UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

August 5, 2011

Mike Perito
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 NUMBER 05000416/2011003

Dear Mr. Perito:

On June 27, 2011, 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 July 14, 2011, with Jeremy Browning, General Plant Manger Operations, 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.

Based on the results of this inspection, the NRC has identified eight issues that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has determined that violations are associated with these issues. Additionally, one licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. However, because of their very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as a noncited violations, consistent with Section 2.3.2 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 facility. In addition, if you disagree with the cross-cutting aspect assigned to 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 the facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Vincent Gaddy, Chief
Project Branch C
Division of Reactor Projects

Docket: 50-416
License: NPF-29

Enclosure:
NRC Inspection Report 05000416/2011003
w/Attachment: Supplemental Information

Distribution via Listserv

Electronic distribution by RIV:
Regional Administrator (Elmo.Collins@nrc.gov)
Deputy Regional Administrator (Art.Howell@nrc.gov)
DRP Director (Kriss.Kennedy@nrc.gov)
Acting DRP Deputy Director (Jeff.Clark@nrc.gov)
DRS Director (Anton.Vegel@nrc.gov)
Acting DRS Deputy Director (Robert.Caldwell@nrc.gov)
Senior Resident Inspector (Rich.Smith@nrc.gov)
Resident Inspector (Blake.Rice@nrc.gov)
Branch Chief, DRP/C (Vincent.Gaddy@nrc.gov)
Senior Project Engineer, DRP/C (Bob.Hagar@nrc.gov)
Project Engineer, DRP/C (Rayomand.Kumana@nrc.gov)
Project Engineer, DRP/C (Jonathan.Braisted@nrc.gov)
GG Administrative Assistant (Alley.Farrell@nrc.gov)
Public Affairs Officer (Victor.Dricks@nrc.gov)
Public Affairs Officer (Lara.Uselding@nrc.gov)
Project Manager (Alan.Wang@nrc.gov)
Acting Branch Chief, DRS/TSB (Dale.Powers@nrc.gov)
RITS Coordinator (Marisa.Herrera@nrc.gov)
Regional Counsel (Karla.Fuller@nrc.gov)
Congressional Affairs Officer (Jenny.Weil@nrc.gov)
OEMail Resource
ROPreports
RIV/ETA: OEDO (John.McHale@nrc.gov)
DRS/TSB STA (Dale.Powers@nrc.gov)

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SUNSI Rev Compl.	✓ Yes ☐ No	ADAMS	✓ Yes ☐ No	Reviewer Initials	VGG
Publicly Avail	✓ Yes ☐ No	Sensitive	☐ Yes ✓ No	Sens. Type Initials	VGG

SRI:DRP/PBC	RI:DRP/PBC	SPE:DRP/PBC	C:DRS/EB1	C:DRS/EB2
RLSmith	BBRice	BHagar	TRFarnholtz	NFO'Keefe
/E/VGG for	**/E/VGG for**	**/RA/**	**/RA/**	**/RA/**
7/26/11	7/26/11	8/2/11	7/8/11	7/14/11

C:DRS/OB	AC:TSB	AC:DRS/PSB1	C:DRS/PSB2	C:DRP/C
MHaire	DPowers	MHay	GEWerner	VGGaddy
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C:DRP/C				
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8/4/11				

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	05000416
License:	NPF-29
Report:	05000416/2011003
Licensee:	Entergy Operations, Inc.
Facility:	Grand Gulf Nuclear Station
Location:	7003 Baldhill Road Port Gibson, MS 39150
Dates:	March 28, 2011 through June 27, 2011
Inspectors:	R. Smith, Senior Resident Inspector B. Rice, Resident Inspector M. Baquera, Resident Inspector (Palo Verde) J. Braisted, Project Engineer J. Drake, Senior Reactor Inspector A. Fairbanks, Reactor Inspector R. Kumana, Project Engineer E. Uribe, Reactor Inspector
Approved By:	Vincent Gaddy, Chief, Project Branch C Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000416/2011003; 03/28 – 06/27/2011; Grand Gulf Nuclear Station, Integrated Resident Report; Adverse Weather Protection, Equipment Alignments, Fire Protection, Flood Protection Measures, Maintenance Effectiveness, and Surveillance Testing.

The report covered a 3 month period of inspection by resident and region based acting resident inspectors. Eight Green noncited violations of 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." The cross-cutting aspect is determined using Inspection Manual Chapter 0310, "Components Within the Cross-Cutting Areas." 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: Mitigating Systems

- Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for failure to perform an adequate inspection of probable maximum precipitation door seals protecting safety related equipment. Inspectors found the entrance door to the diesel generator building and the entrance door to the division 2 diesel generator in a degraded condition. The inspectors identified that the door seals did not make complete contact with the door frames all the way around as required by procedure. The licensee initiated compensatory actions for the degraded seals, staging sand bags in the area and requiring monitoring of the affected doors during heavy rainfall. This issue was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-02575.

  The finding is more than minor because it is associated with the protection against external factors attribute of Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors used the seismic, flooding, and severe weather Table 4b and determined it would affect multiple trains of safety equipment. The inspectors consulted the regional senior reactor analyst, who performed a Phase 3 analysis. The result was a delta-core damage frequency of $3.3E^{-7}$/yr and a delta-large early release frequency of $6.6E^{-8}$/yr. These results confirmed that the finding had very low safety significance (Green). The inspectors determined the apparent cause of this finding was that licensee personnel were not adequately trained to perform these inspections. Therefore this finding has a cross-cutting aspect in the area of human performance associated with resources in that the licensee's training of personnel was not adequate in performing inspection of the probable maximum precipitation door seals [H.2(b)](Section 1R01).

- Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to adequately implement scaffolding control procedural requirements related to post-installation inspections and engineering safety evaluations for scaffolding constructed within 2 inches of safety-related or fire protection equipment. During plant walkdowns, inspectors identified multiple examples of the licensee not properly implementing Entergy’s corporate and site procedures for the control of scaffolding. The licensee’s immediate corrective actions included inspecting the scaffolding that had been installed, modifying or removing it where appropriate, and properly posting the scaffolds. This issue was entered into the licensee’s corrective action program as Condition Reports CR-GGN-2011-03480, CR-GGN-2011-03601, CR-GGN-2011-03602, and CR-GGN-2011-03603.

  The inspectors determined that this finding is more than minor because it is associated with the external factors and equipment performance attributes of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined the finding was of very low safety significance (Green), because it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

  The inspectors determined the apparent cause of this finding was lack of supervisor oversight during scaffold construction. Therefore the finding has a cross-cutting aspect in the area of human performance associated with work practices, in that the licensee did not provide effective supervisor oversight of workers constructing scaffolding to ensure these activities were performed per procedural requirements [H.4(c)](Section 1R04).

- Green. The inspectors identified a noncited violation of License Condition 2.C(41) for the failure to identify conditions adverse to the fire protection program. Specifically, during required inspections of the material condition of the sprinkler system, the licensee failed to identify several instances of bent or misaligned sprinkler head deflector plates and a painted sprinkler head. Corrective action included correcting bent or misaligned plates and replacing the painted sprinkler head. This issue was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-03132.

  The finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the safety concern is that the number of bent or misaligned sprinkler heat canopies and painted sprinkler heads would not provide an adequate area-wide coverage of suppression. The inspectors evaluated the significance of this finding using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." The deficiency involved the Fixed Fire Protection Systems category. Using Appendix F,

Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," the inspectors determined that the deficiency had low degradation since less than 10 percent of the heads in the affected fire area were nonfunctional, a functional head remained within 10 feet of the combustibles of concern, and the system remained nominally code compliant. This finding screened as having very low safety significance (Green) in Phase 1of Manual Chapter 0609, Appendix F. This finding has a cross-cutting aspect in the area of human performance associated with resources because the procedure used to inspect the condition of these sprinklers did not contain specific criteria for identifying unacceptable sprinkler conditions [H.2(c)](Section 1R05).

- Green. The inspectors identified a noncited violation of Facility Operating License Condition 2.C(41), involving the failure to ensure that manholes MH01, MH20 and MH21 were properly sealed to prevent the entry of flammable liquid. During the performance of the manhole/vault inspection, the inspectors were reviewing engineering change packages associated with solar sump pumps for MH20 and MH21. During their review, they determined that the licensee was not meeting the requirements of their license bases documents for MH20 and MH21, which contain safe shutdown cables for standby service water trains A and B. The licensee's immediate corrective action included placing hazmat barricades around each manhole to prevent flammable fluids from entering the manholes. This issue was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-00562.

  This finding was more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 3b, Item 1 directs the inspectors to Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." However, an NRC senior reactor analyst determined that the unique nature of this performance deficiency did not lend itself to analysis by the methods provided in Appendix F. Therefore, a Phase 3 analysis was performed. Based on a bounding analysis, the analyst determined that the change in core damage frequency was approximately $1.5E^{-7}$/yr. The result was low because of the relatively short periods of time that fuel was actually being transferred, the low probability of transfer system failures, and the low likelihood that a loss of normal service water initiator would occur following a fire in the subject manholes. This noncited violation was therefore determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of problem identification and resolution associated with corrective actions because licensee personnel failed to initiate a condition report when the issue was identified during the development of their engineering change package, which resulted in the failure to ensure the safety related manholes were sealed in accordance with their license based documents [P.1(a)](Section 1R06).

- Green. The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a for the licensee's failure to provide adequate testing procedures, which resulted in the high pressure core spray minimum flow valve inadvertently stroking

approximately 11 times during a surveillance test. The excessive stroking of the valve resulted in the unplanned inoperability of the high pressure core spray system because the valve's feeder breaker overcurrent instantaneous trip setpoint had drifted below the manufacturer's tolerance for the existing setting. As immediate corrective action, the licensee replaced the degraded breaker. This finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-01901.

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined that the finding was of very low safety significance (Green) because it did not result in a loss of system safety function since the high pressure core spray system would still have been functional even with the minimum flow valve potentially failing open. Additionally, it did not represent a loss of a system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.
This finding had a cross-cutting aspect in the area of problem identification and resolution associated with operating experience in that licensee had not incorporated operating experience from a similar event that had occurred at another Entergy site [P.2(b)](Section 1R12).

- Green. The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to take adequate corrective actions for a significant condition adverse to quality associated with the division 3 emergency diesel generator. While performing a maintenance effectiveness review of the diesel generators, the inspectors noted on October 17, 2009, at 9:07 p.m., the FU-7 fuse for the division 3 diesel generator was determined to have a faulty fuse clip, resulting in the inoperability of the diesel generator due to loss of power to the direct current powered fuel pumps. Then on March 18, 2011, the division 3 emergency diesel generator was again rendered inoperable due to a faulty fuse clip on the FU-8 fuse holder, which is of the same design and function as the FU-7 fuse holder in the previous occurrence. Short term corrective action included replacing the fuse holder. This finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-01868.

  The finding is more than minor because it is associated with equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

The finding had a cross-cutting aspect in the area of human performance associated with resources because the training provided to correct the initial event was not adequate to ensure proper fuse installation and verify good connection existed between the fuse and fuse holder [H.2(b)](Section 1R12).

- Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to review the suitability of leaving test fittings on reactor coolant system flow transmitter equalizing block drain ports instead of the design specified manifold plugs. As corrective action, the licensee replaced the test fittings with the correct drain plugs. This finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-04485.

  This finding is more than minor because it is associated with the design control attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined that the finding was of very low safety significance (Green) because it was a design or qualification deficiency confirmed not to result in loss of operability of functionality, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

  The inspectors determined that the finding had a cross-cutting aspect in the area of human performance, associated with work practices, because the licensee failed to ensure that human error prevention techniques, such as holding pre-job briefings, self- and peer-checking, and proper documentation of activities were utilized such that work activities were performed safely and personnel did not proceed in the face of uncertainty or unexpected circumstances Specifically, the licensee failed to review the suitability of installing test and brass fittings on pressure, differential pressure and flow transmitter block valve drain ports instead of the design specified manifold plugs. [H.4(a)](Section 1R12).

- Green. The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a, for failure to follow a procedure resulting in the inoperability of the reactor core isolation cooling system primary containment isolation valve. This occurred while the licensee was performing surveillance on the reactor core isolation cooling system and incorrectly attached a jumper to the wrong terminal point resulting in blowing a fuse that caused a loss of control power to the reactor core isolation cooling primary containment isolation valve 1E51-F031. As immediate corrective action, the licensee removed the jumper and replaced the control power fuse. The finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-01932.

  The finding is more than minor since it is associated with the human performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual

Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. In addition, this finding had a human performance cross-cutting aspect associated with work practices in that the licensee did not use the proper human performance techniques of self-checking to prevent the loss of control power to a primary containment isolation valve [H.4(a)](Section 1R22).

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee has been entered into the licensee’s corrective action program. These violations and condition report number is listed in Section 4OA7.

REPORT DETAILS

Summary of Plant Status

Grand Gulf Nuclear Station began the inspection period at 96 percent rated thermal power. This is due to the January 9, 2011, isolation of the second-stage steam to both the A and B moisture separator reheaters.

- On April 8, 2011, operators reduced power to 68 percent for a planned control rod sequence exchange, control rod testing, and turbine testing. The plant was returned to 96 percent power on April 10, 2011.

- On April 15, 2011, operators reduced power to 93 percent to remove heater drain pump B from service in an attempt to repair a steam leak on the heater drain pump B discharge flange. The plant was returned to 96 percent power later that day.

- On May 14, 2011, operators reduced power to 85 percent for planned control rod testing and turbine testing. The plant was returned to 96 percent power on May 15, 2011.

- On June 3, 2011, operators reduced power to 85 percent for planned control rod testing and turbine testing. The plant was returned to 96 percent power on June 4, 2011.

- On June 6, 2011, operators reduced power to 94.5 percent power to remove the heater drain pump B from service in an attempt to repair a steam leak on the heater drain pump B discharge flange. The plant was returned to 96 percent power later that day.

- On June 18, 2011, operators reduced power to 50 percent power to perform a steam leak repair on moisture separator reheater B instrument plug, a permanent repair of the heater drain pump B, and to determine if a fuel defect existed. The plant was returned to 96 percent power on June 22, 2011.

- On June 26, 2011, operators reduced power to 58 percent to determine the location of a fuel defect and perform fuel defect suppression. The plant remained at 60 percent for remainder of the inspection period while completing fuel leak location activities.

1. REACTOR SAFETY

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

1R01 Adverse Weather Protection (71111.01)

.1 Summer Readiness for Offsite and Alternate-ac Power

a. Inspection Scope

The inspectors performed a review of preparations for summer weather for selected systems, including conditions that could lead to loss of offsite power and conditions that

could result from high temperatures. The inspectors reviewed the procedures affecting these areas and the communications protocols between the transmission system operator and the plant to verify that the appropriate information was being exchanged when issues arose that could affect the offsite power system. Examples of aspects considered in the inspectors' review included:

- Coordination between the transmission system operator and the plant's operations personnel during off-normal or emergency events
- Explanations for the events
- Estimates of when the offsite power system would be returned to a normal state
- Notifications from the transmission system operator to the plant when the offsite power system was returned to normal

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 the licensee was 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:

- Division 1 and 2 standby diesel generators
- 500 kV switchyard
- 34.5 kV switchyard

These activities constitute completion of one readiness for summer weather affect on offsite and alternate-ac power sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings were identified.

.2 Readiness for Seasonal Extreme Flooding Conditions

a. Inspection Scope

The inspectors performed a review of the flooding procedures and site actions for seasonal extreme flooding of the Mississippi River. The inspectors verified that the site had developed detailed plans and contingency actions for the record flooding of the Mississippi River. Inspectors attended flooding preparation meetings, reviewed the licensee's plans, and ensured that the site had addressed requirements for plant

shutdown, if required. The inspectors reviewed the protective strategies for the plant's service water system to ensure that it would be effective against the record flooding. The inspectors reviewed previously identified deficiencies to determine if these had been addressed prior to the onset of higher than normal flooding in the area. Inspectors also evaluated the implementation of the site plan for flooding preparation and compensatory measures before the onset of, and during, the flooding conditions.

During the inspection, the inspectors focused on plant-specific design features and the procedures used by plant personnel to mitigate or respond to the record flooding conditions. Additionally, the inspectors reviewed the Updated Final Safety Analysis Report and performance requirements for systems selected for inspection, and they 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 flooding 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:

- Plant service water system
- Emergency diesel generators
- Offsite power availability

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

b. Findings

No findings were identified.

.3 Readiness to Cope with External Flooding

a. Inspection Scope

The inspectors evaluated the design, material condition, and procedures for coping with the design basis probable maximum flood. The evaluation included a review to check for deviations from the descriptions provided in the Updated Final Safety Analysis Report for features intended to mitigate the potential for flooding from external factors. As part of this evaluation, the inspectors checked for obstructions that could prevent draining, checked that the roofs did not contain obvious loose items that could clog drains in the event of heavy precipitation, and determined that barriers required to mitigate flooding were in place and operable. Additionally, the inspectors performed an inspection of the protected area to identify any modifications to the site that would inhibit site drainage or that would allow ingress past a barrier during a probable maximum precipitation event. The inspectors also reviewed the abnormal operating procedure for mitigating the design basis flood to ensure it could be implemented as written. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one external flooding sample as defined in Inspection Procedure 71111.01-05.

b. Findings

Introduction. The inspectors identified a Green noncited violation of 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for failure to perform an adequate inspection of probable maximum precipitation door seals protecting safety related equipment.

Description. During an external flooding inspection on April 12, 2011, inspectors found the entrance door to the diesel generator building and the entrance door to the division 2 diesel generator in a degraded condition. The inspectors identified that both door seals did not make complete contact with the door frames all the way around. Failure of these two door seals during a probable maximum precipitation event could potentially cause flooding of the three diesel generator rooms at the site. The site initiated compensatory actions for the degraded seals, staging sand bags in the area and requiring monitoring of the affected doors during heavy rainfall. The site initiated and completed work orders replacing the degraded seals on the two doors. They also implemented a corrective action to review the inspection practices to determine if the workers are performing these door seal inspections correctly.

The licensee documented this issue in their corrective action program as Condition Report CR-GGN-2011-02575. The corrective actions included replacing the degraded seals on the two doors.

Analysis. The inspectors determined that the failure to properly inspect and repair door seals that protect safety related equipment from probable maximum precipitation is a performance deficiency. The finding is more than minor because it is associated with the protection against external factors attribute of Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors used the seismic, flooding, and severe weather Table 4b and determined it would affect multiple trains of safety equipment. The inspectors consulted the regional senior reactor analyst, who performed a Phase 3 analysis. The result was a delta-core damage frequency of $3.3E^{-7}$/yr and a delta-large early release frequency of $6.6E^{-8}$/yr. These results confirmed that the finding had very low safety significance (Green). The inspectors determined the apparent cause of this finding was that licensee personnel were not adequately trained to perform these inspections. Therefore, this finding has a cross-cutting aspect in the area of human performance associated with the resources component in that the licensee's training of personnel was not adequate in performing inspection of the probable maximum precipitation door seals [H.2(b)].

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," states, in part, that activities affecting quality shall be accomplished in accordance with prescribed procedures. Contrary to the above, on April 12, 2011,

activities affecting quality were not performed in accordance with prescribed procedures in that they failed to implement an adequate inspection of door seals protecting safety-related equipment as prescribed in Procedure 07-S-14-310, "Inspection of Mechanical Seals on Doors," Revision 8. Since this finding is of very low safety significance and has been entered in the licensee's corrective action program as Condition Report CR-GGN-2011-02575, this violation is being treated as a noncited violation, consistent with Section 2.3.2.a of the Enforcement Policy: NCV 05000416/2011003-01, "Failure to Perform an Adequate Inspection of Probable Maximum Precipitation Door Seals Protecting Safety Related Equipment."

1R04 Equipment Alignments (71111.04)

.1 Partial Walkdown

a. Inspection Scope

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

- Fire protection water system diesel-driven fire pump A and pump house during maintenance outage of motor-driven fire pump and diesel driven fire pump B
- Division 1 and 2 standby diesel generators as part of maintenance review and while the division 3 diesel was inoperable during the water jacket system flush
- Division 3 diesel generator following the water jacket system flush and refill evolution

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

Introduction. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to adequately implement scaffolding control procedural requirements related to post-installation inspections and engineering safety evaluations for scaffolding constructed within 2 inches of safety-related or fire protection equipment.

Description. During plant walkdowns to support baseline inspections the weeks of May 16 and 23, 2011, the inspectors identified several examples of the licensee not properly implementing Entergy's corporate and site-specific procedures for the control of scaffolding. For example, contrary to Section 3, Item 27 of EN-MA-133, "Control of Scaffolding," which states in part, "Each site will define the criteria they will use and designate a list of individuals (e.g. from Maintenance, Operations, Engineering, supplemental employees, etc)," the licensee did not maintain a list of qualified scaffolding inspectors. The inspectors identified four scaffolds that were touching safety-related or fire protection equipment. Impacted systems were: division 1 and 2 standby diesel generator starting air receivers, division 2 standby diesel generator fuel oil supply system, control room air conditioning unit B, and fire main piping in the auxiliary building. During the licensee's extent of condition review, six additional scaffolds were identified that did not meet the requirements of EN-MA-133, "Control of Scaffolding," in that they were installed within 2 inches of safety-related equipment without receiving appropriate engineering safety evaluations.

The licensee documented this issue in their corrective action program as Condition Reports CR-GGN-2011-03480, CR-GGN-2011-03601, CR-GGN-2011-03602, and CR-GGN-2011-03603. The licensee's corrective actions included inspecting the scaffolding that had been installed, modifying or removing it where appropriate, and properly posting the scaffolds.

Analysis. The inspectors determined that the failure to properly implement the scaffolding procedure was a performance deficiency. The inspectors determined that this finding is more than minor because it is associated with the external factors and equipment performance attributes of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined the finding was of very low safety significance (Green), because it was not a design or qualification deficiency; did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined the apparent cause of this finding was lack of supervisor oversight during scaffold construction. Therefore, the finding has a cross-cutting aspect in the area of human performance associated with the work practices component, in that the licensee did not provide effective supervisor

oversight of workers constructing scaffolding to ensure these activities were performed per procedural requirements [H.4(c)].

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these procedures. Contrary to the above, certain activities involving quality were not in accordance with prescribed procedures. The license failed to implement Procedure EN-MA-133, "Control of Scaffolding," Revision 7. Specifically, during the weeks of May 15 and 22, 2011, inspectors identified four cases in which the licensee did not properly implement procedures for the control of scaffolding. Because this issue is of very low safety significance (Green) and the licensee entered this issue into their corrective actions program as Condition Reports CR-GGN-2011-03480, CR-GGN-2011-03601, CR-GGN-2011-03602 and CR-GGN-2011-03603, this finding is being treated as an NCV consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2011003-02, "Failure to Follow Scaffold Control Procedure."

.2 Complete Walkdown

a. Inspection Scope

On May 9 and 10, 2011, the inspectors performed a complete system alignment inspection of the high pressure core spray to verify the functional capability of the system. The inspectors selected this system because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors inspected the system to review mechanical and electrical equipment line ups; electrical power availability; system pressure and temperature indications; as appropriate, component labeling, component lubrication, component and equipment cooling, hangers and supports, operability of support systems; and to ensure that ancillary equipment or debris did not interfere with equipment operation. The inspectors reviewed a sample of past and outstanding work orders to determine whether any deficiencies significantly affected the system's function. In addition, the inspectors reviewed the corrective action program database to ensure that system equipment alignment problems were being identified and appropriately resolved. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one complete system walkdown sample as defined in Inspection Procedure 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

Quarterly Fire Inspection Tours

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:

- High pressure core spray room (room 1A109)
- Corridors and passages (auxiliary building, elevations 93 foot)
- Corridors and passages (auxiliary building, elevations 103 foot)
- Division 2 switchgear room (room 1A207)
- Division 1 switchgear room (room 1A208)

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.

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

b. Findings

Introduction. The inspectors identified a noncited violation of License Condition 2.C(41) and the requirements of National Fire Protection Association (NFPA) 13-1975, "Standards for the Installation of Sprinkler Systems," for failure to identify conditions adverse to the fire protection program for several bent sprinkler head heat canopies and for a painted sprinkler head that could have affected suppression capability required to cover the entire area.

Description. On May 5, 2011, the inspectors performed a plant walkdown of Fire Area 1, inside the auxiliary building. The inspectors identified two examples of fire protection sprinkler system deficiencies.

- Several misaligned sprinkler head heat canopies were identified in a walkway and are subject to damage because of their location. Damaged or misaligned heat canopies could affect the functionality of the sprinkler system resulting in decreased ability to control a fire because of reduced area-wide coverage.

- A painted sprinkler head was also identified in the same area, located at a higher elevation. Paint on sprinkler heads reduces the ability of the sprinkler head to function as it was designed.

The licensee is committed to NFPA 13-1975 for spacing, location, and position of sprinkler systems. NFPA 13-1975, Table 4-2.4.6, "Position of Deflector When Located Above Bottom of Beam," specifies the appropriate distances to avoid obstruction of the sprinkler discharge pattern. Section 3-15.2.1, of NFPA 13-1975, specifies that "sprinklers shall not be altered in any respect, nor have any type of ornamentation or coatings applied after shipment from the place of manufacture." Section 3-15.9.1, of NFPA 13-1975, addresses the painting and ornamental finishes of sprinkler systems and provides guidance to those approved to perform the tasks.

The inspectors observed that five sprinkler heads did not meet the clearances specified in this table. The heat canopies positioned above the sprinkler heads appeared manipulated for accommodating the installation of a fire barrier on the cable tray above the set of sprinkler heads. The inspectors observed that the heat canopies were installed with the outer edge bent downward. This is a concern because the heat canopies appeared to be positioned in a way that would obstruct the discharge of water from the sprinklers which would prevent adequate area-wide sprinkler coverage. The inspectors also observed that a sprinkler in the area was painted with a white colored coating.

Technical Requirements Manual Surveillance Requirement 6.2.3.4 requires the licensee to visually inspect the dry pipe spray and sprinkler headers in safety areas every 18 months to verify their integrity.

To address these issues, the licensee initiated a condition report and conducted an extent-of-condition review. On May 27, 2011, while the licensee was performing the extent-of-condition walkdown in the auxiliary building, they identified a heat canopy that impaired the fire protection system in that area. The licensee declared the system nonfunctional and entered LCO 1-FTR-11-0103 to track the condition. A continuous fire watch was immediately established and Work Request 238272 was written to correct the problem. The licensee straightened the heat canopy per Work Order 00278955 and declared the system functional.

The licensee entered the identified conditions into their corrective action program as Condition Reports CR-GGN-2011-03132, CR-GGN-2011-03628, and CR-GGN-2011-03636. The licensee's corrective actions included correcting the

misaligned canopy, initiating a work request to replace the sprinkler head that has coating on it, and evaluating their inspection procedure for adequacy.

Analysis. The licensee's failure to identify conditions adverse to the fire protection program for several bent sprinkler-head heat canopies and for a painted sprinkler head is a performance deficiency. The finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the safety concern is that the number of bent or misaligned sprinkler heat canopies and painted sprinkler heads would not provide an adequate area-wide coverage of suppression. The inspectors evaluated the significance of this finding using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." The deficiency involved the Fixed Fire Protection Systems category. Using Appendix F, Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," the inspectors determined that the deficiency had low degradation since less than 10 percent of the heads in the affected fire area were nonfunctional, a functional head remained within 10 feet of the combustibles of concern, and the system remained nominally code compliant. This finding screened as having very low safety significance (Green) in Phase 1of Manual Chapter 0609 Appendix F. The inspectors determined that the apparent cause of this finding was a lack of detail in the procedure used by the licensee to inspect sprinkler heads. Specifically, that procedure did not direct attention to structures or objects that could interfere with sprinkler flow. This finding has a cross-cutting aspect in the area of human performance associated with the resources component because the procedure used to inspect the condition of these sprinklers did not contain specific criteria for identifying unacceptable sprinkler conditions [H.2(c)].

Enforcement. License Condition 2.C(41), "Fire Protection Program," requires, in part, that Entergy Operations, Inc., shall implement and maintain in effect all the provisions of the approved fire protection program as described in Revision 5 of the Updated Final Safety Analysis Report and as approved in the Safety Evaluations dated August 23, 1991, and September 29, 2006, subject to the following provisions:

> The licensee may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

Updated Final Safety Analysis Report, Section 9.5.1.4, states: "Inspection and testing after systems and components are in operation, are discussed in Table 9.5-11, Section C." In Table 9.1-11, Section C.2, states, "The scope of the Fire Protection QA Program for GGNS was limited to selected aspects of 10 CFR 50, Appendix B. Specifically, Sections III-V, VII, X, XI, and XIV-XVIII of Appendix B were invoked." Title 10 CFR 50, Appendix B, Criterion XVI requires, in part, that measures be established to ensure that conditions adverse to quality are promptly identified and corrected.

Contrary to the above, in the months preceding May 5, 2011, the licensee failed to ensure that conditions adverse to quality were promptly identified and corrected, in that bent or misaligned sprinkler heat canopies and painted sprinkler heads constituted a condition adverse to quality; the licensee conducted inspections of the sprinkler heads and those inspections failed to identify bent or misaligned sprinkler heat canopies and painted sprinkler heads. Because this finding is of very low safety significance and has been entered into the corrective action program Condition Report CR-GGN-2011-03132, this finding is being treated as a noncited violation, consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2011003-03, "Failure to Identify Conditions Adverse to Fire Protection."

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 could 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.

- April 14, 2011, the high and low pressure core spray rooms and water tight doors, on the auxiliary building 93 foot elevation
- April 19, 2011, the residual heat removal C room and water tight door, on the auxiliary building 93 foot elevation
- May 5, 2011, the auxiliary building to turbine building door, on the 93 foot elevation

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

b. Findings

Introduction. The inspectors identified a Green noncited violation of Facility Operating License Condition 2.C(41) involving the failure to ensure that manholes MH01, MH20 and MH21 were properly sealed to prevent the entry of flammable liquid.

Description. On January 28, 2011, during the performance of the manhole/vault inspection, the inspectors were reviewing engineering change packages associated with

solar sump pumps for MH20 and MH21. During this review, inspectors determined that the licensee was not meeting the requirements of their license bases documents for MH20 and MH21, which contain safe shutdown cables for standby service water trains A and B. In Section 9.A.5.59 of the fire hazard analysis for fire area 59, "the yard area," it is required to seal manholes MH01, MH20 and MH21. The inspectors determined from walking down these manholes and observing the licensee opening them that they were not meeting the sealing requirements of the fire hazard analysis. The sealing requirements state that the manholes were to be sealed with pressure type water-, gas-, and steam-tight bolted lids, with rubber gaskets, to prevent the potential entry of any flammable liquid.

The inspectors brought this to the attention of the licensee operations staff. The shift manager contacted engineering and maintenance and confirmed that they were not in compliance with the fire hazard analysis and initiated a condition report. The site determined that they could maintain operability but would have to perform compensatory actions while they waited to receive the required sealing gasket material and bolting. Interviewing the licensee staff revealed that it could not be determined how long this condition existed.

The licensee documented this issue in Condition Report CR-GGN-2011-00562. Its short term corrective actions included placing hazmat barricades around each manhole to prevent potentially flammable liquids from entering the manholes. The operators performed daily checks to ensure the barriers were in place.

Analysis. The inspectors determined that the failure to implement fire hazard analysis requirements to properly seal the safety-related manholes from the introduction of flammable liquid was a performance deficiency. This finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 3b, Item 1 directs the inspectors to Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." However, an NRC senior reactor analyst determined that the unique nature of this performance deficiency did not lend itself to analysis by the methods provided in Appendix F. Therefore, a Phase 3 analysis was performed. Based on a bounding analysis, the analyst determined that the change in core damage frequency was approximately $1.5E^{-7}$/yr. The result was low because of the relatively short periods of time that fuel was actually being transferred, the low probability of transfer system failures, and the low likelihood that a loss of normal service water initiator would occur following a fire in the subject manholes. This finding was therefore determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective actions component because licensee personnel failed to initiate a condition report when the issue was identified during the development of their engineering change package, which resulted in the failure to ensure the safety related manholes were sealed in accordance with their license based documents [P.1(a)].

Enforcement. Grand Gulf Nuclear Station Facility Operating License Condition 2.C(41) states, in part, that the plant "shall implement and maintain in effect all provisions of the Fire Protection Program as described in the Updated Final Safety Analysis Report." Updated Final Safety Analysis Report Section 9A.5.59, "Fire Area 59," Section 9A.5.59.3.a, requires that manholes MH01, MH20 and MH21 be properly sealed with pressure type water-, gas-, and steam-tight bolted lids, with rubber gaskets, to prevent the potential entry of any flammable liquid. Contrary to this, on January 28, 2011, the licensee did not have manholes MH01, MH20, and MH21 properly sealed in accordance with the fire hazard analysis. It could not be determined how long this condition existed. The licensee has restored compliance by installing the proper sealing material and bolting which was completed on March 24, 2011. Because the finding was of very low safety significance and was documented in the licensee's corrective action program as Condition Report CR-GGN-2011-0562, this finding is being treated as a noncited violation consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2011002-04, "Failure to Ensure that Safety Related Manholes were Properly Sealed to Prevent the Entry of Flammable Liquid."

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On April 4, 2011, 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 preestablished 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 were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

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

- High pressure core spray system (E22)
- Division 1 and 2 standby diesel generators and division 3 high pressure core spray diesel generator (P75 and P81)

The inspectors reviewed events such as where ineffective equipment maintenance had 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 Part 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 Part 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.

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

b. Findings

1. Inadequate Test Procedures Results in High Pressure Core Spray being Inoperable

Introduction. The inspectors reviewed a self-revealing Green noncited violation of Technical Specification 5.4.1.a for the licensee's failure to provide adequate testing procedures, which resulted in the high pressure core spray minimum flow valve inadvertently stroking approximately 11 times during a surveillance test. The excessive stroking of the valve resulted in the unplanned inoperability of the high pressure core spray system because the valve feeder breaker overcurrent instantaneous trip setpoint had drifted below the manufacturer's tolerance for the existing setting.

Description. While performing a maintenance effectiveness inspection of the high pressure core spray system, the inspectors reviewed an event associated with the surveillance testing of the high pressure core spray system. During surveillance testing on March 18, 2011, the high pressure core spray minimum flow valve 1E22-F012 was inadvertently stroked approximately 11 times before tripping the feeder breaker, which resulted in an annunciator alarming in the control room. The cause of the excessive stroking of the valve was due to the decreasing output of the battery powered current calibrator, which is a piece of test equipment used to hold a flow signal in place to prevent cycling of the valve. The decreasing output was due to a loss of battery power. Technicians later told inspectors that they had no procedure-driven minimum required output from the current calibrator to high pressure core spray system to ensure the valve would not cycle. The breaker was subsequently closed back in by electrical maintenance, the current calibrator was replaced, the surveillance test was completed successfully, and the high pressure core spray system was declared operable.

In response to the breaker tripping, the licensee's engineering organization discovered that the retest instructions did not adequately test the breaker overcurrent instantaneous trip setpoint. The high pressure core spray system was declared inoperable on March 19, 2011, to perform additional testing on the breaker. During testing of the subject breaker, the breaker tripped at currents below the manufacturer's tolerance for the existing setting and had to be replaced with a new breaker. The licensee concluded that the excessive cycling of the valve during the surveillance test resulted in the breaker tolerance drifting below the manufacturer's tolerance for the existing setting. The licensee concluded that the premature tripping of the breaker was reportable to the NRC because the high pressure core spray system was incapable of fulfilling its safety function prior to replacing the breaker.

The licensee documented this issue in Condition Report CR-GGN-2011-01901. The corrective action included replacement of the degraded breaker. The licensee revised the surveillance procedure to require the installation of new batteries in battery powered current calibrators prior to performing the surveillance test, and they also updated the procedure to specify the required output by the current calibrator.

Analysis. The inspectors determined that the failure to provide adequate procedures for the surveillance testing of the high pressure core spray minimum flow valve was a performance deficiency. The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined that the finding was of very low safety significance (Green) based on subsequent calculations performed by the licensee. These calculations concluded that although no loss of safety function occurred, the high pressure core spray system was inoperable because the minimum flow valve's feeder breaker overcurrent instantaneous trip setpoint had drifted below the manufacture's tolerance for the existing setting. Additionally, it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the operating experience component in that the licensee had not incorporated operating experience from a similar event that had occurred at another Entergy site [P.2(b)].

Enforcement. Technical Specification 5.4.1.a 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 8b, includes procedures for surveillance tests listed in the technical specifications. Surveillance Procedure 06-IC-1E22-Q-0004, "HPCS System Flow Rate Low (Bypass) Functional Test," Revision 105, is a procedure for surveillance tests listed in the technical specifications. Contrary to the above, on March 18, 2011, the licensee failed to establish, implement, and maintain procedures for surveillance testing of the high pressure core spray minimum flow valve. Specifically, Procedure 06-IC-1E22-Q-0004 did not require the installation of new batteries in battery powered current calibrators, nor did it specify the required output of the current calibrator. This led to excessive cycling of the high pressure core spray minimum flow valve and subsequent drifting of the manufacturer's tolerance of the valve's feeder breaker overcurrent instantaneous trip setpoint. This finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-01901. Because this finding was determined to be of very low safety significance and was entered into the licensee's corrective action program, this violation is being treated as a noncited violation, consistent with Section 2.3.2a the NRC Enforcement Policy: NCV 05000416/2011003-05, "Failure to

Provide Adequate Procedures for High Pressure Core Spray Minimum Flow Valve Surveillance Testing."

2. Loose Fuse Clips in Division 3 Emergency Diesel Generator

Introduction. The inspectors reviewed a self-revealing Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to take adequate corrective actions for a significant condition adverse to quality associated with the division 3 emergency diesel generator.

Description. The inspectors were performing a maintenance effectiveness review of the safety diesel generators at Grand Gulf Nuclear Station. In this review inspectors noted on October 17, 2009, at 9:07 p.m., an annunciator alarm, "Div 3 (High Pressure Core Spray) Diesel Generator Trouble," was noted during rounds. During fuse checks by electrical and instrument and control personnel per the alarm response instruction, fuse FU-7 was touched with meter leads. The fuse rotated slightly and the alarm cleared. It was determined that the fuse holder was loose; such that the fuse would rotate easily when touched with leads and could result in a loss of continuity. Fuse FU-7 supplies power to the direct current fuel oil pumps to diesel engines A and B for the division 3 diesel generator. This equipment is required for the high pressure core spray diesel generator to meet the 10 second start time criteria for meeting the post-accident safety function requirements of Technical Specification 3.8.1. With a loss of power to the direct current fuel oil booster pumps, the high pressure core spray diesel generator was determined to be inoperable. Entergy procedure EN-LI-102, "Corrective Action Process," Revision 16, provides the following definition for Significant Conditions Adverse to Quality: "Conditions such as failures, malfunctions, deficiencies, deviations, defective material & equipment, and non-conformances which have resulted in, or could result in, a significant degradation or challenge to nuclear safety." Because the division 3 diesel generator is required per Technical Specification 3.8.1, any condition that rendered the division 3 diesel generator inoperable would be a significant condition adverse to quality as defined in the licensee's procedures. On March 18, 2011, the division 3 emergency diesel generator was again rendered inoperable due to a loose fuse clip on the FU-8 fuse holder, which is of the same design and function as the fuse FU-7 holder in the previous occurrence. The inspectors reviewed the licensee condition report and apparent cause evaluation, including the potential impact on operability and the need for further corrective actions. The inspectors concluded the licensee failed to take adequate corrective actions to prevent the recurrence of the condition that occurred in October 2009.

The licensee documented this issue in Condition Report CR-GGN-2011-01868. Short term corrective actions included replacing the fuse clip for fuse FU-8 and returning the division 3 diesel generator to operable status.

Analysis. The performance deficiency involved the failure of the licensee to take adequate corrective actions to prevent recurrence of a significant condition adverse to quality. The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of

systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding had a cross-cutting aspect in the area of human performance associated with the resources component because the training provided to correct the initial event was not adequate to ensure proper fuse installation and to verify good connection existed between the fuse and the fuse holder [H.2(b)].

Enforcement. Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that "measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance's are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition." Contrary to the above, in October 2009, the licensee failed to take adequate corrective actions for a significant condition adverse to quality associated with the division 3 diesel generator. Specifically, corrective actions were inadequate to prevent the recurrence of a fuse holder failure in the power supply to the direct current fuel oil booster pumps for the division 3 diesel generator. This condition resulted in the division 3 diesel generator being rendered inoperable on March 18, 2011. Because this finding was of very low safety significance and has been entered into the licensee's corrective action program as Condition Report CR-GGN-2011-01868, this violation is being treated as a noncited violation, consistent with Section 2.3.2a of the NRC Enforcement Policy:
NCV 05000416/2011003-06, "Loose Fuse Clips in Division 3 Emergency Diesel Generator."

3. Failure to Assure Configuration Control of Safety Related Systems

Introduction. The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to review the suitability of leaving test fittings on reactor coolant system flow transmitter equalizing block drain ports instead of the design specified manifold plugs.

Description. During a NRC plant system walkdown, inspectors identified that many drain ports on the dragon block valves for pressure, differential pressure, and flow transmitters had test fittings installed in the drain ports instead of the manifold plugs required by the design documents. Also, the drywell pressure transmitter had brass fittings installed instead of stainless steel fittings. A design configuration nonconformance existed by leaving the test fittings on the drain ports during critical plant operations. Vendor design drawings specify that manifold plugs be installed in the drain ports during critical plant operation. However the licensee failed to review the suitability of installing test fittings and brass fittings on pressure, differential pressure, and flow transmitter dragon block

valve drain ports instead of the design-specified manifold plugs. This issue was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-03559. The short term corrective actions included replacing the test fittings with correct drain plugs. Additionally, they replaced the Damar light bulbs in the division 1 and 2 diesel generators with approved bulbs.

Analysis. Failure to review the suitability of replacing the design specified manifold plugs with brass caps and test fittings on various dragon block valve drain ports for pressure, differential pressure, and flow transmitters is a performance deficiency. This finding was more than minor because it is associated with the design control attribute of the Mitigating System Cornerstone and affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined the finding was of very low safety significance (Green) because it was a design or qualification deficiency confirmed not to result in loss of operability or functionality, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined that the finding had a cross-cutting aspect in the area of human performance, associated with the work practices component, because the licensee failed to ensure that human error prevention techniques, such as holding prejob briefings, self- and peer-checking, and proper documentation of activities were utilized such that work activities were performed safely and personnel did not proceed in the face of uncertainty or unexpected circumstances. Specifically, the licensee failed to review the suitability of installing test fittings and brass fittings on pressure, differential pressure, and flow transmitter block valve drain ports instead of the design specified manifold plugs. [H.4(a)].

Enforcement. Title 10 of Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control," required, in part, that measures be established for the selection and review of suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components. Contrary to the above, the licensee failed to review the suitability of replacing the design specified manifold plugs with brass caps and test fittings on various dragon block valve drain ports for pressure, differential pressure, and flow transmitters. This issue was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-04485. Because this finding was determined to be of very low safety significance and was entered into the licensee's corrective action program, this violation is being treated as a noncited violation, consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2011003-07, "Failure to Assure Configuration Control of Safety Related Systems."

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:

- On April 4, 2011, the plant entered orange risk due to emergent tornado warning in the area
- On April 22, 2011, with a planned replacement of the 152-1706 breaker, one of the offsite power feeds to the division 3 bus, this work was not included in the daily risk profile
- On April 25-27, 2011, with emergent intermittent severe weather and tornado warnings
- The week of May 16, 2011, during emergent issue of Mississippi River record flooding
- On June 3, 2011, the plant entered yellow risk due to emergent severe weather in the area

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 were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- A hot tap completion plug failure-in-place in the fire protection water system
- Unplanned limiting condition of operation for the division 1 diesel generator
- 115 kV Port Gibson to Natchez line qualification
- Division 3 diesel jacket water chemistry
- Division 1 and 2 standby diesel generator fuel oil tube fretting issue

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 that 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 five operability evaluations inspection samples as defined in Inspection Procedure 71111.15-04

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

To verify that the licensee was appropriately controlling temporary modifications and implementing the temporary modification procedure, the inspectors reviewed the temporary modification log in the control room. The inspectors noted that there were three safety-related and four nonsafety-related temporary modifications that had been installed in excess of one refueling cycle, but had not been re-evaluated. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2011-04200. 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.

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

b. Findings

No findings 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:

- Control rods 60-29 and 24-45 after maintenance
- Control room air conditioner B following maintenance
- Residual heat removal jockey pump B after seal replacement
- Emergency safeguards room area room cooler 1T46-B004B after maintenance
- Standby service water pump house B ventilation following relay replacements

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:

- 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 five postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

No findings 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
- Engineering evaluations, root causes, and bases for returning tested systems, structures, and components not meeting the test acceptance criteria were correct

- 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 March 29, 2011, 125 volt battery checks for division 1, 2 and 3, batteries
- On April 9, 2011, turbine valve testing, overspeed testing and automatic turbine tester safety device test
- On April 20, 2011, division 3 diesel generator 24-hour rated load and hot start test
- On May 3, 2011, hydrogen analyzer calibration
- On June 19, 2011, standby service water C 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

Introduction. The inspectors reviewed a self-revealing, noncited violation of Technical Specification 5.4.1.a, for failure to follow a procedure resulting in the inoperability of a reactor core isolation cooling system primary containment isolation valve. This occurred while the licensee was performing surveillance on the reactor core isolation cooling system and incorrectly attached a jumper to the wrong terminal point, which resulted in a blown fuse that caused a loss of control power to the reactor core isolation cooling primary containment isolation valve 1E51-F031.

Description. On March 20-21, 2011, the licensee was performing surveillance 06-OP-1C61-R-0002, "Remote Shutdown Panel Control Check." The electrician was performing Attachment 7, Step 5.8.97, that required a jumper to be installed between terminal points A4-79 and A4-80. The electrician had attached one end of the jumper to terminal A4-79, and while attempting to attach the other end to terminal A4-80, the jumper end came in contact with terminal A4-81. An arc was noticed and operations reported they had lost indication on primary containment isolation valve 1E51 F031. Operations declared the valve inoperable and dispatched an operator to manually shut the valve to comply with Technical Specification Section 3.6.1.3. The licensee conducted an investigation, determined which fuse had blown, and replaced the fuse. Operations performed a valve stroke test per their quarterly surveillance procedure. The licensee completed the remote shutdown procedure surveillance for the

isolation valve 1E51-F031 and declared it operable per associated Technical Specifications Section 3.6.1.3. Due to having previously isolated reactor core isolation cooling during the original surveillance, there was an additional 22.5 hour delay in restoring the reactor core isolation cooling system to service. The delay was due to the event associated with restoring operability to valve 1E51-F031. The licensee's investigation of the event revealed that the electrician had lost focus on the task and adequate barriers to prevent human performance errors were not in place. The licensee documented this issue in Condition Report CR-GGN-2011-01932. Corrective actions included replacing the control power fuse and restoring operability to the reactor isolation cooling system primary isolation valve 1E51-F031.

Analysis. The inspectors determined that the failure to properly follow the surveillance procedure resulted in the inoperability of a reactor core isolation cooling primary isolation valve. The finding is more than minor since it is associated with the human performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. In addition, this finding had human performance cross-cutting aspects associated with the work practices component in that the licensee did not use the proper human performance techniques of self-checking to prevent the loss of control power to a primary containment isolation valve [H.4(a)].

Enforcement. Technical Specification 5.4.1(a) requires written procedures to be implemented as recommended by Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Section 1.d recommends administrative procedures for procedure adherence. Attachment 7, of Procedure 06-OP-1C61-R-0002, step 5.8.97, required a jumper to be placed between terminals A4-79 and A4-80. Contrary to the above, on or about March 20, 2011, electricians attached a jumper to terminal A4-79 and inadvertently contacted terminal A4-81, resulting in the loss of control power to primary containment isolation valve 1E51-F031 and the inoperability of the valve. Because the finding was of very low safety significance and has been entered into the corrective action program as Condition Report CR-GGN-2011-01932, this violation is being treated as a noncited violation, consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2011003-08, "Failure to Follow a Procedure Resulting in the Inoperability of the Reactor Core Isolation Cooling System Primary Containment Isolation Valve."

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on April 12, 2011, 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 technical support center 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 were identified.

4. OTHER ACTIVITIES

4OA1 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 first Quarter 2011 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 were identified.

.2 Safety System Functional Failures (MS05)

a. Inspection Scope

The inspectors sampled licensee submittals for the safety system functional failures performance indicator for the period from the second quarter 2010 through the first quarter 2011. 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 6, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73." The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance work orders, issue reports, event reports, and NRC integrated inspection reports for the period of April 2010 through March 2011 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 safety system functional failures sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.3 Reactor Coolant System Specific Activity (BI01)

a. Inspection Scope

The inspectors sampled licensee submittals for the reactor coolant system specific activity performance indicator for the period from the second quarter 2010 through the first quarter 2011. 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 6. The inspectors reviewed the licensee's reactor coolant system chemistry samples, technical specification requirements, issue reports, event reports, and NRC integrated inspection reports for the period of April 2010 through March 2011 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. In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze a reactor coolant system sample. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one reactor coolant system specific activity sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.4 Reactor Coolant System Leakage (BI02)

a. Inspection Scope

The inspectors sampled licensee submittals for the reactor coolant system leakage performance for the period from the second quarter 2010 through the first quarter 2011. 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 6. The inspectors reviewed the licensee's operator logs, reactor coolant system leakage tracking data, issue reports, event reports, and NRC integrated inspection reports for the period of April 2010 through March 2011 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 reactor coolant system leakage sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

4OA2 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 occurrence 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 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 were identified.

.3 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors focused their review on repetitive equipment issues, but also considered the results of daily corrective action item screening discussed above in Section 4OA2.2, licensee trending efforts, and licensee human performance results. The inspectors nominally considered the six-month period of January 2011 through June 2011, although some examples expanded beyond those dates where the scope of the trend warranted.

The inspectors also included issues documented outside the normal corrective action program in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's corrective action program trending reports. Corrective actions associated with

a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

These activities constitute completion of one single semi-annual trend inspection sample as defined in Inspection Procedure 71152-05.

b. Findings and Observations

No findings were identified.

The inspectors identified an increasing trend in condition reports identifying steam leaks, with the majority occurring to balance of plant equipment at the plant. The specific items documented in the condition reports were reviewed by the inspectors and it was determined that all were minor in nature. The licensee had performed an apparent cause evaluation from November 2008 through present and had identified 33 steam leaks over the period. These steam leaks have resulted in various impacts on the plant operations, including down powers, and they were a contributing cause to a reactor scram in March 2010 (a finding documented in report 05000416/2010003). The inspectors specifically reviewed condition reports that documented actions taken to resolve the steam leak associated with heater drain pump B.

The licensee was aware of the adverse trend and is implementing corrective actions to minimize future steam leaks. The licensee also initiated actions to evaluate how Grand Gulf Nuclear Station compares to the rest of the industry in the area of steam leaks and based on the results will take appropriate corrective actions at the station.

4OA3 Event Follow-up (71153)

.1 (Closed) Licensee Event Report (LER) 05000416/2011-001-00, "High Pressure Core Spray (HPCS) Inoperability - Failure Due to Failed Test Equipment"

a. Inspection Scope

On March 19, 2011, at 10:36 p.m., with the plant operating at 96 percent power, the high pressure core spray pump was declared inoperable following the discovery of a degraded breaker that supplied power to the high pressure core spray minimum flow valve. The cause of the degraded breaker was the breaker's instantaneous overcurrent trip setpoint, which was found out of tolerance during testing. The investigation of this event determined that the cause of the degradation was the result of a loss of power to a current calibrator installed for the performance of the high pressure core spray system flow rate low (bypass) functional test. The loss of power caused repeated cycling of the valve and the resulting surge currents created excessive heat in the circuit breaker instantaneous trip and overload circuits. This degraded the instantaneous overcurrent trip setpoint, which resulted in the breaker tripping at a setpoint that was out of tolerance. The breaker was replaced and the high pressure core spray system was restored to its standby condition on March 20, 2011, at 7 a.m. Documents reviewed as part of this

inspection are listed in the attachment. The enforcement aspects of this finding are discussed in Section 1R12 of this report. This licensee event report is closed.

b. Findings

No findings were identified.

.2 Tritium is Found in Unit 2 Turbine Building Sumps

a. Inspection Scope

On April 28, 2011, the inspectors were briefed on samples of water taken from Grand Gulf Nuclear Station's Unit 2 turbine building sumps indicating the presence of tritium at a level of 106,400 picocurie/liter in the east sump and 100,259 picocurie/liter in the west sump. Unit 2 is an incomplete reactor building and has offices being used by plant employees. This unit is not within the operating unit radiological controlled area. The source of the tritium is thought to be from naturally occurring sources and plant stack effluent which is a monitored release within the legal regulatory limits. This sample was not normally taken in the past and was recently initiated as a part of the industry groundwater monitoring initiative. Water from the sumps was automatically pumped via storm drain piping to outfall 007. Outfall 007 discharges to holding basin 014. The holding basin discharges to a stream leading to Lake Hamilton and then eventually into the Mississippi River. To prevent uncontrolled release of water from the unit 2 sumps, the sump pumps located in the unit 2 turbine building have been disabled. The licensee performed sample from outfall 007 on May 3, 2011, during a rain event for an indication of tritium being removed from the air due to washout. Washout is the term used to describe the natural cleansing process of the air due to precipitation (rain, snow, fog, etc.) and the result of the sample was 3,227 picocurie /liter. The levels found in these samples are well below regulatory limits. The licensee continues to evaluate the causes, and they are taking permanent corrective actions to ensure tritium is not released to the public through any unmonitored paths. Documents reviewed as part of this inspection are listed in the attachment.

These activities constitute completion of one event follow-up as defined in Inspection Procedure 71153-05.

b. Findings

No findings were identified.

.3 Main Steam Line High Radiation Alarm during Power Increase

a. Inspection Scope

On June 21, 2011, the inspectors were briefed on a main steam line high radiation alarm that was received in the control room during power ascension. The operators found channel C in alarm and reading approximately 900 mrem/hr. The other channels read

as follows: A = 960 mrem/hr, B = 658 mrem/hr, D = 515 mrem/hr. The operators suspended the power ascension, maintained reactor power at 77 percent and entered Emergency Procedure EP-4, "Secondary Containment Control." Initially, the licensee determined the cause of the elevated radiation levels were due to either, (1) a possible fuel defect, (2) resin intrusion, (3) potentially low quality water from the condensate storage tank. The licensee analyzed reactor coolant conductivity and off-gas pre-treat and post-treat radiation samples. The results of the conductivity and radiation samples were normal for plant conditions which indicated resin intrusion, introduction of low quality water and fuel damage had not occurred during the power ascension. The licensee determined, through the use of operational experience (OE– Elevated Main Steam Line Radiation Levels Following a Rod Movement), that the increased radiation was due to increased volatility of Nitrogen-16 which was associated with the implementation of on line noble chemistry. The inspectors independently verified that the addition of noble metal injection can increase N-16 volatility during power ascension in two ways: (1) noble metal deposited on reactor internal surfaces catalyzes the reduction of ionic N-16 species to its volatile constituents with hydrogen addition, and (2) fine noble metal particles floating at the water level causes N-16 to reduce to its volatile constituents. The inspectors determined that the licensee's response to the main steam line high radiation alarm was appropriate and in accordance with station procedures. Documents reviewed as part of this inspection are listed in the attachment.

These activities constitute completion of one event follow-up as defined in Inspection Procedure 71153-05.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Licensee Strike Contingency Plans (92709)

a. Inspection Scope

On May 16, 2011, the bargaining unit operators and maintenance workers at the Grand Gulf Nuclear Station voted against the ratification of the contract due to expire on June 15, 2011. The inspectors initiated inspection procedure 92709," Licensee Strike Contingency Plans." The inspectors evaluated the adequacy of the strike contingency plan by reviewing the plan for required minimum number of qualified personnel available for proper operation, maintenance, and safe operation of the facility. The inspectors attended the meeting in which the onsite safety review committee reviewed the plan for adequacy. The inspectors interviewed plant personnel selected to fill in for potential striking staff and reviewed training records of personnel to ensure they met minimum qualification requirements. On June 13, 2011, the bargaining unit operators and maintenance workers voted to ratify the contract. Documents reviewed as part of this inspection are listed in the attachment.

b. Findings

No findings were identified.

.2 (Closed) NRC Temporary Instruction 2515/183, "Followup to the Fukushima Daiichi Nuclear Station Fuel Damage Event"

a. Inspection Scope

The inspectors assessed the activities and actions taken by the licensee to assess its readiness to respond to an event similar to the Fukushima Daiichi nuclear plant fuel damage event. This included (1) an assessment of the licensee's capability to mitigate conditions that may result from beyond design basis events, with a particular emphasis on strategies related to the spent fuel pool, as required by NRC Security Order Section B.5.b issued February 25, 2002, as committed to in severe accident management guidelines, and as required by 10 CFR 50.54(hh); (2) an assessment of the licensee's capability to mitigate station blackout conditions, as required by 10 CFR 50.63 and station design bases; (3) an assessment of the licensee's capability to mitigate internal and external flooding events, as required by station design bases; and (4) an assessment of the thoroughness of the walkdowns and inspections of important equipment needed to mitigate fire and flood events, which were performed by the licensee to identify any potential loss of function of this equipment during seismic events possible for the site.

b. Findings

Inspection Report 05000416/2011008 (ML11133A249) documented detailed results of this inspection activity. Following issuance of the report, the inspectors conducted detailed follow-up on selected issues. The following finding was identified during this follow-up inspection: 05000416/2011003-01 and documented in section 1R01 of this report.

.3 (Closed) NRC Temporary Instruction 2515/184, "Availability and Readiness Inspection of Severe Accident Management Guidelines (SAMGs)"

On May 19, 2011, the inspectors completed a review of the licensee's severe accident management guidelines, implemented as a voluntary industry initiative in the 1990s, to determine (1) whether the severe accident management guidelines were available and updated, (2) whether the licensee had procedures and processes in place to control and update its severe accident management guidelines, (3) the nature and extent of the licensee's training of personnel on the use of severe accident management guidelines, and (4) licensee personnel's familiarity with severe accident management guideline implementation.

The results of this review were provided to the NRC task force chartered by the Executive Director for Operations to conduct a near-term evaluation of the need for agency actions following the Fukushima Daiichi fuel damage event in Japan. Plant specific results for Grand Gulf Nuclear Station were provided as Enclosure 8 to a

memorandum to the Chief, Reactor Inspection Branch, Division of Inspection and Regional Support, dated May 26, 2011 (ML111470264).

4OA6 Meetings

Exit Meeting Summary

On July 14, 2011, the inspectors presented the inspection results to Jeremy Browning, General Plant Manger Operations, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a noncited violation.

> Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," states, in part, that activities affecting quality shall be accomplished in accordance with prescribed procedures. Specifically EN-OP-104, "Operability Determination Process," Revision 5, Section 5.3(1), states in part to "Confirm the existence of a Degraded or Nonconforming Condition for the Technical Specification System Structure or Component." Contrary to this requirement, on March 18, 2011, the on-shift senior reactor operator failed to perform a proper operability determination for the high pressure core spray pump after minimum flow valve 1E22-F012 cycled approximately 11 times during testing causing the supply breaker to trip open, resulting in high pressure core spray being inoperable. After resetting the breaker for 1E22-F012, ensuring the breaker was not faulted, and performing a one-time stroke test, the system was declared operable. Engineering personnel evaluated the event several hours later and questioned the operability of valve 1E22-F012 and the high pressure core spray system due to repeated cycling of the valve motor, which resulted in the breaker tripping." Based on engineering input, operations performed a second operability determination and determined that the system was operable with evaluation required. The licensee performed testing of the breaker for valve 1E22-F012 and determined its over-current trip setting had drifted to approximately 60 amps when its minimum allowed setting was 85 amps. This confirmed that the high pressure core spray system was inoperable the entire time. This issue was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-02240. The finding was determined to be of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of a system safety function, 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

J. Browning, General Plant Manager
D. Coulter, Senior Licensing Specialist
H. Farris, Assistant Operations Manager
K. Higgenbotham, Planning and Scheduling Manager
J. Houston, Maintenance Manager
D. Jones, Manager, Design Engineering
C. Lewis, Manager, Emergency Preparedness
J. Miller, Manager, Operations
L. Patterson, Manager, Program Engineering
C. Perino, Licensing Manager
M. Perito, Site Vice President of Operations
M. Richey, Director, Nuclear Safety Assurance
J. Shaw, Manager, System Engineering
T. Trichell, Radiation Protection Manager
D. Wiles, Engineering Director
R. Wilson, Manager, Quality Assurance

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

05000416/2011003-01	NCV	Failure to Perform an Adequate Inspection of Probable Maximum Precipitation Door Seals Protecting Safety Related Equipment (1R01.3.b)
05000416/2011003-02	NCV	Failure to Follow Scaffold Control Procedure (1R04.1.b)
05000416/2011003-03	NCV	Failure to Identify Conditions Adverse to Fire Protection (1R05.1.b)
05000416/2011003-04	NCV	Failure to Ensure that Safety Related Manholes were Properly Sealed to Prevent the Entry of Flammable Liquid (1R06.b)
05000416/2011003-05	NCV	Failure to Provide Adequate Procedures for High Pressure Core Spray Minimum Flow Valve Surveillance Testing (1R12.b.1)

Opened and Closed

05000416/2011003-06	NCV	Loose Fuse Clips in Division 3 Emergency Diesel Generator (1R12.b.2)
05000416/2011003-07	NCV	Failure to Assure Configuration Control of Safety Related Systems (1R12.b.3)
05000416/2011003-08	NCV	Failure to Follow a Procedure Resulting in the Inoperability of the Reactor Core Isolation Cooling System Primary Containment Isolation Valve (1R22.b)

Closed

5000416/2011-001-00	LER	High Pressure Core Spray (HPCS) Inoperability - Failure Due to Failed Test Equipment (4OA3.1)

LIST OF DOCUMENTS REVIEWED

Section 1RO1: Adverse Weather Protection

PROCEDURES

NUMBER	TITLE	REVISION
07-S-14-310	General Maintenance Instruction Inspection of Mechanical Seals on Doors Safety Related	7
04-1-01-R21-16	System Operating Instruction ESF BUS 16AB	27
06-OP-1R20-W-0001	Plant AC and DC Electrical Power Distribution	108
04-1-01-R21-15	System Operating Instruction ESF BUS 15AA	19
05-1-02-I-4	Off-Normal Event Procedure Loss of AC Power	39
04-1-01-R21-17	System Operating Instruction ESF BUS 17AC	9
02-S-01-42	Switchyard Control	0
ENS-DC-199	Off Site Power Supply Design Requirements Nuclear Plant Interface Requirements	6
ENS-DC-201	ENS Transmission Grid monitoring	5
ENS-IS-123	Electrical Safety	8

60-TE-1000-V-0001	Surveillance Procedure, Culvert No. 1 Embankment Stability Inspection/Survey	100
07-S-14-310	Inspection of Mechanical Seals on Doors	8

DRAWINGS

NUMBER	TITLE	DATE
Figure 2.4-38	Pumpout Test Ground Water Level Contours	August 7, 1979
	GGNS Potentiometric Surface Map Upland Complex/MS Rive Alluvial Aquifer	January 25, 2011

OTHER

NUMBER	TITLE	DATE
11-0018	Standing Order	May 15, 2011
PS&O MS River Action Plan	MS River Flood-GGNS Oversight Meeting	May 10, 2111
	MS River Flood-GGNS Oversight Meeting	May 5, 2111
	GGNS Base Map	February 2, 2010
	Vicksburg to GGNS Alternate Route (HWY 61 Closure)	
ODMI CA No. 014	Operational Decision Making Issues Plan: Rising MS River Level with Potential Impact to Radial Wells and Radial Switchgear House	May 13, 2011
MS Power and Light GGNS Units 1&2 Final Safety Analysis Report	Pumpout Test Ground Water Level Contours (Pumping Static levels)	August 7, 1979
	GGNS EP Status Related to MS River Flood	
ELEC-GGNS-04	The Determination of the Available Voltages During Startup with One Service Transformer	0
	Current Road Status	
	May 2011 Flood Levels	May 5, 2011
	2011 Flood Estimated Timeline-Vicksburg Area	May 10, 2011

CONDITION REPORTS

CR-GGN-2011-02056	CR-GGN-2011-02064	CR-GGN-2011-02349
CR-GGN-2011-02350	CR-GGN-2011-02351	CR-GGN-2011-02525
CR-GGN-2011-02575	CR-GGN-2011-02064	CR-GGN-2011-02525
CR-GGN-2011-02575	CR-GGN-2011-03133	CR-GGN-2011-03135
CR-GGN-2011-03136	CR-GGN-2011-02056	CR-GGN-2011-02064

WORK ORDERS

WO00171973 01	WO52337120 01	WO52270712 01

ENGINEERING CHANGES

EC 0000022657

Section 1RO4: Equipment Alignment

PROCEDURES

NUMBER	TITLE	REVISION
04-S-01-P64-1	Fire Protection Water System	57
GG UFSAR	Table 3.2-1	9
04-1-01-E22-1	High Pressure Core Spray System, Safety Related	116
EN-MA-133	Control of Scaffolding	7

DRAWINGS

NUMBER	TITLE	REVISION
M-0035A	P&I Diagram Fire Protection System Unit 1	28
	HPCS/RCIC CST Suction Piping Diagram	0
M-1086	High Pressure Core Spray System Unit 1	31
M-1065	Condensate & Refueling Water Storage and Transfer System Unit 1	43

CALCULATIONS

NUMBER	TITLE	REVISION
12202	HPCS and RCIC System Performance With Regards to CST and Suppression Pool Suction for Level Transmitters E22N054C&G and E51N035A&E	2

OTHER

NUMBER	TITLE	REVISION
ER-GG-1999-0217-000	Replace and Respan Transmitters 1E22N054C&G and 1E51N035A&E, Respan & Change Setpoint	0
Reg Guide 1.29	USNRC Regulatory Guide Seismic Design Classification	3

CONDITION REPORTS

CR-GGN-2011-00915 CR-GGN-2011-02606 CR-GGN-2011-03529
CR-GGN-2011-03530

Section 1RO5: Fire Protection

PROCEDURES

NUMBER	TITLE	REVISION
Fire Pre-Plan A-01	Corridors and Passages 1A101, 1A117, Elevation 93', Below Grating, 1A121, 1A123, Elevation 103', Below Grating, Areas 7 & 8	2
Fire Pre-Plan A-13	Electrical SWGR Room 1A207, Electrical SWGR Room 1A208, Area 8-7, Elevation 119'	0
GG UFSAR	Table 9A.1 – Fire Hazard Analysis Summary	
Fire Pre-Plan A-06	HPCS Room	0
06-EL-SP65-SA-0002	Auxiliary Building Fire Detector and Supervisory Panel Functional Test	104
06-OP-SP64-D-0044	Fire Door Check	115

DRAWINGS

NUMBER	TITLE	REVISION
E-1800	Raceway Plan Aux. Bldg. & Cntmt. – El. 119'0", 120'10", 114'6" Fire and Smoke Detection System Unit 1	9

DRAWINGS

NUMBER	TITLE	REVISION
E-1809	Aux. Bldg & Cntmt. - El. 93'0", 100'9" Fire and Smoke Detection System	6
E-1809	Aux. Bldg. & Cntmt. N625A and N625B	6

OTHER

NUMBER	TITLE	DATE
NFPA 13	Standard for the Installation of Sprinkler Systems	1975
Startup Form 7.10	Carbon Dioxide Fire Protection System	April 27, 1982

CONDITION REPORTS

CR-GGN-2011-03132	CR-GGN-2011-03132	CR-GGN-2011-03628
CR-GGN-2011-03636	CR-GGN-2011-03939	

Section 1RO6: Flood Protection Measures

PROCEDURES

NUMBER	TITLE	REVISION
07-1-24-T10-1	Preventive Maintenance Instruction Periodic Leak Check of Airtight Door Sealing Surfaces	5
05-1-02-VI-1	Off-Normal Event Procedure Flooding	107
06-OP-SP64-R-0049	Fire Rated Sealed Penetration Visual Inspection	108
07-1-24-T10-1	Preventive Maintenance Instructions, Periodic Leak Check of Airtight Door Sealing Surfaces	5

OTHER

NUMBER	TITLE	DATE
TIMD083	Door Inspection	April 11, 2011

CONDITION REPORTS

CR-GGN-2008-03485	CR-GGN-2011-02410	CR-GGN-2011-02412
CR-GGN-2011-02428	CR-GGN-2011-02619	

WORK ORDERS

WO52241872 01	WO52203106 01	WO52221454 01
WO00275309 01	WO52256742 01	WO52203106 01
WO52221454 01	WO52241872 01	

ENGINEERING CHANGES

EC 0000029291

Section 1R11: Licensed Operator Requalification Program

PROCEDURES

NUMBER	TITLE	REVISION
GSMS-LOR-WEX09	Emergency Diesel Generator 12 Control Air Leak/Loss of Feedwater Heating/ATWS/Suppression Pool Leak (EP-2, 2A, EP-3, EP-4)	17

OTHER

NUMBER	TITLE	REVISION
	Turnover and Simulator Differences 2011 Cycle 2 Simulator Training	0
	Scenario/Simulation: GSMS-LOR-WEX09	17

Section 1R12: Maintenance Effectiveness

PROCEDURES

NUMBER	TITLE	REVISION / DATE
EN-OP-104	Operability Determination Process	5
06-IC-1E22-Q-0004	HPCS System Flow Rate Low (Bypass) Functional Test	105
EN-LI-102	Corrective Action Process	16
EN-LI-119	ACE Process CR-GGN-2011-002245	11

EN-LI-119	ACE Process CR-GGN-2011-01868	11
EN-LI-119	Lower Tier Apparent Cause Review Document for CR-GGN-2009-05678	October 27, 2009
EN-OP-104	Operability Determination Process	5
06-IC-1E22-Q-0004	HPCS System Flow Rate Low (Bypass) Functional Test	105
EN-LI-102	Corrective Action Process	16

DRAWINGS

NUMBER	TITLE	REVISION
FSK-I-1110A-012-B	Instrument Tubing Run	8
FSK-I-1110A-015-B	Instrument Tubing Run	9
M-1093B	HPCS Diesel Generator System	24
FO25O	Schematic Diagram Engine Control for Division III DG	

OTHER

NUMBER	TITLE	REVISION / DATE
Attachment 9.5	Operability Evaluation for CR-GGN-2011-01901	March 20, 2011
	Briefing Instruction for Fuse Insertion and Extraction	
	Timeline for Events Leading to NRC Notification Call in on HPCS	March 18, 2011
	GGNS Standard/Specific Change Notice ER 96/0079	0

CONDITION REPORTS

CR-GGN-2011-01915	CR-GGN-2010-00508	CR-GGN-2011-01078
CR-GGN-2011-01911	CR-GGN-2011-01882	CR-GGN-2011-01907
CR-GGN-2011-01902	CR-GGN-2011-01901	CR-GGN-2011-02158
CR-GGN-2011-02791	CR-GGN-2010-00253	CR-GGN-2010-08130
CR-GGN-2010-00634	CR-GGN-2010-00572	CR-GGN-2010-00679
CR-GGN-2009-04024	CR-GGN-2010-02118	CR-GGN-2010-01093
CR-GGN-2010-01828	CR-GGN-2010-03212	CR-GGN-2010-03912
CR-GGN-2010-04705	CR-GGN-2010-05570	CR-GGN-2010-05039
CR-GGN-2010-05635	CR-GGN-2009-02541	CR-GGN-2009-02536
CR-GGN-2009-02877	CR-GGN-2009-03193	CR-GGN-2009-03067
CR-GGN-2009-03172	CR-GGN-2009-05581	CR-GGN-2009-05873
CR-GGN-2009-06770	CR-GGN-2009-05627	CR-GGN-2011-01901
CR-GGN-2011-02008	CR-GGN-2011-01915	CR-GGN-2011-01902
CR-GGN-2011-01879	CR-GGN-2011-01901	CR-GGN-2011-02008
CR-GGN-2011-01915	CR-GGN-2011-01902	CR-GGN-2011-01879
CR-GGN-2009-01126	CR-GGN-2009-06186	CR-GGN-2010-00009
CR-GGN-2010-00412	CR-GGN-2010-00845	CR-GGN-2011-01868
CR-GGN-2011-01868	CR-GGN-2011-01879	CR-GGN-2011-02515
CR-GGN-2011-01901	CR-GGN-2011-02245	CR-GGN-2009-05678
CR-GGN-2009-00301	CR-GGN-2009-00317	CR-GGN-2009-00355
CR-GGN-2009-00427	CR-GGN-2009-00429	CR-GGN-2009-00684
CR-GGN-2009-00800	CR-GGN-2009-00811	CR-GGN-2009-00821
CR-GGN-2009-00847	CR-GGN-2009-00849	CR-GGN-2009-00868
CR-GGN-2009-00948	CR-GGN-2009-00962	CR-GGN-2009-00980
CR-GGN-2009-00989	CR-GGN-2009-00994	CR-GGN-2009-00995
CR-GGN-2009-01000	CR-GGN-2009-01031	CR-GGN-2009-01036
CR-GGN-2009-01037	CR-GGN-2009-01068	CR-GGN-2009-01078
CR-GGN-2009-01079	CR-GGN-2009-01088	CR-GGN-2009-01091
CR-GGN-2009-01100	CR-GGN-2009-01106	CR-GGN-2009-01122
CR-GGN-2009-01129	CR-GGN-2009-01125	CR-GGN-2009-01126
CR-GGN-2009-01138	CR-GGN-2009-01140	CR-GGN-2009-01156
CR-GGN-2009-01364	CR-GGN-2009-01381	CR-GGN-2009-01389
CR-GGN-2009-01468	CR-GGN-2009-01552	CR-GGN-2009-01676
CR-GGN-2009-01708	CR-GGN-2009-01721	CR-GGN-2009-01764
CR-GGN-2009-01765	CR-GGN-2009-01766	CR-GGN-2009-01870

CR-GGN-2009-02089	CR-GGN-2009-02090	CR-GGN-2009-02390
CR-GGN-2009-02424	CR-GGN-2009-02467	CR-GGN-2009-02736
CR-GGN-2009-02769	CR-GGN-2009-02780	CR-GGN-2009-02898
CR-GGN-2009-02968	CR-GGN-2009-03054	CR-GGN-2009-03060
CR-GGN-2009-03134	CR-GGN-2009-03153	CR-GGN-2009-03234
CR-GGN-2009-03407	CR-GGN-2009-03433	CR-GGN-2009-03437
CR-GGN-2009-03452	CR-GGN-2009-03502	CR-GGN-2009-03749
CR-GGN-2009-03778	CR-GGN-2009-03807	CR-GGN-2009-04060
CR-GGN-2009-04220	CR-GGN-2009-04510	CR-GGN-2009-04756
CR-GGN-2009-04801	CR-GGN-2009-04813	CR-GGN-2009-04849
CR-GGN-2009-04892	CR-GGN-2009-04932	CR-GGN-2009-05139
CR-GGN-2009-05156	CR-GGN-2009-05157	CR-GGN-2009-05197
CR-GGN-2009-05233	CR-GGN-2009-05443	CR-GGN-2009-05625
CR-GGN-2009-05678	CR-GGN-2009-05747	CR-GGN-2009-05857
CR-GGN-2009-05917	CR-GGN-2009-06033	CR-GGN-2009-06113
CR-GGN-2009-06186	CR-GGN-2009-06421	CR-GGN-2009-06465
CR-GGN-2009-06468	CR-GGN-2009-06689	CR-GGN-2009-06767
CR-GGN-2009-06909	CR-GGN-2009-06929	CR-GGN-2010-00009
CR-GGN-2010-00268	CR-GGN-2010-00269	CR-GGN-2010-00412
CR-GGN-2010-00507	CR-GGN-2010-00517	CR-GGN-2010-00525
CR-GGN-2010-00532	CR-GGN-2010-00534	CR-GGN-2010-00543
CR-GGN-2010-00570	CR-GGN-2010-00578	CR-GGN-2010-00627
CR-GGN-2010-00629	CR-GGN-2010-00634	CR-GGN-2010-00638
CR-GGN-2010-00641	CR-GGN-2010-00656	CR-GGN-2010-00661
CR-GGN-2010-00662	CR-GGN-2010-00666	CR-GGN-2010-00680
CR-GGN-2010-00845	CR-GGN-2010-00867	CR-GGN-2010-00872
CR-GGN-2010-00993	CR-GGN-2010-01093	CR-GGN-2010-01104
CR-GGN-2010-01275	CR-GGN-2010-01328	CR-GGN-2010-01332
CR-GGN-2010-01341	CR-GGN-2010-01342	CR-GGN-2010-01343
CR-GGN-2010-01347	CR-GGN-2010-01348	CR-GGN-2010-01357
CR-GGN-2010-01360	CR-GGN-2010-01363	CR-GGN-2010-01372
CR-GGN-2010-01384	CR-GGN-2010-01385	CR-GGN-2010-01386
CR-GGN-2010-01388	CR-GGN-2010-01397	CR-GGN-2010-01406
CR-GGN-2010-01410	CR-GGN-2010-01419	CR-GGN-2010-01422
CR-GGN-2010-01433	CR-GGN-2010-01443	CR-GGN-2010-01453
CR-GGN-2010-01458	CR-GGN-2010-01457	CR-GGN-2010-01467
CR-GGN-2010-01468	CR-GGN-2010-01473	CR-GGN-2010-01909

CR-GGN-2010-02030
CR-GGN-2010-02191
CR-GGN-2010-02285
CR-GGN-2010-02309
CR-GGN-2010-02489
CR-GGN-2010-02711
CR-GGN-2010-02812
CR-GGN-2010-02841
CR-GGN-2010-02869
CR-GGN-2010-02893
CR-GGN-2010-03577
CR-GGN-2010-03629
CR-GGN-2010-03831
CR-GGN-2010-04710
CR-GGN-2010-05159
CR-GGN-2010-05167
CR-GGN-2010-05376
CR-GGN-2010-05549
CR-GGN-2010-05557
CR-GGN-2010-05570
CR-GGN-2010-05571
CR-GGN-2010-05594
CR-GGN-2010-05662
CR-GGN-2010-05952
CR-GGN-2010-05971
CR-GGN-2010-06017
CR-GGN-2010-06031
CR-GGN-2010-06042
CR-GGN-2010-06082
CR-GGN-2010-06084
CR-GGN-2010-06255
CR-GGN-2010-06361
CR-GGN-2010-06362
CR-GGN-2010-06397
CR-GGN-2010-06414
CR-GGN-2010-06464
CR-GGN-2010-06487
CR-GGN-2010-06515
CR-GGN-2010-06639
CR-GGN-2010-06672
CR-GGN-2010-06673
CR-GGN-2010-06743
CR-GGN-2010-07183
CR-GGN-2010-07421
CR-GGN-2010-07684
CR-GGN-2010-07868
CR-GGN-2010-08317
CR-GGN-2010-08370
CR-GGN-2010-08597
CR-GGN-2010-08743
CR-GGN-2010-08749
CR-GGN-2010-08782
CR-GGN-2010-08793
CR-GGN-2010-08827
CR-GGN-2011-00285
CR-GGN-2011-00571
CR-GGN-2011-00759
CR-GGN-2011-00767
CR-GGN-2011-00768
CR-GGN-2011-00770
CR-GGN-2011-00788
CR-GGN-2011-00800
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CR-GGN-2011-00815
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CR-GGN-2011-00906
CR-GGN-2011-00927
CR-GGN-2011-00933
CR-GGN-2011-01048
CR-GGN-2011-01317
CR-GGN-2011-01318
CR-GGN-2011-01349
CR-GGN-2011-01385
CR-GGN-2011-01407
CR-GGN-2011-01435
CR-GGN-2011-01501
CR-GGN-2011-01512
CR-GGN-2011-01619
CR-GGN-2011-01868
CR-GGN-2011-02238
CR-GGN-2011-02354
CR-GGN-2011-02355
CR-GGN-2011-02998
CR-GGN-2011-03038
CR-GGN-2011-03559
CR-GGN-2010-00680
CR GGN-2011-04485
CR-GGN-2011-01901
CR-GGN-2011-02008
CR-GGN-2011-01915
CR-GGN-2011-01902
CR-GGN-2011-01879

<u>WORK ORDERS</u>

WO 00184972 01

Section 1R13: Maintenance Risk Assessment and Emergent Work Controls

PROCEDURES

NUMBER	TITLE	REVISION
05-1-02-VI-2	Hurricanes, Tornados, and Severe Weather	114
06-TE-1000-V-0001	Culvert No. 1 Embankment Stability Inspection/Survey	100

OTHER

NUMBER	TITLE	REVISION / DATE
WT-2011-0038	Work Week 4/18/11 to 4/24/11 DIV 2(3d) Week (1117)** EOOS, Risk Items Only	April 21, 2011
EN-WM-101	On-line Work Management Process for the Week of May 16, 2011	7

CONDITION REPORTS

CR-GGN-2011-03820	CR-GGN-2011-03822	CR-GGN-2011-03826

WORK ORDERS

WO259985 01	WO52311561	WO52311563
WO52311564	WO257066 24	WO52305794 01
WO271050	WO271369 02	WO270938 02
WO270937 02	WO259985 01	WO228606
WO220408 03	WO252061 01	WO220408 03
WO270938 02	WO270937 02	WO271369 02
WO258425	WO246790 07	WO52291436 01
WO275477 01	WO52297900	WO276821
WO275928	WO148711	

Section 1R15: Operability Evaluations

PROCEDURES

NUMBER	TITLE	REVISION / DATE
EN-MA-125	Troubleshooting Control Form from Initiating Document CR-GGN-2011-2782	April 23, 2011

ENS-DC-199	Off Site Power Supply Design Requirements Nuclear Plant Interface Requirements	6
ENS-DC-201	ENS Transmission Grid Monitoring	5

CALCULATIONS

NUMBER	TITLE	REVISION
MC-N1P64-06001	Fire Protection System in Fire Water Pump House: Piping Evaluation per ER-GG-2006-0096-000-00	0

OTHER

NUMBER	TITLE	DATE
	Nuclear Change Response for ER-GG-2006-096-000	0
	Division III-HPCS Diesel "A" Jacket Water Chemistry Trends	December 2009 - May 2011
Attachment 9.5	Operability Evaluation for CR-GGN-2011-3411	
Attachment 9.5	Operability Evaluation for LO-WTGGN-2011-0179 CA #001	
Attachment 9.5	Operability Evaluation for CR-GGN-2011-03530 and CR-GGN-2011-3624	

CONDITION REPORTS

CR-GGN-2011-02782	CR-GGN-2011-02238	CR-GGN-2011-02245
CR-GGN-2011-02755	CR-GGN-2011-03559	

ENGINEERING CHANGES

EC 0000029217	EC 5000104104

Section 1R18: Plant Modifications

PROCEDURES

NUMBER	TITLE	REVISION
EN-DC-136	Temporary Modifications	5

CONDITION REPORTS

CR-GGN-2011-04200

OTHER

NUMBER	TITLE	DATE
	Temporary Modifications GGNS	June 16, 2011

Section 1R19: Postmaintenance Testing

PROCEDURES

NUMBER	TITLE	REVISION
07-S-12-39	General Cleaning and Inspection of Non-Rotating Electrical Equipment	8
07-S-12-40	General Cleaning and Inspection of Rotating Electrical Equipment	2
EN-MA-133	Control of Scaffolding, WO #266675	7
06-OP-1E12-Q-0024	LPCI/RHR Subsystem B Quarterly Functional Test	115
1-18-07592-A2-01	Control Rod Movement Sequence	0
06-RE-SC11-V-0402	Control Rod Scram Testing	117

DRAWINGS

NUMBER	TITLE	REVISION
E-1266-03	Schematic Diagram Y47 SSW Pump House Vent SYS SW PMP HSE Vent Fan Mod F003B-B Unit 1	10
E-1266-04	Schematic Diagram Y47 SSW Pump House vent System SSW PMP HSE Vent Fan Intake Mod F002B-B Unit 1	12
E-1571-55	Wiring Diagram Relay Compartment MCC 1B651-C5	2
E-1266-10	Schematic Diagram Y47 SSW Pump House Vent System SSW PMP HSE Vent fan Intake mod F002A-B Unit 2	8
E-1266-09	Schematic Diagram Y47 SSW Pump House vent SYS SSW PMP HSE Vent fan RET MOD F003A-B Unit 2	5

OTHER

NUMBER	TITLE	DATE
	Downpower Work Activities Level 2 Schedule	April 8, 2011

CONDITION REPORTS

CR-GGN-2011-03756	CR-GGN-2011-03774	CR-GGN-2011-03453

WORK ORDERS

WO52256736 01	WO52305785 01	WO00279347 02
WO00271625 01	WO00277385 01	WO00277385 02
WO00277385 06	WO00277385 07	WO00228606 01

Section 1R22: Surveillance Testing

PROCEDURES

NUMBER	TITLE	REVISION / DATE
06-EL-1L11-W-0001	125-Volt Battery Bank Pilot Cell Check	104
06-OP-1P81-R-0001, Attachment III	HPCS Diesel Generator 18 Month Functional Test-Test No. 3- 24-Hour Rated Load Test/DG Hot Start Test	118
06-OP-1P81-R-0001	HPCS Diesel Generator 18 Month Functional Test	118
07-S-13-8	Calibration/Calibration Check of Plant Indicators	7
06-IC-1E61-Q-1004	Containment and Drywell Hydrogen Analyzer (PAM) Calibration	104
06-IC-1E61-Q-1004	Drywell Hydrogen Analyzer (PAM) Calibration – Channel B	104
	Primary Containment Atmosphere Hydrogen Analyzer K-III	January 16, 1979
06-OP-1N32-V-0001	Turbine Stop and Control Valve Operability	115
04-1-03-N32-5	ATT Safety Devices Test	22
06-OP-1N32-V-0002	Turbine Mechanical Overspeed Operability (ATT Panel)	108
06-OP-1E12-Q-0025	LPCI/RHR Subsystem C Quarterly Functional Test	115
06-OP-1P41-Q-0006	HPCS Service Water System Valve and Pump Operability Test	111

DRAWINGS

NUMBER	TITLE	DATE
017120	K-III P&I Diagram	May 1976

CONDITION REPORTS

CR-GGN-2011-02156	CR-GGN-2011-02738	CR-GGN-2011-02773
CR-GGN-2011-02778	CR-GGN-2011-03127	CR-GGN-2011-02468
CR-GGN-2011-02469	CR-GGN-2011-02470	CR-GGN-2011-02471
CR-GGN-2011-04224		

WORK ORDERS

WO52297223	WO52297205	WO52297204
WO00239736 03	WO52234112 01	WO52234199 01
WO52271011 01	WO52319584 01	

Section 1EP6: Drill Evaluation

OTHER

NUMBER	TITLE	DATE
	2nd Quarter Drill Scenario/Simulation	April 12, 2011
	GGNS 2011 2nd Quarter ERO Training Drill Red Team Sections 7-10	April 12, 2011
GGN 2011 296	TEAR Printout for selected Tear	May 18, 2011

CONDITION REPORTS

CR-GGN-2011-02508	CR-GGN-2011-02517	CR-GGN-2011-02518
CR-GGN-2011-02521	CR-GGN-2011-02533	CR-GGN-2011-02542
CR-GGN-2011-02544	CR-GGN-2011-02545	CR-GGN-2011-02564
CR-GGN-2011-02565	CR-GGN-2011-02571	CR-GGN-2011-02585
CR-GGN-2011-02601	CR-GGN-2011-02602	CR-GGN-2011-02603
CR-GGN-2011-02632	CR-GGN-2011-02641	CR-GGN-2011-02698
CR-GGN-2011-02716	CR-GGN-2011-02718	CR-GGN-2011-02730

Section 4OA1: Performance Indicator Verification

PROCEDURES

NUMBER	TITLE	REVISION
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, April 7, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, May 5, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, June 2, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, July 7, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, August 4, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, September 1, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, October 6, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, November 10, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, December 1, 2010	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, January 5, 2011	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, February 2, 2011	104
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine, March 2, 2011	104
EN-LI-114	Performance Indicator Process GGNS 1st Qtr 2010, Mitigating Systems Indicator	4
EN-LI-114	Performance Indicator Process GGNS 2nd Qtr 2010, Mitigating Systems Indicator	4
EN-LI-114	Performance Indicator Process GGNS 3rd Qtr 2010, Mitigating Systems Indicator	4
EN-LI-114	Performance Indicator Process GGNS 4th Qtr 2010, Mitigating Systems Indicator	4

EN-LI-114	Performance Indicator Process GGNS 1st Qtr 2010, Barrier Integrity Indicator	4
EN-LI-114	Performance Indicator Process GGNS 2nd Qtr 2010, Barrier Integrity Indicator	4
EN-LI-114	Performance Indicator Process GGNS 3rd Qtr 2010, Barrier Integrity Indicator	4
EN-LI-114	Performance Indicator Process GGNS 4th Qtr 2010, Barrier Integrity Indicator	4

OTHER

NUMBER	TITLE	DATE
Attachment 9.2	2nd Quarter 2010 Reactor Coolant System Specific Activity	July 1, 2010
	April 2010 Core Thermal Power	
	May 2010 Thermal Power: No Steady State Operations	
	June 2010 Core Thermal Power	
Attachment 9.2	3rd Quarter 2010 Reactor Coolant System Specific Activity	October 5, 2010
	July 2010 Core Thermal Power	
	August 2010 Core Thermal Power	
	September 2010 Core Thermal Power	
Attachment 9.2	4th Quarter 2010 Reactor Coolant System Specific Activity	January 1, 2011
	October 2010 Core Thermal Power	
	November 2010 Core Thermal Power	
	December 2010 Core Thermal Power	
Attachment 9.2	1st Quarter 2010 Reactor Coolant System Specific Activity	April 6, 2011
	January 2011 Core Thermal Power	
	February 2011 Core Thermal Power	
	March 2011 Core Thermal Power	

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CR-GGN-2011-02781

Section 4OA2: Identification and Resolution of Problems

OTHER

NUMBER	TITLE	REVISION
Section 5.7	Engineering Evaluation of EC No. 22172	0
Section 5.1	Nuclear Change EC No. 27357	0

CONDITION REPORTS

CR-GGN-2009-03105	CR-GGN-2009-03112	CR-GGN-2009-03228
CR-GGN-2009-03384	CR-GGN-2009-03485	CR-GGN-2009-03611
CR-GGN-2009-03687	CR-GGN-2009-04661	CR-GGN-2009-04795
CR-GGN-2009-04999	CR-GGN-2010-00787	CR-GGN-2010-00793
CR-GGN-2010-00801	CR-GGN-2010-00966	CR-GGN-2010-00971
CR-GGN-2010-00978	CR-GGN-2010-01035	CR-GGN-2010-01090
CR-GGN-2010-01095	CR-GGN-2010-01101	CR-GGN-2010-01132
CR-GGN-2010-01135	CR-GGN-2010-01153	CR-GGN-2010-01194
CR-GGN-2010-01205	CR-GGN-2010-01498	CR-GGN-2010-01529
CR-GGN-2010-01538	CR-GGN-2010-01539	CR-GGN-2010-01574
CR-GGN-2010-01673	CR-GGN-2010-01678	CR-GGN-2010-01689
CR-GGN-2010-01768	CR-GGN-2010-01854	CR-GGN-2010-01887
CR-GGN-2010-01989	CR-GGN-2010-02073	CR-GGN-2010-02075
CR-GGN-2010-02131	CR-GGN-2010-02139	CR-GGN-2010-02180
CR-GGN-2010-02186	CR-GGN-2010-03021	CR-GGN-2010-03081
CR-GGN-2010-03545	CR-GGN-2010-04208	CR-GGN-2010-04361
CR-GGN-2010-04524	CR-GGN-2010-04554	CR-GGN-2010-04606
CR-GGN-2010-04634	CR-GGN-2010-04635	CR-GGN-2010-04636
CR-GGN-2010-04637	CR-GGN-2010-04668	CR-GGN-2010-04673
CR-GGN-2010-04827	CR-GGN-2010-04863	CR-GGN-2010-04882
CR-GGN-2010-04965	CR-GGN-2010-05152	CR-GGN-2010-05277
CR-GGN-2010-05287	CR-GGN-2010-06625	CR-GGN-2010-06650
CR-GGN-2010-07852	CR-GGN-2010-07859	CR-GGN-2010-07874
CR-GGN-2010-07880	CR-GGN-2010-07881	CR-GGN-2010-08362
CR-GGN-2010-08366	CR-GGN-2010-08474	CR-GGN-2010-08490
CR-GGN-2010-08561	CR-GGN-2010-08608	CR-GGN-2010-08613
CR-GGN-2010-08618	CR-GGN-2010-08625	CR-GGN-2010-08643
CR-GGN-2010-08644	CR-GGN-2010-08645	CR-GGN-2010-08703

CR-GGN-2010-08704	CR-GGN-2010-08705	CR-GGN-2010-08706
CR-GGN-2010-08716	CR-GGN-2010-08742	CR-GGN-2010-08744
CR-GGN-2010-08768	CR-GGN-2011-00082	CR-GGN-2011-00130
CR-GGN-2011-00137	CR-GGN-2011-00162	CR-GGN-2011-00202
CR-GGN-2011-00271	CR-GGN-2011-00272	CR-GGN-2011-00345
CR-GGN-2011-00574	CR-GGN-2011-00627	CR-GGN-2011-00638
CR-GGN-2011-00681	CR-GGN-2011-00731	CR-GGN-2011-00845
CR-GGN-2011-00873	CR-GGN-2011-01073	CR-GGN-2011-01083
CR-GGN-2011-01104	CR-GGN-2011-01529	CR-GGN-2011-01762
CR-GGN-2011-02288	CR-GGN-2011-02353	CR-GGN-2011-02499
CR-GGN-2011-02966	CR-GGN-2011-03329	CR-GGN-2011-03691
CR-GGN-2011-03855	CR-GGN-2011-03860	CR-GGN-2011-03880
CR-GGN-2011-03454	CR-GGN-2011-00873	

Section 4OA3: Event Follow-Up

PROCEDURES

NUMBER	TITLE	REVISION
08-S-04-634	Liquid Tritium Samples	8
08-S-04-223	Operation of the Tri-Carb 1600TR Liquid Scintillation Analyzer	101

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NUMBER	TITLE	DATE
	Reactor Chemistry Sample Results	June 21, 2011
	Offgas Pre-treat Sum of the Six Analysis	June 2011

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CR-GGN-2011-02936	CR-GGN-2011-03445	CR-GGN-2011-04280

Section 4OA5: Other Activities

PROCEDURES

NUMBER	TITLE	REVISION / DATE
05-S-01-EP-3	Containment Control	27

05-S-01-EP-4	Auxiliary Building Control	26
05-S-01-EP-2	RPV Control	42
GLP-EP-EPTS26	Emergency Preparedness Training	1
EN-TQ-110	Emergency Response Organization Training	1
05-S-01-EP-5	RPV Flooding	21
01-S-06-41	Emergency Procedure and Severe Accident Procedures	6
01-S-06-37	Revision and Control of Emergency Procedure and Severe Accident Procedures	9
05-S-01-SAP-1	Severe Accident	7
05-S-01-PSTG	Plant Specific Technical Guidelines	3
GLP-EP-EPT19	Accident Management	5
10-S-04-7	Major Event Response, Change 6	0
05-S-01-STRATEGY	Alternate Strategy	7
05-S-01-EP-1	Injection Into RPV With Fire Protection Water System, Attachment 26	23
05-S-01-EP-1	Emergency/Severe Accident Procedure Support Documents	23
05-S-01-SAP-1	Severe Accident Procedure	7
LPN GLP-OPS-B5B00	EMERGENCY PROCEDURE ALTERNATE STRATEGY (B5B)	0
LPN GLP-EP-EPTS26	SAPs and Emergency Plan Refresher	1
GLP-OPS-B5B00	Emergency Procedure Alternate Strategy	3
GLP-OPS-B5B00	Part 2, Charging Fire Header With Construction Water	3
GLP-OPS-B5B00	Part 3	3
GLP-OPS-B5B00	Part 4	3

GLP-OPS-B5B00	Part 5, Attachment X	3
01-S-10-3	Emergency Preparedness Department Responsibilities	16
	Performed Test to verify DIGITAL TACHOMETER Model 1726 used in 05-S-01 Strategy	March 22, 2011
	Fire Apparatus Service Test	August 16, 2010
02-S-01-34	Auxiliary Building Generic Checks	28
06-OP-SP64-M-0047, Attachment I	Unit I Fire Hose Station Check, Fire Extinguisher Inspections and B5b Lockers	112
06-OP-SP64-M-0047	B5b Locker Inventory Check	112
	GGNS Fire Truck Tests and Verify Hose Lengths that are Stored on the Fire Truck	March 18, 2011
	Procedure Distribution in Fire House	
05-S-01-EP-1	Pathway #9 Feedwater Pump Discharge	23
04-1-01-P75-1	Standby Diesel Generator System	89
GNRO-93/00003	Change of Commitments on Containment Isolation Valves During Station Blackout	January 12, 1993
9.1-14b	GG USFAR	
05-S-01-EP-1, Attachment 4	Defeating HPCS High Sp Water Level Suction Transfer Interlock	23
05-S-01-EP-1, Attachment I	Defeating RCIC High SP Water level Suction Transfer Interlock	23

05-1-02-I-4	Off-Normal Event Procedure Loss of AC Power	38
06-OP-SP64-R-0049	Fire Related Sealed Penetration Visual Inspection	108
	TIMD083 - Predefined History	April 11, 2011
07-1-24-T10-1	Periodic Leak Check of Airtight Door Seal Surface	5
06-TE-1000-V-0001	Culvert No 1 Embankment Stability/Inspection Survey	100
3.4-2a	GG Updated Final Safety Analysis Report	3
06-OP-SP64-R-0049	Surveillance Procedure Fire Rated Sealed Penetrations Visual Inspection	108
05-S-01-SAP-1	Controlled Copies/Locations/Copy Holders	
05-S-01-PSTG	Plant Specific Technical Guidelines	3
01-S-06-41	Verification and Validation of Emergency Procedures and Severe Accident Procedures	6
01-S-06-37	Revision and Control of Emergency Procedure and Severe Accident Procedures	9

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NUMBER	TITLE	DATE
	Scenario EAL and Participation Table	
	GGNS Emergency Notification System List Rotation Schedule	May 7, 2011
	Accident Assessment	June 14, 2011

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CR-GGN-2011-03398	CR-GGN-2011-02432	CR-GGN-2011-02558
CR-GGN-2011-02800	CR-GGN-2011-02801	CR-GGN-2011-01776

CR-GGN-2011-01857	CR-GGN-2011-01877	CR-GGN02011-01882
CR-GGN-2011-01895	CR-GGN-2011-01896	CR-GGN-2011-01924
CR-GGN-2011-01925	CR-GGN-2011-01951	CR-GGN-2011-01958
CR-GGN-2011-01959	CR-GGN-2011-01961	CR-GGN-2011-01877
CR-GGN-2011-01891	CR-GGN-2011-01895	CR-GGN-2011-01959
CR-GGN-2011-02372	CR-GGN-2011-02645	CR-GGN-2011-02757
CR-GGN-2011-02831	CR-GGN-2011-02016	CR-GGN-2011-02019
CR-GGN-2011-02053	CR-GGN-2011-02063	CR-GGN-2011-02016
CR-GGN-2011-02010	CR-GGN-2011-02016	CR-GGN-2011-02019
CR-GGN-2011-02053	CR-GGN-2011-02063	CR-GGN-2011-02177
CR-GGN-2011-02906	CR-GGN-2011-02910	CR-GGN-2011-02913
CR-GGN-2011-02960	CR-GGN-2011-02410	CR-GGN-2011-02412
CR-GGN-2011-02428	CR-GGN-2011-02525	CR-GGN-2011-02575
CR-GGN-2011-02619	CR-GGN-2011-02356	CR-GGN-2011-02364
CR-GGN-2011-02064	CR-GGN-2011-02619	CR-GGN-2011-02349
CR-GGN-2011-02350	CR-GGN-2011-02351	

WORK ORDERS

WO 52327369 01	WO 00171973 01	WO 52203106 01
WO 52241872 01	WO 52270712 01	WO 52221454 01
WO 52256742 01		

OTHER

NUMBER	TITLE	REVISION / DATE
	GG Staffing Contingency Plan, 2011 Plan	2
	GG Staffing Contingency Plan, 2011 Plan	0
	US NRC Operator Licensing Tracking System Active Operator Count, Region 4	May 27, 2011

Section 4OA7: Licensee-Identified Violations

CONDITION REPORTS

CR-GGN-2011-01879 CR-GGN-2011-02240