant-specific design features and the procedures used by plant personnel to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Updated Final Safety Analysis Report and performance requirements for systems selected for inspection and verified that operator actions were appropriate as specified by plant-specific procedures. Specific documents reviewed during this inspection are listed in the attachment. The inspectors also reviewed corrective action program items to verify that plant personnel

were identifying adverse weather issues at an appropriate threshold and entering them into their corrective action program in accordance with station corrective action procedures. The inspectors' reviews focused specifically on the following plant systems:

- Standby Service Water
- Auxiliary Cooling Tower

These activities constitute completion of one readiness for seasonal adverse weather sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings of significance were identified.

.2 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

On January 5, 2010, a winter-weather advisory was issued for an expected ice storm in the area. The inspectors observed the preparations and planning for the significant winter weather potential. The inspectors reviewed licensee procedures and discussed potential compensatory measures with control room personnel. The inspectors focused on plant management's actions for implementing the station's procedures for ensuring adequate personnel for safe plant operation and emergency response would be available. The inspectors conducted a site inspection, including various plant structures and systems, to check for maintenance or other apparent deficiencies that could affect system operations during the predicted significant weather. The inspectors also reviewed corrective action program items to verify that plant personnel were identifying adverse weather issues at an appropriate threshold and entering them into their corrective action program in accordance with station corrective action procedures. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one readiness for impending adverse weather condition sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- Control Room Air Conditioner 'A' while Control Room Air Conditioner 'B' compressor was being replaced

- Division 1 Diesel Generator while the Division 2 Diesel Generator was in an allowed outage time
- Offsite Power alignment while the Division 2 Diesel Generator was in an allowed outage time

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could affect the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Final Safety Analysis Report, technical specification requirements, administrative technical specifications, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also inspected accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors conducted fire protection walkdowns that were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Division 2 Diesel Generator Room (1D303)
- Standby Service Water B Pump and Valve Rooms (2M110 and 2M112)
- Division 1 Diesel Generator Room (1D302)
- Diesel Building Hallway (1D301)

- Standby Service Water A Pump and Valve Rooms (1M110 and 1M112)
- High Pressure Core Spray Diesel Generator Room (1D304)

The inspectors reviewed areas to assess if licensee personnel had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant; effectively maintained fire detection and suppression capability; maintained passive fire protection features in good material condition; and had implemented adequate compensatory measures for out of service, degraded or inoperable fire protection equipment, systems, or features, in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to affect equipment that could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the attachment, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's corrective action program. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of six quarterly fire-protection inspection samples as defined in Inspection Procedure 71111.05-05.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, the flooding analysis, and plant procedures to assess susceptibilities involving internal flooding; reviewed the corrective action program to determine if licensee personnel identified and corrected flooding problems; inspected underground bunkers/manholes to verify the adequacy of sump pumps, level alarm circuits, cable splices subject to submergence, and drainage for bunkers/manholes; and verified that operator actions for coping with flooding can reasonably achieve the desired outcomes. The inspectors also inspected the areas listed below to verify the adequacy of equipment seals located below the flood line, floor and wall penetration seals, watertight door seals, common drain lines and sumps, sump pumps, level alarms, and control circuits, and temporary or removable flood barriers. Specific documents reviewed during this inspection are listed in the attachment.

- January 11, 2010, Emergency Core Cooling System Pump Rooms

These activities constitute completion of one flood protection measures inspection sample as defined in Inspection Procedure 71111.06-05.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

.1 Annual Heat Sink Inspection

a. Inspection Scope

The inspectors reviewed licensee programs, verified performance against industry standards, and reviewed critical operating parameters and maintenance records for the safety-related room coolers, Division 3 standby diesel generator jacket water cooler and the Division 2 standby diesel jacket water cooler. The inspectors verified that performance tests were satisfactorily conducted for heat exchangers/heat sinks and reviewed for problems or errors; the licensee utilized the periodic maintenance method outlined in EPRI Report NP 7552, "Heat Exchanger Performance Monitoring Guidelines"; the licensee properly utilized biofouling controls; the licensee's heat exchanger inspections adequately assessed the state of cleanliness of their tubes; and the heat exchanger was correctly categorized under 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one heat sink inspection sample as defined in Inspection Procedure 71111.07-05.

b. Findings

No findings of significance were identified.

.2 Triennial Heat Sink Inspection

a. Inspection Scope

The inspectors reviewed design documents, program documents, test and maintenance procedures, and corrective action documents for the inspection samples selected. The inspectors interviewed chemistry and engineering personnel.

The inspectors selected heat exchangers that ranked high in the plant specific risk assessment and were directly connected to the safety-related standby service water system. The inspectors selected the following heat exchangers:

- Ultimate Heat Sink (Standby Service Water Cooling Towers)
- Division 1 and 2 Control Room Heating, Ventilation, and Air Conditioning

- Division 2 Diesel Generator Jacket Water
- Residual Heat Removal Pump A Seal Cooler

For heat exchangers directly connected to the standby service water system, the inspector verified whether testing, inspection, maintenance, and monitoring of biotic fouling and microfouling programs are singularly or in combination adequate to ensure proper heat transfer. Specifically, the inspectors reviewed: (1) heat exchanger test methods and test results from performance testing; (2) chemical treatments for microfouling and controls for macrofouling; and (3) whether test results appropriately considered differences between testing conditions and design conditions.

For heat exchangers directly connected to the safety-related standby service water system, the inspectors verified that the licensee: (1) performed condition monitoring and operation consistent with design assumptions in the heat transfer calculations; (2) evaluated the potential for water hammer, as applicable; (3) instituted appropriate chemistry controls for the heat exchangers, (4) reviewed periodic flow testing at or near maximum design flow for redundant and infrequently used heat exchanger, (5) verified that the number of plugged tubes were within pre-established limits based on heat transfer capacity, and (6) reviewed visual inspection records, to determine the structural integrity of the heat exchanger.

For the ultimate heat sink and its subcomponents, the inspectors verified that the licensee established appropriate controls for macrofouling and biological fouling. A system walk-down was performed to verify the licensee had: (1) sufficient reservoir capacity; (2) performed periodic monitoring and trending of sediment build-up; (3) periodic performance monitoring of heat transfer capability, (4) periodic performance monitoring of the ultimate heat sink structural integrity, (5) instrumentation that is available and functional, (6) reviewed licensee controls to prevent clogging due to macrofouling, and (7) biocide treatments that were conducted as scheduled, controlled, and the results monitored, trended, and evaluated.

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of four samples as defined in Inspection Procedure 71111.07-05.

b. Findings

Introduction. The inspectors reviewed a self-revealing Green non-cited violation of Technical Specification 3.7.4 for failing to restore control room air conditioning subsystem B to operable status within the required time of 30 days.

Description. On May 14, 2009, the site identified that the control room air conditioning subsystem B was not cooling properly. The thermostat set point was at 55°F, but the control room temperature was being maintained at 73°F. The subsequent operability determination noted that control room air conditioning subsystem B surveillance testing had been performed on the previous day, and that as part of the test, the standby fresh

air heaters had been turned on to ensure an adequate heat load for the test. The standby fresh air heaters were turned off, and the compressor capacity controller was adjusted. This resulted in a control room temperature decrease to 69°F. Based on the system response to the site's troubleshooting efforts and the raw data from the surveillance test, the control room air conditioning subsystem B was declared operable.

Initial review of the surveillance data taken on May 13, 2009, indicated that the control room air conditioning subsystem B condenser had an unacceptable fouling rate. The test data was declared invalid since the condenser had been rebuilt and cleaned in March 2009 and a retest was scheduled. The site failed to identify that the incorrectly positioned capacity controller was a deficiency that had been introduced to the system during the March 28, 2009, maintenance and rebuild of the compressor causing the control room air conditioning subsystem B to be inoperable.

Technical Specification Surveillance Requirement 3.7.4.1 requires an 18-month verification test confirming that each control room air conditioning subsystem is capable of removing an assumed heat load and maintaining the control room at or below 90°F. On August 12, 2009, an engineering evaluation of the data taken during the May 13, 2009, surveillance test showed that the control room air conditioning subsystem B would have maintained a control room temperature of 91.5°F under design basis heat loads, which did not meet the acceptance criteria defined by the site's technical specifications. The conclusion of the engineering evaluation was that the control room air conditioning subsystem B had been inoperable from March 28, 2009, through June 25, 2009, a period of 89 days. Although the control room air conditioning subsystem B was inoperable, it still would have performed its safety function of maintaining the control room below the design basis temperature of 120°F as defined by the site's Technical Requirements Manual.

Analysis. The performance deficiency associated with this finding was the failure to meet the technical specification requirement of restoring the control room air conditioning subsystem B to operable status within 30 days. The finding was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone, and it adversely affected the cornerstone objective of ensuring the availability, reliability and capability of safety related equipment. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding was determined to be of very low safety significance (Green) because it was not a design or qualification deficiency confirmed not to result in loss of operability or functionality, it does not represent an actual loss of a system safety function, it does not represent the actual loss of safety function of a single train for greater than its technical specification allowed outage time, it does not represent an actual loss of safety function of one or more non-technical specification of equipment designated as risk-significant per 10CFR50.65 for greater than 24 hours and it does not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The cause of this finding has a crosscutting aspect in the area of human performance associated with decision making in that the operators did not utilize conservative assumptions to determine system operability [H.1(b)].

Enforcement. In the event that one control room air conditioning subsystem is inoperable, Technical Specification 3.7.4.A.1 requires that the subsystem be restored to operable status within a period of 30 days. Contrary to the above, the control room air conditioning subsystem B was inoperable for a period of 89 days from March 28, 2009, through June 25, 2009. Because this violation was of very low safety significance and was entered in to the licensee's corrective action program as Condition Report CR-GGN-2009-3779, this violation is being treated as a non-cited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000416/2009002-01, "Failure to Restore Control Room Air Conditioning Subsystem B to Operable Status within the Required Time of 30 Days."

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On January 25, 2010, the inspectors observed a crew of licensed operators in the plant's simulator to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- Licensed operator performance
- Crew's clarity and formality of communications
- Crew's ability to take timely actions in the conservative direction
- Crew's prioritization, interpretation, and verification of annunciator alarms
- Crew's correct use and implementation of abnormal and emergency procedures
- Control board manipulations
- Oversight and direction from supervisors
- Crew's ability to identify and implement appropriate technical specification actions and emergency plan actions and notifications

The inspectors compared the crew's performance in these areas to pre-established operator action expectations and successful critical task completion requirements. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one quarterly licensed-operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk significant systems:

- 125V DC Power Supply System (L11, L21, L51)

The inspectors reviewed events such as where ineffective equipment maintenance has resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- Implementing appropriate work practices
- Identifying and addressing common cause failures
- Scoping of systems in accordance with 10 CFR 50.65(b)
- Characterizing system reliability issues for performance
- Charging unavailability for performance
- Trending key parameters for condition monitoring
- Ensuring proper classification in accordance with 10 CFR 50.65(a)(1) or -(a)(2)
- Verifying appropriate performance criteria for structures, systems, and components classified as having an adequate demonstration of performance through preventive maintenance, as described in 10 CFR 50.65(a)(2), or as requiring the establishment of appropriate and adequate goals and corrective actions for systems classified as not having adequate performance, as described in 10 CFR 50.65(a)(1)

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

The inspectors also performed a review of the (a)(3) Periodic Evaluation. This review is credited as an inspection sample.

These activities constitute completion of two quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed licensee personnel's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- The week of January 11, 2010, during emergency core cooling system Division 3 testing
- The week of January 25, 2010, during the Division 3 allowed outage time resulting in the plant being in yellow risk the entire week
- The week of March 1, 2010, during the Division 2 allowed outage time resulting in the plant being in yellow risk the entire week
- The week of March 8, 2010, during a force outage and startup following an automatic plant shutdown on March 8, 2010
- The week of March 15, 2010, during completion of startup activities which included control rod frictions testing and increase to full power. This was followed by a transition to normal work schedule, that included performing numerous half scram and half isolation surveillances and a shift from Division 2 work week to Division 1 work day to performing yellow risk activities and then a return to Division 2 work week

The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that licensee personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When licensee personnel performed emergent work, the inspectors verified that the licensee personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed the technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13-05.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- Reactor water cleanup system primary containment isolation valve body to bonnet leakage, CR-GGN-2010-00981
- Fuel oil leak in high pressure core spray diesel filter fitting, CR-GGN-2009-06909
- Standby liquid control system low oil indication problem, CR-GGN-2010-00283
- Standby gas treatment system operability impacted due to door failure, CR-GGN-2009-04480
- Reactor coolant system pressure interface valve interlock problem due to agastat relay failure, CR-GGN-2010-00804
- Corrosion found in standby diesel generator air start system check valve, CR-GGN-2010-01458

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that technical specification operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the technical specifications and Updated Final Safety Analysis Report to the licensee personnel's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of six operability evaluations inspection samples as defined in Inspection Procedure 71111.15-04

b. Findings

No findings of significance were identified.

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed the effectiveness of the licensee's implementation of evaluations performed in accordance with 10 CFR 50.59, "Changes, Tests, and Experiments," and changes, tests, experiments, or methodology changes that the licensee determined did not require 10 CFR 50.59 evaluations.

The inspectors reviewed five evaluations required by 10 CFR 50.59 because these were the only evaluations performed since the last performance of this inspection. The inspectors also reviewed 19 changes, tests, and experiments that were screened out by licensee personnel and eight permanent plant modifications. Document numbers of the evaluations, changes, and modifications reviewed are listed in the attachment.

The inspectors verified that when changes, tests, or experiments were made, that evaluations were performed in accordance with 10 CFR 50.59 and that licensee personnel had appropriately concluded that the change, test or experiment can be accomplished without obtaining a license amendment. The inspectors also verified that safety issues related to the changes, tests, or experiments were resolved. The inspectors reviewed changes, tests, and experiments that licensee personnel determined did not require evaluations and verified that these conclusions were correct and consistent with 10 CFR 50.59. The inspectors also verified that procedures, design, and licensing basis documentation used to support the changes were accurate after the changes had been made.

In the inspection of modifications, the inspectors verified that supporting design and license basis documentation had been updated accordingly and was still consistent with the new design. The inspectors verified that procedures, training plans and other design basis features had been adequately accounted for and updated. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of samples as defined in Inspection Procedure 71111.17-05.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

Temporary Modifications

a. Inspection Scope

To verify that the safety functions of important safety systems were not degraded, the inspectors reviewed the following temporary modifications:

- Feedwater heating valve, 1N35-505B, steam leak repair that was impacting plant equipment
- Removal of control rod drive mechanism temperature alarm inputs

The inspectors reviewed the temporary modifications and the associated safety-evaluation screening against the system design bases documentation, including the Updated Final Safety Analysis Report and the technical specifications, and verified that the modification did not adversely affect the system operability/availability. The inspectors also verified that the installation and restoration were consistent with the modification documents and that configuration control was adequate. Additionally, the inspectors verified that the temporary modification was identified on control room drawings, appropriate tags were placed on the affected equipment, and licensee personnel evaluated the combined effects on mitigating systems and the integrity of radiological barriers.

These activities constitute completion of two samples for temporary plant modifications as defined in Inspection Procedure 71111.18-05.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the following postmaintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- For Intermediate Range H power supply refurbishment
- For Division 3 diesel generator following maintenance
- For control room fresh air train B following replacement of the compressor
- Replacement of a reactor protection system relay

- Division 2 Diesel Generator retest after two year maintenance window
- Residual Heat Removal system motor operated valves retest after periodic maintenance and motor operated valve testing
- Standby Service Water system 'B' retest after periodic maintenance

The inspectors selected these activities based upon the structure, system, or component's ability to affect risk. The inspectors evaluated these activities for the following (as applicable):

- The effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed
- Acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate

The inspectors evaluated the activities against the technical specifications, the Updated Final Safety Analysis Report, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with postmaintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate with their importance to safety. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of seven postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, procedure requirements, and technical specifications to ensure that the surveillance activities listed below demonstrated that the systems, structures, and/or components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the significant surveillance test attributes were adequate to address the following:

- Preconditioning

- Evaluation of testing impact on the plant
- Acceptance criteria
- Test equipment
- Procedures
- Jumper/lifted lead controls
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal
- Restoration of plant systems
- Fulfillment of ASME Code requirements
- Updating of performance indicator data
- Reference setting data
- Annunciators and alarms setpoints

The inspectors also verified that licensee personnel identified and implemented any needed corrective actions associated with the surveillance testing.

- On January 12, 2010, containment spray time delay relay functional test
- On January 14-15, 2010, high pressure core spray diesel generator 18 month functional test
- On January 22, 2010, high pressure core spray local leak rate test
- On March 4, 2010, residual heat removal system train B quarterly inservice test
- On March 16, 2010, reactor core isolation cooling quarterly inservice test

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five surveillance testing inspection samples as defined in Inspection Procedure 71111.22-05.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector performed an in-office review of Grand Gulf Nuclear Station Emergency Plan, Revision 62 and 63. Revision 62 clarified the position descriptions of the Security Coordinator and the Security Shift Supervisor, assigned habitability monitoring to the Emergency Operations Facility Habitability Specialist, described the Emergency Preparedness Department reporting relationships, and made other minor administrative changes. Revision 63 involved on-shift staffing changes submitted to NRC for prior approval by letters dated April 28, 2008 and April 3, 2009. The NRC issued letter dated September 2, 2009 (ADAMS Accession Number ML091110035), concluding that the proposed change would not decrease the effectiveness of the emergency plan. The change increased the on-shift Auxiliary Operators from two to three, increased the 90 minute response Mechanical Maintenance staff from one to two, combined the on-shift Electrical and I&C Maintenance staff from 1 each to two of either discipline or both, and added one 90 minute I&C maintenance staff responder.

These revisions were compared to previous revisions, to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, to Nuclear Energy Institute Report 99-01, "Emergency Action Level Methodology," Revision 4, and to the standards in 10 CFR 50.47(b) to determine if the revision adequately implemented the requirements of 10 CFR 50.54(q). This review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, these revisions are subject to future inspection.

These activities constitute completion of two samples as defined in Inspection Procedure 71114.04-05.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on February 24, 2010, to identify any weaknesses and deficiencies in classification, notification, and

protective action recommendation development activities. The inspectors observed emergency response operations in the simulator control room and the emergency operations facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the attachment.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.06-05.

b. Findings

No findings of significance were identified.

40A1 Performance Indicator Verification (71151)

.1 Data Submission Issue

a. Inspection Scope

The inspectors performed a review of the performance indicator data submitted by the licensee for the fourth quarter 2009 performance indicators for any obvious inconsistencies prior to its public release in accordance with Inspection Manual Chapter 0608, "Performance Indicator Program."

This review was performed as part of the inspectors' normal plant status activities and, as such, did not constitute a separate inspection sample.

b. Findings

No findings of significance were identified.

.2 Unplanned Scrams per 7000 Critical Hours (IE01)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams per 7000 critical hours performance indicator for the period from the first quarter 2009 through fourth quarter 2009. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 1, 2009, through December 31, 2009, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's condition report database to determine if any problems had

been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned scrams per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.3 Unplanned Scrams with Complications (IE02)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams with complications performance indicator for the period from the first quarter 2009 through fourth quarter 2009. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 1, 2009, through December 31, 2009, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's condition report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned scrams with complications sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.4 Unplanned Power Changes per 7000 Critical Hours (IE03)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned power changes per 7000 critical hours performance indicator for the period from the first quarter 2009 through fourth quarter 2009. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports, and NRC integrated inspection reports for the period of January 1, 2009 through December 31, 2009, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's condition report database

to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned transients per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

40A2 Identification and Resolution of Problems (71152)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included the complete and accurate identification of the problem; the timely correction, commensurate with the safety significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure, they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings of significance were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. The inspectors accomplished this through review of the station's daily corrective action documents.

The inspectors performed these daily reviews as part of their daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings of significance were identified.

.3 Identification and Resolution of Problems for Heat Exchangers and 10 CFR 50.59

a. Inspection Scope

The inspectors reviewed the licensee's corrective actions related to deficiencies in the operation of the selected heat exchangers and the ultimate heat sink. The inspectors evaluated whether the licensee implemented appropriate corrective actions commensurate with their safety significance.

The inspectors reviewed the licensee's corrective actions related to deficiencies in the 10 CFR 50.59, "Changes, Tests, and Experiments" program and permanent plant modifications. The inspectors evaluated whether the licensee implemented appropriate corrective actions commensurate with their safety significance.

b. Observations

The inspector concluded that problems are being identified and corrective actions are being implemented for the selected heat exchangers and the plant modification process.

No findings of significance were identified.

.4 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, specifically in reference to sump pump equipment performance in the emergency core cooling system pump rooms, the inspectors found condition reports that had been closed to work orders associated with failed check valves in the room drains. The work orders had been open for more than five years. The inspectors requested information on the number of condition reports documenting problems in safety-related systems that had been closed to work orders, and found that the licensee had previously identified a

backlog of 856 condition reports closed to open work orders, dating back to 1999. The inspectors reviewed approximately 200 of the work orders, starting with the oldest and found 26 that documented degrading equipment. The inspectors focused on eight of the issues and found that the degrading conditions had not been resolved, however, in each case, operability of the system, structure or component was maintained.

The inspectors reviewed a condition report documenting a pin-hole leak on a service water cooling tower fan 'D' gearbox oil drain line caused by degraded protective wraps on the service water cooling tower fans gearbox oil drain lines. The inspectors interviewed the system engineer and learned that a condition report had been written to document the failure to do a proper extent of condition review from a previous event. The inspectors found that the licensee had previously identified and replaced wrappings on the gearbox for the "A" fan in 2007; however, the licensee failed to take action to replace known degraded wrappings on the other fan gearboxes.

The inspectors reviewed the status of a condition report and the resulting corrective actions documenting corrosion in the standby cooling tower basins in October 2008. The inspectors reviewed corrective actions taken to improve maintenance inspections of safety-related equipment and to restore the structural margins of the degraded basins. The inspectors also reviewed the apparent cause evaluation and the corrective action taken to date to ensure that actions are appropriate and have been implemented in a timely manner.

These activities constitute completion of three in-depth problem identification and resolution samples as defined in Inspection Procedure 71152-05.

b. Findings

No findings of significance were identified.

40A3 Event Follow-up (71153)

.1 (Closed) Licensee Event Report 05000416/2009-004-00/05000416/2009-004-01, "Condition Prohibited by Technical Specifications due to Control Room Air Conditioning Subsystem 'B' Inoperability Not Recognized"

On May 13, 2009, a surveillance test had been performed per Technical Specification (TS) Surveillance Requirement 3.7.4.1. The test results indicated an unacceptable fouling rate of the control room air conditioning subsystem B (CRAC B) compressor. Since the compressor had undergone maintenance and cleaning in March 2009, the test data was considered invalid and a retest was scheduled and completed on June 25, 2009. On August 12, 2009, an engineering evaluation of the invalid data showed that the CRAC B unit would not meet the acceptance criteria of maintaining the control room less than or equal to 90°F under design basis accident heat loads. Based on the evaluation, it was concluded that CRAC B had been inoperable from March 28, 2009, through June 25, 2009. As a result, the Technical Specification 3.7.4.A.1, which requires control room air conditioning subsystem operability, be restored within 30 days, was not met.

The cause of this event was a failure to correctly implement station procedures for maintenance on the CRAC B compressor and determining operability of the CRAC B unit. Maintenance personnel did not follow station procedures when setting the capacity controller on the unit compressor. Consequently, a deficiency was introduced to the system that prevented the CRAC unit from meeting the technical specification surveillance test acceptance criteria. Control room personnel failed to adequately develop a reasonable expectation of operability on May 14, 2009, because they utilized an impromptu functional test and un-evaluated surveillance test data to declare the unit operable. There is no safety consequence associated with this event.

Corrective actions included reviewing the maintenance history of control room air conditioning subsystem A to confirm the thermal performance test had been completed with satisfactory results and revise work instructions for both A & B compressors to include prerequisites for capacity controller setup/adjustment and capacity controller setup/adjustment instructions per the Vendor manual. Documents reviewed as part of this inspection are listed in the attachment. The enforcement aspects of this finding were discussed in NRC Inspection Report 05000416/2010002 in Section 1R07. These LERs are closed.

.2 Low Pressure Turbine Control Valve Inadvertent Closure

a. Inspection Scope

On February 17, 2010, at 1:15 a.m., the operations crew noted a decrease of 13 megawatts electric for unknown reason. The control room also received turbine alarms and entered alarm response procedures and sent personnel into the turbine building to determine if previously identified steam leaks had gotten worse. At 5:40 a.m., the operations crew noted that the 1N11-F030K, low pressure turbine 3 control valve, indicated closed. Operators confirmed that the valve was closed and the crew entered Technical Requirements Manual (TRM) Section 6.3.8 for main turbine overspeed protection which required entry into TRM section 6.0.1. As required by the system operating instruction the crew reduced reactor power to 90 percent when the low pressure turbine control valve closed. The shift manager notified the resident inspectors at approximately 5:30 a.m. of the loss of megawatts electric. The inspectors responded to the site to monitor operator actions. The licensee determined that cause of the control valve closure was due to turbine testing control system giving the valve a close signal. The inspectors reviewed the site's recovery plans. The inspectors then observed the operating crew recover from the event by opening the control valve. Inspectors also monitored plant response from the control room. The plant restored reactor power to 100 percent. The licensee determined that the reason the low pressure control valve closed was possibly due to a water intrusion from a steam leak into turbine testing logic control panel. Documents reviewed for this inspection are listed in the attachment.

b. Findings

No findings of significance were identified.

.3 Loss of Motor Control Center 14B12

a. Inspection Scope

On March 3, 2010, at 10:25 a.m., the main control room received alarm "480V LCC 14BE1 INCM FDR/Trip," indicating a loss of alternating current to a bus. Further investigation revealed that power was lost to motor control center 14B12. Due to the loss of this bus, the control room lost indications for several control rod drive meters; lost power to solenoid valves for both control rod drive flow control valves causing them to drift close; plant chiller 'C' tripped and subsequently restarted; lost power to recirculation pump 'B' hydraulic control units for the 'B' flow control valve and other plant equipment. The cause of the loss of power was due to work being performed in the non-safety motor control center which caused a phase to ground short, tripping the feeder breaker 52-14106 to bus 14B12. The phase to ground short also caused damage to the bus bar. The resident inspectors arrived in the main control room shortly after the event occurred and observed the operating crew's response to the event. The crew entered their off normal procedure for loss of alternating current to the bus and system operating procedure for determining bus loads that were de-energized. The inspectors also responded to the bus location and observed the recovery actions. After the cause of the ground fault was removed engineering evaluated the extent of damage to the bus bar and established a recovery plan. The inspectors observed control room operators direct the restoration of the bus and restoration of power to loads on the bus. Documents reviewed for this inspection are listed in the attachment.

b. Findings

Introduction. The inspectors reviewed a self-revealing Green finding involving a failure to follow work instructions that resulted in a loss of 480V power to a bus and a plant transient.

Description. On March 3, 2010, at 10:25 a.m., the main control room received alarm "480V LCC 14BE1 INCM FDR/Trip," indicating a loss of alternating current to a bus. Further investigation revealed that power was lost to motor control center 14B12. The loss of power was due to work being performed in the non-safety motor control center, which resulted in a phase to ground short that tripped the feeder breaker 52-14106 to bus 14B12. The operating crew responded to the event by entering their off normal procedure for loss of alternating current to the bus and system operating procedure for determining bus loads that were de-energized. Power was lost to the recirculation pump 'B' hydraulic control units for the 'B' flow control valve. This resulted in the 'B' flow control valve slowly closing over the duration of event, which caused in a slight power decrease. Power was also lost to the solenoid valves for both control rod drive flow control valves, causing them to drift fully closed, causing an increasing temperature to control rod drive mechanisms. The inspectors observed the operating crew's response to the event. Additionally, the inspectors responded to the bus location to observe the recovery actions. After the cause of the ground fault was removed and site engineering evaluated the extent of damage to the bus bar, a recovery plan was established, and the bus was restored along with its loads.

Power to the bus was lost when contract electrical workers, who were running cables in motor control center 14B12, deviated from the approved work instructions for performing the work. During the deviation, a metal access cover contacted the energized bus bar, causing the phase to ground short.

Plant management immediately removed all contract/supplemental workers from the site that were associated with the company employing the workers involved in the event. Additionally, the licensee required the contractor to develop a recovery plan prior to returning to work. Licensee management also addressed all the contract/supplemental workers from this company about the event and about site expectations for working at Grand Gulf Nuclear Station prior to their return to work. This event was entered into the licensee's corrective action program as CR-GGN-2010-01404.

Analysis. The performance deficiency involved the failure of contract electrical workers to follow approved work instructions which resulted in a plant transient. Specifically, contract workers were directed by work instructions to enter into the motor control center (MCC) via the top cable tray of the motor control center to run cables to a spare breaker. Contrary to this, on March 3, 2010, contract electrical workers deviated from approved work instructions, resulting in a phase to ground short that tripped the motor control center causing a plant transient. The finding was more than minor because it was associated with the initiating events cornerstone attribute of human performance, and it affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during shutdown, as well as during power operations. Using the Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors concluded that the transient initiator did not contribute to both the likelihood of a reactor trip and to the likelihood that mitigation equipment or functions would not be available. As a result, the issue was of very low safety significance (Green). The cause of this finding has a crosscutting aspect in the area of human performance associated with work practices because the supervisor of the workers failed to ensure the contract workers followed the approved work instructions as required [H.4(c)].

Enforcement. No violation of regulatory requirements occurred. This finding was entered into the licensee's corrective action program as CR-GGN-2010-01404 and is identified as FIN 05000416/2010002-02, Failure to Follow Work Instructions Results in Loss of Buss and a Plant Transient.

.4 Reactor Scram Due to the Reactor Feedwater Pump Turbine 'B' Minimum Flow Valve Failing Open

a. Inspection Scope

On March 8, 2010, at 4:35 p.m., the reactor experienced an automatic scram from 100 percent power. The 'B' reactor feed pump minimum flow valve failed open, and both reactor feed pumps increased speed to compensate for feedwater that was being diverted to the condenser. The 'A' reactor feed pump governor failed to mechanically respond to the controllers increase in demand, and a greater than 20 percent mismatch occurred between the control circuit signal and the actual feed pump speed, resulting in

trip of the 'A' feed pump. The reactor recirculation system responded to the 'A' feed pump trip by initiating a flow control valve runback to both control valves to reduce reactor power to maintain the reactor level within the flow capability of one reactor feed pump. The 'A' flow control valve locked up and failed to decrease power, and the reactor scrambled on reactor low water level. The resident inspectors responded to the control room to observed operators' post scram response. Inspectors observed the operating crew restore reactor water level using reactor feed pump 'B' via the start up level control valve to maintain reactor water level in normal band. The operators entered the appropriate emergency operating, off-normal event and integrating operating procedures to mitigate the transient with all systems responding as designed with the exception of those previously noted. Site personnel investigating the scram determined that the 'B' reactor feed pump minimum flow valve opened due to a cable splice being submerged in water in its routing box, resulting in the cable grounding. This resulted in a signal to the minimum flow valve to open. The source of the water in the cable routing box was from a steam leak from valve N35-F505B (second stage moisture separator re-heater drain valve to the 6B high pressure heater) that had been repaired on February 23, 2010. Documents reviewed in this inspection are listed in the Attachment.

b. Findings

Introduction. The inspectors reviewed a self-revealing Green finding involving the failure of site management to ensure that adequate corrective actions were implemented to resolve the effects of a large steam leak in the turbine building.

Description. On March 8, 2010, the reactor experienced an automatic scram on low reactor water level due to the 'B' reactor feed pump minimum flow valve failing open and a subsequent trip of the 'A' reactor feed pump. The scram investigation determined that the minimum flow valve failed open due to condensation in a cable routing box. The condensation was caused by a large steam leak on the second stage moisture separator re-heater drain valve. Cable splices in the box were submerged in water and eventually caused those cables to short to ground.

The following timeline details the steam leak and the associated plant effects:

- On February 14, 2010, a major steam leak developed in the second stage moisture separator re-heater drain valve to the 6B high pressure feed water heater.
- On February 17, 2010, a low pressure turbine control valve failed closed resulting in a plant down power.
- On February 18-19, 2010, control room operators identified the following deficiencies for the 'B' reactor feed pump:
 - The pump suction flow indicator failed down scale.
 - The low pressure and high pressure stop valves showed dual position indication.

- Various computer points on the parameter display system went to a faulted status.
- On February 20, 2010, control room operators observed fluctuations in generator electric power output.
- On February 21, 2010, various indications were lost on steam supply valves and alarms were received for the 'B' reactor feed pump. Water was found leaking into a panel in the vicinity of the steam leak.
- On February 23, 2010, plant power was reduced to 80 percent to repair the steam leak.

Site personnel investigating the scram determined that the plant failed to take timely and appropriate actions to resolve the problems caused by the steam leak. Following the steam leak repair on February 23, 2010, the licensee implemented a corrective action plan to identify deficiencies listed in the above timeline and the plan was to be implemented March 12, 2010. The failure to take these actions sooner directly resulted in the automatic reactor scram that occurred on March 8, 2010.

Prior to plant startup, the site conducted a review of electrical boxes in the turbine building and drained several boxes where water had accumulated. In addition, boxes found with cable splices that had been submerged were identified and the splices repaired.

Analysis. The performance deficiency involved the failure of site management to ensure that adequate corrective actions were implemented to resolve the effects of the steam leak on second stage moisture separator re-heater drain valve. Specifically, EN-LI-102, Section 4.0[2](c), states, "EN Management is responsible for ensuring that required actions for Condition Reports are determined, implemented, and adequate to resolve the condition." Contrary to this, site management did not take adequate corrective actions to thoroughly evaluate and resolve the effects of the February 14, 2010, steam leak. Had this evaluation been performed, it could have potentially prevented an automatic reactor scram on March 8, 2010. The finding was more than minor because it was associated with the initiating events cornerstone attribute of equipment performance, and it affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during shutdown, as well as during power operations. Using the Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors concluded that the transient initiator did not contribute to both the likelihood of a reactor trip and to the likelihood that mitigation equipment or functions would not be available. This is because the reactor feed pump 'B' was able to restore reactor water level post scram. As a result, the issue was of very low safety significance (Green). The cause of this finding has a crosscutting aspect in the area problem identification and resolution associated with the corrective action program component because the licensee failed to prioritize and thoroughly evaluate the extent of the cause of the water grounding sensitive electronic equipment in the vicinity of the steam leak [P.1(c)].

Enforcement. No violation of regulatory requirements occurred. This finding was entered into the licensee's corrective action program as CR-GGN-2010-01503 and is identified as FIN 05000416/2010002-03, Inadequate Actions in Response to a Steam Leak Result in an Automatic Reactor Scram.

.5 Fuel Handling Platform Mast and Fuel Assembly Damaged during Fuel Receipt

a. Inspection Scope

On March 22, 2010, a new fuel assembly and the fuel handling platform mast were damaged when the platform was moved away from the fuel preparation machine prior to ensuring that the fuel assembly was clear of the machine. During the movement of the bridge, a popping noise was heard by the refuel supervisor, fuel preparation machine operator, bridge operator, and spotter. Fuel handling platform movement was terminated. The noise was caused by the mast impacting the Plexiglas shield attached to the top of the fuel handling platform cab. The inspectors responded to the spent fuel pool area to ensure that the fuel was in a safe condition. The inspectors monitored the recovery and observed repairs of the refueling mast. Documents reviewed in this inspection are listed in the Attachment.

b. Findings

Introduction. A Green self-revealing non-cited violation of Technical Specification 5.4.1a was identified when a fuel handling platform operator failed to move a fuel assembly in accordance with station procedures.

Description. On March 22, 2010, a fuel assembly was damaged during receipt of new fuel in the spent fuel pool. The assembly had been placed in the fuel preparation machine and lowered so that the fuel handling platform could grapple the bail handle and move the assembly to a designated storage location in the spent fuel pool. The platform operator manoeuvred the platform and mast to the fuel assembly and grappled the fuel. As the operator was lifting the fuel bundle with the mast hoist, the spotter informed the operator of an unusual noise that sounded like a hissing. After a few minutes of investigation, the operator and spotter determined the sound to be from a relief valve that lifts under normal conditions and was expected. The operator returned to the mast controls and instead of bringing the bundle to the full up position, began to move the platform away from the fuel preparation machine. At the same time, the spotter had left the cab area to complete documentation associated with the fuel movement. A popping noise was heard by the refuel supervisor, fuel preparation machine operator, bridge operator, and spotter. Fuel handling platform movement was terminated. The popping noise was caused by the mast impacting the Plexiglas shield attached to the top of the fuel handling platform cab.

The licensee inspected the bundle and mast and found that the bundle had lifted a few inches off the seat of the fuel preparation machine. The upper carriage guide on the fuel preparation machine prevented the horizontal movement of the bundle, resulting in the mast and the fuel assembly bail handle bending under the horizontal force applied by the platform movement.

Analysis. The performance deficiency was the failure of the fuel handling platform operator to move a fuel assembly in accordance with station procedures. The inspectors determined that the finding was more than minor because the finding was associated with the human performance attribute of the barrier integrity cornerstone and adversely affected the cornerstone's objective to provide reasonable assurance that physical design barriers (i.e. fuel cladding) protect the public from radionuclide releases caused by accidents or events. Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1-Initial Screening and Characterization of Findings," was used to evaluate the significance of the finding. Attachment 0609.04, Table 4a, was used to evaluate the impact of the finding on fuel clad integrity. Since the finding represented a fuel handling error that did not cause damage to fuel clad integrity, the finding was determined to be of very low safety significance (Green). The finding has a cross cutting aspect in the work practices component of the human performance area because the operator performing the fuel movement did not employ effective self and peer checking techniques such that fuel handling activities were performed safely [H.4(a)].

Enforcement. Technical Specification 5.4.1a, requires that written procedures be established, implemented and maintained as recommended in NRC Regulatory Guide 1.33, "Quality Assurance Program Requirements," Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, Section 2 includes procedures for refueling equipment operation. System Operating Procedure 04-1-01-F11-3, "Fuel Handling Platform," Revision 036 requires that the operator continuously observe the grapple position as the bridge and trolley is moved. System Operating Procedure 04-1-01-F11-4, "Fuel Prep Machine Operation," Revision 016 requires that the operator slowly raise the fuel bundle until it is clear of the fuel preparation machine upper carriage guide. Contrary to these procedural requirements, on March 22, 2010, the operator failed to continuously observe the grapple position to ensure that a new fuel assembly cleared the upper carriage guide of the fuel preparation machine. This resulted in damage to the fuel assembly and the fuel handling platform mast. Because this violation was of very low safety significance and the licensee has entered it into their corrective action program as condition report CR-GGN-2010-01883, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. NCV 05000416/2010002-04, Failure to Follow Procedures Results in Damage to Fuel Assembly and Fuel Handling Platform Mast.

40A6 Meetings

Exit Meeting Summary

On February 11, 2010, the region-based inspectors presented the triennial heat exchanger and 50.59 inspection results to Mr. R. Douet, Site Vice President, and other members of his staff. The inspectors reviewed some proprietary information and verified that none would be included in this report.

On March 22, 2010, the inspector conducted a telephonic exit meeting to present the results of the in-office inspection of changes to the licensee's emergency plan to Mr. R. Vandenaeker, Acting Manager, Emergency Preparedness and Mr. M. Larson, Licensing Engineer. The

licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On April 12, 2010, the inspectors presented the inspection results to Mr. R. Douet, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

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, NUREG-1600, for being dispositioned as NCVs.

- Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states that "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected." Contrary to this, conditions adverse to quality which had been documented in condition reports and then subsequently closed to improperly prioritized or delayed work orders, failed to be corrected in a timely manner. The licensee identified a large backlog of work orders for safety related equipment that dated back to 1999. The work orders included several conditions adverse to quality such as an increasing trend in cyclic loading on a containment isolation valve motor, degraded standby service water basin slab coatings, and a degraded control building fire door. This issue was documented in the licensee's corrective action program in condition report CR GGN-2009-05478. This finding is of very low safety significance because it did not represent a loss of system safety function, did not represent the actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

- Technical Requirements Manual (TRM) section 6.2.8 requires that if a fire barrier assembly is inoperable and the fire detection system on one side of the inoperable assembly is inoperable a continuous fire watch must be established immediately. Contrary to this, on February 26, 2010 the licensee identified the fire detection system for fire zone 2-14 had failed its surveillance and was declared inoperable. The control room supervisor established an hourly fire watch based on TRM section 6.2.1. During shift turnover it was discovered that previously the auxiliary building elevator door for 103 foot elevation of the auxiliary building was declared inoperable. This was a barrier assembly that was in the same area as fire zone 2-14 and a continuous fire watch should have been established rather than a hourly fire watch. The control room supervisor immediacy established a continuous fire watch to comply with the TRM. This issue was documented in the licensee's corrective action program in condition report CR GGN-2010-01291. The senior reactor analyst from region IV performed a bounding evaluation of the change in risk caused by substituting a one-hour roving fire watch for a continuous fire watch. Based on the short exposure period and the 45-minute fire wrap in use in the fire compartments of concern, the analyst determined that the change in risk was significantly less than 1E-6. Therefore, this finding was of very low safety significance (Green).
- Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states that "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected." Contrary to this, on June 27, 2007 the licensee identified degrading protective wrappings on the service water cooling tower "A" fan gearbox oil drain lines resulting in metal loss on the piping due to corrosion. The wrappings were replaced on the gearbox for the "A" fan; however the licensee failed to take action to replace known degraded wrappings on the other fan gearboxes. This resulted in a pinhole leak on the "D" fan gearbox on December 3, 2009. This issue was documented in the licensee's corrective action program in condition report CR GGN-2009-06597. This finding is of very low safety significance because it did not represent a loss of system safety function, did not represent the actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

D. Barfield, Director, Engineering
R. Benson, Supervisor, Radioactive Waste
J. Browning, General Manager, Plant Operations
J. Buford, Acting Manager, Licensing
J. Caery, Training Manager
M. Causey, Maintenance Rule Engineer
R. Douet, Vice President, Operations
B. Edwards, Minority Owner Specialist
H. Farris, Assistant Operations Manager
G. Giles, Manager, Corrective Actions and Assessments
E. Harris, Manager, Quality Assurance
K. Higginbotham, Manager, Operations
J. Houston, Manger, Maintenance
D. Jones, Manager, Design Engineering
M. Larson, Senior Licensing Specialist
S. Osborn, Senior Licensing Specialist
C. Perino, Licensing Manager
M. Rohrer, Manager, Component Engineering
F. Rosser, Supervisor, Radiation Protection
J. Shew, Manager, System Engineering
P. Stokes, Radiation Protection Specialist
W. Trichell, Radiation Protection Manager
J. Watts, Radiation Protection Specialist
R. Wilson, Manager, Planning, Scheduling and Outages
E. Wright, ALARA Specialist, Radiation Protection
R. Vandenakker, Acting Manager, Emergency Preparedness
M. Larson, Licensing Engineer

NRC Personnel

R. Kumana, Project Engineer
B. Hagar, Senior Project Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000416/2010002-01	NCV	Failure to Restore Control Room Air Conditioning Subsystem B to Operable Status Within the Required Time of 30 days (Section 1R07)
05000416/2010002-02	FIN	Failure to Follow Work Instructions Results in Loss of Buss and a Plant Transient (Section 4OA3)
05000416/2010002-03	FIN	Inadequate Actions in Response to a Steam Leak Result in an Automatic Reactor Scram (Section 4OA3)
05000416/2010002-04	NCV	Failure to Follow Procedures Results in Damage to Fuel Assembly and Fuel Handling Platform Mast (Section 4OA3)

Closed

05000416/2009-004-00	LER	Condition Prohibited by Technical Specifications due to Control Room Air Conditioning Subsystem 'B' Inoperability Not Recognized
05000416/2009-004-01	LER	Condition Prohibited by Technical Specifications due to Control Room Air Conditioning Subsystem 'B' Inoperability Not Recognized

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

CONDITION REPORT

CR-GGN-2010-00031

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-1-01-P41-1	Standby Service Water System	130
04-1-01-N71-1	Circulating Water System	071
04-1-01-N71-3	Auxiliary Cooling Tower System	012
05-1-02-V1-2	Off Normal Event Procedure: Hurricanes, Tornados, and Severe Weather	113
04-1-03-A30-1	Manual Cold Weather Protection	20

CALCULATIONS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MC-N1N71-01-030	SACTI Model of Stream Plumes from Grand Gulf Cooling Towers	0

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/DATE</u>
	Grand Gulf Nuclear Station "Deep Freeze" Action Plan	
IEN 98-002	Industry Operating Experience Screening Form Nuclear Power Plant Cold Weather Problems and Protective Measures	01/28/1998
GGNS 96-0019	GGNS Engineering Report for Resolution of QDR 95/0033 UHS Cold Weather Operation	0
GNRI-95/00044	Issuance of Amendment No. 120 to facilitate Operating License No. NPF-29 GGNS Unit 1 (TAC No. M88101)	02/21/1995

Section 1RO4: Equipment Alignment

CONDITION REPORT

CR-GGN-2009-01676

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-S-01-Z51-1	Control Room HVAC System	047
06-OP-1R20-W-0001	Plant AC and DC Electrical Power Distribution Weekly Lineup, Attachment II	107
06-OP-1R20-W-0001	Operability Checksheet, Attachment III	107
04-1-01-P75-1	Standby Diesel Generator System	086

Section 1RO5: Fire Protection

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
E-1714	Exposed Raceway Plan Diesel Generator Building	30

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/ DATE</u>
9A.5.65 Fire Area 65	Grand Gulf Nuclear Station Appendix 9A Fire Hazard Analysis Report	
Fire Pre-Plan SSW-02	SSW Pump House and Valve Room	1
Fire Pre-Plan DG-03	Division II Diesel Generator Room	3
9A.5.62 Fire Area 62	Grand Gulf Nuclear Station Appendix 9A Fire Hazard Analysis Report	
	GGNS Combustible Control Permit Number: 2770	02/23/2010
Fire Pre-Plan SSW-01	SSW Pump House and valve Room	1
Fire Pre-Plan DG-04	HPCS Diesel Generator	3
Fire Pre-Plan DG-01	Fresh Air Corridor	2

Section 1RO6: Flood Protection Measures

CONDITION REPORT

CR-GGN-2008-07116	CR-GGN-2009-06418	CR-GGN-2009-06647
CR-GGN-2009-06650	CR-GGN-2010-00706	

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-1-03-E12-12	RHR B Pump Room Sump Pump Functional Check	0

WORK ORDER

WO00142576	WO00168381	WO00168382
WO00176176	WO00219937	WO00219938
WO51547907	WO52191220	

CALCULATION

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
195.0-41	Mississippi Power & Light Company Grand Gulf Nuclear Station Unit 1	09/25/1987

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
M-1355C	System Piping Isometric Fl. & Equip. Drains-Aux. Bldg. North & South Sump Pump Disch. – Unit 1	17

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	ECCS Sump Valve Reliability Status – Top Ten List	
1999-01346	Fire System Water-Hammer Results in Flooding of Emergency Core-Cooling Equipment, SER 98-03 (SEN-184)	06/01/1999
GGNS-99-0010	GGNS Engineering Report for GGNS Response to Significant Event Notification SEN-184 Fire System Water-Hammer Results in flooding of Emergency Core-Cooling Equipment SSW Room Cooler Flow Trend 2002-Present	

Section 1R07: Heat Sink Performance

CONDITION REPORT

CR-GGN-2009-5527	CR-GGN-2009-03458	CR-GGN-2008-02874
CR-GGN-2009-01583	CR-GGN-2002-02465	CR-GGN-2009-06600
CR-GGN-2007-03514	CR-GGN-2010-00167	CR-GGN-2007-03584
CR-GGN-2009-03779	CR-GGN-2009-04132	CR-GGN-2009-04158
CR-GGN-2009-05527	CR-GGN-2008-05434	CR-GGN-2009-01222
CR-GGN-2008-02881		

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-EP-S-039-G	Testing Standard for Safety-Related Heat Exchangers Cooled by Standby Service Water	Revision 1
EN-DC-316	Heat Exchanger Program	Revision 0
17-S-03-29	Engineering Programs and Components Procedure GL-89-13 Thermal Performance Data Collection and Analysis Safety Related	Revision 4
17-S-06-22	Performance and System Engineering Procedure SSW "A" Performance Safety Related	Revision 10
17-S-06-23	Performance and System Engineering Procedure SSW "B" Performance Safety Related	Revision 11
GJPM-OPS-P7502	Placing D/G 11(12) Jacket Water System in Service	Revision 1
07-S-24-P75-B004-1	Preventative Maintenance Instruction Jacket Water Heat Exchanger Maintenance Safety Related	Revision 6
1-S-08-16	Chemical Treatment Program	Revision 21
08-S-03-14	Chemical Addition to Plant Systems	Revision 24
06-TE-SZ51-R-0001	Plant Operations Manual: Control Room Air Conditioning Unit Thermal Performance Test	Revision 102
07-S-24-Z51-B002-1	Control Room Air Conditioning Unit Inspection and Maintenance	Revision 10
04-1-03-Z51-2	Equipment Performance Instruction: 'B' Control Room Air Conditioning Flow Test	Revision 7
04-1-03-Z51-1	Equipment Performance Instruction: 'A' Control Room Air Conditioning Flow Test	Revision 14
EN-OP-104	Operability Determinations	Revision 3
08-S-03-28	Station Service Water Emergency Water Treatment Guide	Revision 0
07-S-24-P75-B004-1	Preventive Maintenance Instruction – Jacket Water Heat Exchanger Maintenance	Revision 6
08-S04-120	Chemistry Evaluations at Standby Service Water	Revision 12

CALCULATION

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MC-Q1P41-97020	Determination of Minimum Allowable SSW Flows (LOCA Lineup) to Safety Related Heat Exchangers	Revision 8
MC-Q1P41-07019	Standby Service Water (SSW) Ultimate Heat Sink Performance (UHS) under normal loads	Revision 0
MC-Q1P41-87215	Evaluation of Low SSW (P41) Flow to the Standby Diesel Jacket Water Cooler	Revision 1

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/DATE</u>
AECM-90/0007	Response to Generic Letter 89-13; Service Water System Problems Affecting Safety-Related Equipment	1/29/1990
CCE-2004-0002	Commitment Change Based on AECM=90/0007	5/25/2004
CCE-2006-0002	Commitment Change Based on AECM=90/0007	5/2/2006
CCE-2006-0004	Commitment Change Based on AECM=90/0007	10/19/2006
CCE-2007-0001	Commitment Change Based on AECM=90/0007	10/10/2007
EOI-Grand Gulf NS	Standby Service Water Inspection	June, 2009
EN-EP-S-039-G	Testing Standard For Safety-Related Heat Exchangers Cooled by Standby Service Water	Revision 1
SERI-88-0009	System Energy Resources Inc. Grand Gulf Nuclear Station Engineering Report For Unanticipated Hydraulic Transient During Restart of the Station Service Water Pumps	Revision 1
ER-GG-2006-0209-000	Evaluate performance of SSW flow balance without fuel pool heat exchangers in support of ER 2006-0113	Revision 0

WORK ORDERS

WO00120276	WO00155015	WO00155020	WO52024742	WO52024743	WO00118517
WO00181071	WO00181071	WO51083477	WO51207080	WO51560272	WO51656153
WO51000092	WO51010684	WO00046369	WO00088931	WO00109029	WO00109030
WO00180966	WO52032195	WO52030835	WO51695394	WO51690759	WO52022454

Section 1R11: Licensed Operator Requalification Program

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
GSMS-LOR-WEX09	DG 12 Control Air Leak / Loss of Feedwater Heating / ATWS/ Suppression Pool Leak / (EP-2, 2A, 3, 4)	16

Section 1R12: Maintenance Effectiveness

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-DC-204	Nuclear Management Manual Maintenance Rule Scope and Basis	2

OTHER

<u>TITLE</u>	<u>DATE</u>
Maintenance Rule Database L11 125V Batteries	
Maintenance Rule database L21 Switchgear and Distribution Panels	
Maintenance Rule Database L51 125V Battery Chargers	
GGNS Maintenance Rule Assessment A Requirement of 10 CFR 50.65 (a)(3) Fuel Cycle 16 and Refueling Outage 16 (RF16)	04/01/2007-10/31/2008

Section 1R13: Maintenance Risk Assessment and Emergent Work Controls

CONDITION REPORT

CR-GGN-2010-01261

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
01-S-18-6	Risk Assessment of Maintenance Activities	007
02-S-01-17	Control of Limiting Conditions for Operations	118
04-1-01-P75-1	Standby Diesel Generator System	086
05-1-02-I-4	Plant Operations Manual, Loss of AC Power	036
EN-WM-101	On-line Work Management Process for the Week of 3/1/2010	6
02-S-01-41	Plant Operations Manual, On Line Risk Assessment	001
EN-WM-101	On-line Work Management Process for the Week of 3/15/2010	6

APPROVAL FORMS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
EN-WM-101	On-Line Emergent Work Addition/Deletion	Week of January 11, 2010
EN-WM-101	On-Line Emergent Work Addition/Deletion	Week of January 25, 2010
EN-WM-101	On-Line Emergent Work Addition/Deletion	

Section 1R15: Operability Evaluations

CONDITION REPORT

CR-GGN-2010-1458	CR-GGN-2010-00981	CR-GGN-2001-943
CR-GGN-2009-743	CR-GGN-2010-00981	CR-GGN-2009-4480
CR-GGN-2010-00804	CR-GGN-2010-00283	CR-GGN-04768
CR-GGN-2009-04480		

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-IC-IE12-R-1010	RHR Interface valve Pressure Calibration	101

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
E-1181-075	E12 Residual Heat Removal System Valve	012
E-1181-082	E12 Residual Heat Removal System Testability "B"	14
E-1181-068	E12 Residual Heat Removal System Relay Logic Bus "B" Unit 1	17
M-1085A	P&I Diagram Residual Heat Removal System Unit 1	068
E-1181-069	Residual Heat Removal System relay Logic Bus "B" Unit 1	11
E-1181-038	E12 Residual Heat Removal System RHR Injection Valve F042B Unit 1	10

WORK ORDER

WO221965

WO 52195006

WO 225523

Section 1R17: Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications

CONDITION REPORTS

CR-GGN-2009-06904	CR-GGN-2009-06223	CR-GGN-2009-05559
CR-GGN-2008-06792	CR-GGN-2008-02546	CR-GGN-2010-00308
CR-GGN-2009-06505	CR-GGN-2009-05185	CR-GGN-2009-04255

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-DC-141	Design Inputs	Revision 6
EN-DC-115	Engineering Change Process	Revision 8
EN-DC-117	Post Modification Testing and Special Instructions	Revision 3
EN-LI-112	10 CFR 72.48 Review Program	Revision 7
EN-OP-104	Operability Determinations	Revision 3
EN-LI-100	Process Applicability Determination	Revision 8
EN-DC-132	Control of Engineering Documents	Revision 2
EN-LI-101	10CFR50.59 Evaluations	Revision 6
EN-DC-134	Design Verification	Revision 2
EPI 04-1-03-C11-7	Control Rod Settle and Insertion Test	Revision 9
15-S-02-2	Work Instructions and Inspection Procedures	Revision 5
07-S-05-300	Control and Use of Cranes and Hoists	Revision 112

ENGINEERING EVALUATIONS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
2008-0001-R00	Gagging of Valve 1P11F515 in the Condensate and Refueling Water Storage and Transfer System	Revision 0
2008-0002-R00	Lowering the Reset Pressure of the ADS Air Receiver and Relief Valves	Revision 0
2008-0003-R00	Feedwater Leading Edge Flowmeter System Modification	Revision 0
2008-0004-R00	Evaluation for Cycle 17 Core Reload Changes	Revision 0
2009-0001-R00	Revised Offsite and Control Room Atmospheric Dispersion Coefficients	Revision 0

SCREENS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EC 3254	Evaluation of the Circulating Water Screens Potential	Revision 0

SCREENS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EC 4593	Overstressing and Lifting with a Differential Pressure of 21 inches (REF. CR-GGN-2007-04607) Evaluate Station Service Water Ultimate Heat Sink Temperature for Normal Heat Loads	Revision 0
EC 7444	Accept-As-Is the 1P44F513 Valve Operator with the Current As-Built 377D Trip Device Installed and Update the Documentation	Revision 0
EC 9522	CR-GGN-2007-4862 CA 11 Resolution - Evaluate Cleaning RHR Pump Seal Coolers with Chemetall Oakite Gardoclean R1700F or Other Effective Chemical Agent	Revision 0
EC 14257	Update SDC-B21 Section 4.4.1 with the Correct Choked Flow for Flow Restrictor, CR-GGN-2009-1439 and Rated Flow CR-GGN-2009-1554	Revision 0
EC 15445	Engineering Report GGNS-ME-09-00001 for Gas Intrusion in Safety Systems SER 2-05	Revision 0
EC 16388	During Testing on the Spent Fuel Cask Crane, the North Load Brake Failed 3 TIMES. Approve Use of Crane for Current Spent Fuel Handling Campaign (REF. CR-GGN-2009-03632)	Revision 0
EC 14143	Revise Dose Calculations to Reflect the Revised Dispersion Coefficients	Revision 0
EC16573	Evaluation of Control Room Air Conditioning B Capacity Controllers not Set Properly	Revision 0
EC 6039	Control Room HVAC System Freon Detection Trip Removal	Revision 0
EC 6084	Remove Division I Control Room Air Conditioning Freon Detector Trip	Revision 0
EC 6085	Remove Division II Control Room Air Conditioning Freon Detector Trip	Revision 0
EC 6086	Remove Control Room Air Conditioning Purge Fan and Damper Initiation on HI FREON Detection	Revision 0
EC 2118	Replace Pressure Relief Valve Q1E51F090 in the E51 System with a Different Brand Name and Model Valve	Revision 0
EC 0069	Replace Safety Related Lonergran LCT-11 Relief Valves	Revision 0
EC 2201	Replacement of Division 1 Diesel Generator Start Circuit Time Delay Relay	Revision 1
EC 18190	Engineering Plan to Accept Existing Condition Found in the Reactor Water Clean Up Heat Exchanger Room	Revision 0
EC 16870	Evaluate Ventilation Intake Dampers Found with Degraded Material Conditions as Noted per CR-GGN-2009-04302.	Revision 0
EC 16490	Evaluation to Address the Tolerances for 250/251 Relays Associated with Reactor Recirculation Pumps A&B	Revision 0

MODIFICATIONS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EC 18330	Replace Thermo Control Switches SP64N093A/B with New Kim Hotstart Preheaters, Model CB125112-000, on Diesel Driven Fire Pumps, SP64C003A/B	Revision 0
EC 3937	Increase the Lube Oil Supply Tubing to Both the Left and Right Turbo Chargers of the Division II Emergency diesel Generator	Revision 0
EC 104110	Implement Siemens Modification to Reduce the Possibility of Energizing the External Electrical Potential Cable for the Primary Water Manifold as Described in Siemens Urgent Technical Advisory 2006-0002	Revision 0
EC 6039	Control Room HVAC System FREON Detection System Trip Removal	Revision 0
EC 10305	Increase the HPCS Room Cooler Flow by Reducing the HPCS Diesel Generator Jacket Water Flow to Reduce Station Service Water Flow to the HPCS Diesel Generator to Minimize Potential for Erosion of the Jacket Water Coolers.	Revision 0
EC 8577	Provide a New Orifice for the Positive Pressure Seal Line for Control Rod Drive Pump 1C11C001B	Revision 0
EC 6418	Increase the HPCS MOV Instantaneous Circuit Breaker Trip Setting to Accommodate Current System Conditions	Revision 0
EC 104072	Replace PSW Piping (8'-JBD-174) through penetrations SP-30A and 2 (CR-1999-01505)	Revision 0

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
G-ME-2004-002	Engineering Report for Thermal Relief Valves	Revision 0
QP-69	Summary for Anderson Greenwood/Crosby relief valve Q1E51F090	Revision 10
GGNS-M-912.0	Design Spec. for Relief Valves	Revision 1
FSK-S-1083-035-B	Drawing Condensate from DBB-51 Thru PSV F090	Revision 5
XC-Q1111-98019	Design Basis Fuel Handling Accident Radiological Analysis with Revised Source Term	Revision3
XC-Q1P53-05011	Radiological Impact of Secondary Containment Bypass Leakage Through Instrument Air and Service Air Piping	Revision 1
XC-Q1M46-04004	Radiological Impact of Post-LOCA Leakage Through the Horizontal Fuel Transfer System	Revision 2
XC-Q1111-98016	Control Rod Drop Accident Analysis with Revised Source Term	Revision 2
XC-Q1C84-09002	SB and LPZ Atmospheric Dispersion Values for Design Basis Accidents	Revision 0

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
XC-Q1111-09001	Control Room Atmospheric Dispersion Values for Design Basis Accidents	Revision 0
XC-Q1111-98017 GNRI-2001/00032	LOCA Dose Analysis with Revised Source Terms GGNS Unit 1 Issuance of Amendment Full Scope Implementation of an Alternative Accident Source Term TAC MA8065	Revision 3 3/14/2001
HWNLO-2007-00001	2007 licensing Focused Self-Assessment EN-LI-100 PADs Review Program Summary Report	1/23/2008
GNRO-2009/00030	August 2009 UFSAR Update for Grand Gulf Nuclear Station	9/8/2009
GNRO-2007/00069	UFSAR Update for Grand Gulf Nuclear Station for October 2007	10/11/2007
GNRO-200B/00063	UFSAR Update for Grand Gulf Nuclear Station for September 2008	9/17/2008

Section 1R18: Plant Modifications

CONDITION REPORT

CR-GGN-1997-00320

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-1-02-1H13- P680-4A2-A4	Alarm Response Instruction CRD HYD TEMP HI	151
EN-DC-136	Nuclear Management Manual-Temporary Modifications	5

DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>
Attachment 2	CRD Scram Time/Temperature Data from 12/27/97-10/8/2000

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
OG01-04140231	Distribution of Technical Position Paper "Generic Response to GE Service Information Letter (SIL) 173, Supplement 1, High Temperature Control Rod Drives" Technical Paper No. BWROG-CRD-01-A	REV: 0 November 2001
SIL No. 173 Supplement 1	Control Rod Drive High Operating Temperature	09/20/1999
SIL-173 S.1	Control Rod Drive High Operating Temperature	12/06/1999

Section 1R19: Postmaintenance Testing

CONDITION REPORT

CR-GGN-2010-01457	CR-GGN-2010-01458	CR-GGN-2010-01467
CR-GGN-2010-01468	CR-GGN-2010-01473	CR-GGN-2010-01474
CR-GGN-2010-01337	CR-GGN-2010-01360	CR-GGN-2010-01422
CR-GGN-2010-01433	CR-GGN-2010-01468	

Procedures

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
06-IC-1C51-V-0001	Intermediate Range Calibration	107
06-OP-1P81-M-0002	HPCS Diesel Generator 13 Functional Test	123
EN-MA-133	Control of Scaffolding Engineering Evaluation Division 3 DG – Component 1P41-D051	12/10/2009
EN-MA-133	Control of Scaffolding Engineering Evaluation Division 3 DG – Component 1P41-D050	12/10/2009
04-1-03-P75-1	Dive 2 Diesel Generator Unexcited Run	006
04-1-03-P75-3	Div 2 D/G Fuel Oil Storage Tank Level Verification	4
06-OP-1P75-M-0002	Standby Diesel Generator 12 Functional Test Attachment I	128

Procedures

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
06-OP-1P75-M-0002	Standby Diesel Generator 12 Functional Test Attachment II	128
06-OP-1E12-Q-0006	LPCI/RHR Subsystem B MOV Functional Test Attachment I	110
06-OP-1C61-R-0002	Remote Shutdown Panel Control Check	108
06-OP-1E12-Q-0006	LPCI/RHR Subsystem B MOV Functional Test Attachment II	110
06-OP-1P41-Q-0005	Standby Service Water Loop B Valve and Pump Operability Test Attachment I	121
06-OP-1P41-M-0005	SSW Loop B Operability Check Attachment I	112
06-OP-1P41-Q-0005	Standby Service Water Loop B Valve and Pump Operability Test Attachment II	121

WORK ORDERS

WO218860	WO52210595	WO52188603 01	WO67992	WO52199042
WO104799	WO220279 01	WO52203585 01		

OTHER

LCOTR#: 1-TS-09-0546
ER-GG-2003-0126 EC20207

Section 1R22: Surveillance Testing

CONDITION REPORT

CR-GGN-2010-01764 CR-GGN-2010-01763

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-EL-1E12-Q-0002	Containment Spray Time Delay Relay Calibration and Functional Test	100

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-OP-1P81-R-0001	HPCS Diesel Generator 18-Month Functional Test	115
06-ME-1M61-V-0003	Local Leak Rate Test – Low Pressure Water	104
06-OP-1E12-Q-0024	LPCI/RHR Subsystem B Quarterly Functional Test	114
06-OP-1E51-Q-0003	Plant Operations Manual RCIC System Quarterly Pump Operability Verification	127

WORK ORDER

WO214147 WO212450 WO52224493

Section 1EP6: Drill Evaluation

CONDITION REPORT

CR-GGN-2010-01248 CR-GGN-2010-01256

OTHER

<u>TITLE</u>	<u>DATE</u>
GGNS 2010 1 st Quarter Site Training Drill	
Objectives/Evaluation Criteria	02/24/2010
Emergency Notification Form 1-5 for EP Drill	02/24/2010
Emergency Preparedness Drill Emergency Facility Log EOF	02/24/2010

Section 40A1: Performance Indicator Verification

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/DATE</u>
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	REV: 5 July 2007

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-LI-114	Performance Indicator Process: Unplanned Scrams per 7,000 Critical Hours, Quarters 1-4, 2009	4

Section 40A2: Identification and Resolution of Problems

CONDITION REPORT

CR-GGN-2009-06425	CR-GGN-2008-05434	CR-GGN-2007-02074	CR-GGN-2006-00073
CR-GGN-2010-00514	CR-GGN-2003-02570	CR-GGN-2003-00656	CR-GGN-2003-02838
CR-GGN-2004-00503	CR-GGN-2004-01732	CR-GGN-2004-01923	CR-GGN-2004-02653
CR-GGN-2004-04362	CR-GGN-2005-03448	CR-GGN-2006-00073	CR-GGN-2006-00859
CR-GGN-2006-01060	CR-GGN-2006-01971	CR-GGN-2006-02407	CR-GGN-2006-03506
CR-GGN-2007-00229	CR-GGN-2007-00494	CR-GGN-2007-00931	CR-GGN-2007-01076
CR-GGN-2007-01355	CR-GGN-2007-01807	CR-GGN-2007-02074	CR-GGN-2007-03335
CR-GGN-2010-00700	CR-GGN-2009-06425		

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/ DATE</u>
07-S-14-56	Component & Component Coating Inspection	REV: 023 8/06/2009
07-S-14-56	Component & Component Coating Inspection	REV: 022 4/02/2009
07-S-14-56	General Maintenance Instruction Western Gear Speed Reducer	REV: 024 10/30/2009
06-ME-SP64-R-0045	Surveillance Procedure Ventilation System Fire Dampers Inspection	REV:107 12/04/2006
07-S-14-338	Plant Operations Manual General Maintenance Instruction Valve Stem Packing Replacement and Adjustment	REV: 8 06/21/2004

07-S-14-338	Valve Stem Packing Replacement and Adjustment Configuration Sheet	8
EN-LI-119	Nuclear Management Manual Apparent Cause Evaluation (ACE) Process	8
EN-LI-102	Nuclear Management Manual Corrective Action Process	10

WORK ORDER

WO0026429	WO50323164	WO0026430
WO0047453	WO0026429	WO0026430
WO50323164	WO0061769	WO0064257
WO0064255	WO0064265	WO0029920
WO0049860	WO0060875	WO0054271
WO0056723	WO0073008	WO0080202
WO0083277	WO0084154	WO0042409
WO0092802	WO0095431	WO10028228
WO00103272	WO00104986	WO00105594
WO50308580	WO00107067	WO00108081

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EC No. 19697	Engineering Evaluation Section 5.7	0

Section 40A3: Event Follow-Up

CONDITION REPORT

CR-GGN-2010-01056	CR-GGN-2010-01037	CR-GGN-2010-01035	CR-GGN-2009-06895
CR-GGN-2009-06510	CR-GGN-2009-06838	CR-GGN-2010-01407	GR-GGN-2010-01404
CR-GGN-2010-01503	CR-GGN-2010-01504	CR-GGN-2010-01506	CR-GGN-2010-01513

CR-GGN-2010-01514 CR-GGN-2010-01768 CR-GGN-2010-01554 CR-GGN-2010-01542
 CR-GGN-2010-01543 CR-GGN-2010-01556

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/ DATE</u>
04-1-01-N32-2	Turbine Generator Control	REV:019 7/25/2008
03-1-01-2	Power Reduction From Full Reactor Power to ~60% Power Attachment III	141
EN-OP-117	Operations Assessments	000
04-1-02-1H13-P680- 9A-A7	Alarm Response Instruction: XOVER PIPE RSFR 1 st DR LVL HI	41
04-1-02-1H13-P680- 9A-B7	Alarm Response Instruction: XOVER PIPE RSFR 2 nd DR LVL HI	41
04-1-02-1H13-P680- 2A-B8	Alarm Response Instruction: FW HTR 3C LVL HI	182
04-1-01-R21-14	4.16 KV Bus	18
05-1-02-I-4	Loss of AC Power	36
EN-LI-102	Nuclear Management Manual, Corrective Action Process	14
01-S-06-5	Reactor Plant Event Notification Worksheet EN#45753	108
01-S-06-26	Post-Trip Analysis Scram No. 122	017
04-1-01-N32-2	Turbine Generator Control	REV:019 7/25/2008
04-1-01-F11-4	Fuel Prep Machine Operations	16
04-1-01-F11-3	Fuel Handling Platform	036

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
1-TS-10-0072	Turbine Overspeed Protection System	02/17/2010

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Operations Log for 2/17/2010 - Days	02/17/2010
	Operations Log for 2/17/2010 - Nights	02/17/2010
	RECIRC Valve -A- Position & RECIRC Valve -B- Position, PDS Trend Tool	03/03/2010
	Operations Log for 3/3/2010 - Days	03/03/2010
	Operations Log for 03/08/2010 - Days	03/08/2010
	OSRC Agenda	03/09/2010
	Corrective Action Detail	03/08/2010
	Condition Report List for Operable comp Measures	03/08/2010
	Site CR Status SDNC and ODMI	03/08/2010
	LCOTR Log	03/08/2010
	Forced Outage FO-10-01-Startup Schedule	03/11/2010

Section 40A7: Licensee-Identified Violations

CONDITION REPORT

CR GGN-2009-05478 CR GGN-2009-06597 CR-GGN-2010-01291

DRAWINGS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
A-0632	Unit I Auxiliary Bldg. Fire Protection	005