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October 28, 2014

Kevin Mulligan Site Vice President Operations Entergy Operations, Inc. Grand Gulf Nuclear Station P.O. Box 756 Port Gibson, MS 39150

# SUBJECT: GRAND GULF NUCLEAR STATION – NRC INSPECTION REPORT 05000416/2014004

Dear Mr. Mulligan:

On September 30, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station, Unit 1. On October 2, 2014, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented two findings of very low safety significance (Green) in this report. One of these findings involved a violation of NRC requirements.

If you contest the violation or significance of this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the Grand Gulf Nuclear Station.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement 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 Grand Gulf Nuclear Station.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <u>http://www.nrc.gov/reading-rm/adams.html</u> (the Public Electronic Reading Room).

K. Mulligan

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Sincerely,

/RA/

Gerond George, Acting Chief Project Branch C Division of Reactor Projects

Docket No.: 50-416 License No.: NPF-29

Enclosure: Inspection Report 05000416/2014004 w/ Attachment: Supplemental Information

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#### **U.S. NUCLEAR REGULATORY COMMISSION**

#### **REGION IV**

- Docket: 05000416
- License: NPF-29
- Report: 05000416/2014004
- Licensee: Entergy Operations, Inc.
- Facility: Grand Gulf Nuclear Station, Unit 1
- Location: 7003 Baldhill Road Port Gibson, MS 39150
- Dates: July 1 through September 30, 2014
- Inspectors: B. Rice, Senior Resident Inspector B. Baca, Project Engineer P. Nizov, Acting Resident Inspector B. Parks, Acting Resident Inspector
  - M. Williams, Acting Senior Resident Inspector
- Approved Gerond George
  - By: Acting Chief, Project Branch C Division of Reactor Projects

#### SUMMARY

IR 05000416/2014004; 07/01/2014 – 09/30/2014; Grand Gulf Nuclear Station; Equipment Alignment and Follow-up of Events and Notices of Enforcement Discretion

The inspection activities described in this report were performed between July 1 and September 30, 2014, by the resident inspectors and inspectors from the NRC's Region IV office. Two findings of very low safety significance (Green) are documented in this report. One of these findings involved a violation of NRC requirements. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects Within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

#### **Cornerstone: Initiating Events**

Green. The inspectors reviewed a self-revealing finding for the licensee's failure to follow procedure EN-LI-102, "Corrective Action Process", Revision 12, which requires the licensee to appropriately complete assigned corrective actions within the prescribed time frame. On March 29, 2014, with Grand Gulf Nuclear Station operating at 87 percent power, a capacitor in a multiplier module of the main turbine overspeed protection circuit failed, causing the load reject relay to actuate. The main turbine control valves closed and an automatic actuation of the reactor protection system occurred, resulting in a plant scram. The root cause analysis noted that a corrective action initially assigned in 2007 in association with a single point vulnerability review was not completed in the prescribed time frame. The corrective action required that the module in question, which contained a single point vulnerability, either be rebuilt so as to reduce the probability that an age-related failure capable of triggering the vulnerability would occur, or replaced with a new design that eliminated the vulnerability altogether. The licensee entered this issue into the corrective action program under Condition Report CR-GGN-2014-03131. Immediate corrective actions following the scram included replacing the failed module with a spare module that had been visually inspected and functionally checked. Long term corrective actions include replacing the module with a component that does not exhibit single point vulnerability.

The licensee's failure to follow procedure by failing to appropriately complete assigned corrective actions was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective, in that it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated June 19, 2012, the inspectors determined that the issue affected the Initiating Events Cornerstone. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19th, 2012, the finding was determined to be of very low safety significance (Green) because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding was a latent issue and is not reflective of present licensee performance; therefore, no cross-cutting aspect was assigned (Section 40A3).

#### **Cornerstone: Mitigating Systems**

• <u>Green</u>. The inspectors identified a non-cited violation of License Condition 2.C(41), "Fire Protection Program," for the failure to control transient combustibles in accordance with a fire protection program procedure. On August 13, 2014, the inspectors identified unattended transient combustible material stored within a combustible exclusion zone in Fire Zone 1A222 of the auxiliary building 119' elevation. The inspectors reported the occurrence to the operations shift manager and determined licensee personnel had not performed a transient combustible evaluation of the contents of the carts. The licensee documented this issue in Condition Report CR-GGN-2014-05842. As an immediate corrective action, the licensee moved the material to an appropriate designated area.

The failure to control transient combustible material in accordance with the approved fire protection program is a performance deficiency. The performance deficiency was more than minor and therefore a finding because it was associated with the protection against external factors attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective in that the transient combustible materials decreased the external event mitigation for fire prevention. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, the inspectors determined that the issue affected the Mitigation Systems Cornerstone and that the finding pertained to a failure to adequately implement fire prevention and administrative controls for transient combustible materials. As a result, the inspectors were directed to Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," September 20, 2013. The inspectors evaluated the finding through Appendix F, Attachment 1, "Fire Protection Significance Determination Process Worksheet," September 20, 2013, and determined that the finding was of very low safety consequence (Green) because the Fire Prevention and Administrative Controls finding would not prevent the reactor from reaching and maintaining a safe shutdown condition. The apparent cause of this finding was incorrect assumptions and mental shortcuts or biases. This finding had a cross-cutting aspect in the human performance area associated with conservative bias, in that licensee staff failed to use decision making-practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 1R04)

## PLANT STATUS

The operators began the inspection period at 92 percent reactor thermal power and continued performing power ascension activities until 100 percent reactor thermal power was reached on July 2, 2014.

On July 4, 2014, the operators reduced power to 84 percent reactor thermal power to remove heater drain pump A from service due to a steam leak. The operators returned the plant to 100 percent reactor thermal power that same day.

On July 15, 2014, the operators reduced power to 88 percent reactor thermal power due to heater drain pump B operating in a run-out condition and having elevated vibration readings. The operators maintained power at 88 percent until heater drain pump A was returned to service. On August 15, 2014, heater drain pump A was returned to service, and the operators increased power to 100 percent reactor thermal power.

On August 18, 2014, the operators reduced power to 80 percent reactor thermal power for monthly control rod exercises. The operators returned the plant to 100 percent reactor thermal power on August 22, 2014.

On September 5, 2014, the operators reduced power to 55 percent reactor thermal power for a sequence exchange and control rod scram time testing. The operators returned the plant to 100 percent reactor thermal power on September 12, 2014, and remained at full power through the end of the inspection period.

#### **REPORT DETAILS**

#### 1. **REACTOR SAFETY**

#### Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R04 Equipment Alignment (71111.04)

- .1 Partial Walkdown
  - a. Inspection Scope

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

- July 7, 2014, standby service water system B during maintenance activities on standby service water systems A and C
- July 21, 2014, residual heat removal system A during maintenance on residual heat removal system B
- August 13, 2014, division three diesel generator following a monthly surveillance

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the systems were correctly aligned for the existing plant configuration.

These activities constituted three partial system walk-down samples as defined in Inspection Procedure 71111.04.

#### b. Findings

<u>Introduction</u>. The inspectors identified a Green non-cited violation of License Condition 2.C(41), "Fire Protection Program," for the failure to control transient combustibles in accordance with a fire protection program procedure.

Description. On August 13, 2014, the inspectors identified unattended transient combustible material stored within a combustible exclusion zone in Fire Zone 1A222 of the auxiliary building 119 foot elevation. The combustible materials included 100 feet of plastic hose, a 50-foot extension cord, approximately 100 feet of Permalon tape, two 25-gallon plastic barrels, and several other miscellaneous plastic items. The items were located in wheeled carts within the designated combustible exclusion zone and were not attended by plant personnel. The estimated weight for the transient combustible material was less than 50 pounds. Procedure EN-DC-161, "Control of Combustibles," Revision 10, Section 5.6[3], requires a transient combustible evaluation before the introduction of material to a Level 1 Combustible Control Zone (Transient Combustible Exclusion Area). Attachment 9.2, "GGNS - Combustible Control Zones," of EN-DC-161 allows for transient combustible material in a Level 1 Zone without a transient combustible evaluation if the material is less than 50 pounds of Class A combustibles and is constantly attended. The inspectors reported the occurrence to the operations shift manager and determined licensee personnel had not performed a transient combustible evaluation of the contents of the carts. The licensee documented this issue in Condition Report CR-GGN-2014-05842. As an immediate corrective action, the licensee moved the material to an appropriate designated area.

Analysis. The failure to control transient combustible material in accordance with the approved fire protection program is a performance deficiency. The performance deficiency was more than minor and therefore a finding because it was associated with the protection against external factors attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective in that the transient combustible materials decreased the external event mitigation for fire prevention. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated June 19, 2012, the inspectors determined that the issue affected the Mitigating Systems Cornerstone and that the finding pertained to a failure to implement fire prevention and administrative controls adequately for transient combustible materials. As a result, the inspectors were directed to Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," dated September 20, 2013. The inspectors evaluated the finding through Appendix F, Attachment 1, "Fire Protection Significance Determination Process Worksheet," dated September 20, 2013, and determined that the finding was of very low safety consequence (Green) because the impact of the Fire Prevention and Administrative Controls finding would not prevent the reactor from reaching and maintaining a safe shutdown condition. The apparent cause of this finding was incorrect assumptions and mental shortcuts or biases. This finding had a cross-cutting aspect in the human performance area associated with conservative

bias, in that licensee staff failed to use decision making-practices that emphasize prudent choices over those that are simply allowable [H.14].

Enforcement. Grand Gulf Nuclear Station Unit 1 Facility Operating License Condition 2.C(41), "Fire Protection Program," requires the licensee to implement and maintain in effect all provisions of the approved Fire Protection Program as described in Revision 5 to the Updated Final Safety Analysis Report (UFSAR). UFSAR Table 9.5-11. "Fire Protection Program Comparison with NRC Requirements," provides Grand Gulf Station Position on meeting NRC's Appendix A to Branch Technical Position APCSB 9.5-1, dated August 23, 1976. Position C.2 states, in part, the scope of the Fire Protection Quality Assurance Program for Grand Gulf Nuclear Station was limited to selected aspects of 10 CFR 50, Appendix B, Specifically, Criteria III – V, VII, X, XI, and XIV – XVIII of Appendix B were invoked. Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," states, in part, that activities affecting quality shall be prescribed by documented instructions or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions or drawings. Procedure EN-DC-161, "Control of Combustibles," Revision 10, Section 5.6[3] requires a transient combustible evaluation before the introduction of material to a Level 1 Combustible Control Zone (Transient Combustible Exclusion Area). Contrary to the above, on August 13, 2014, the licensee did not perform a transient combustible evaluation before introducing material to a Level 1 Combustible Control Zone (Transient Combustible Exclusion Area). Specifically, the licensee stored and left combustible material unattended in a combustible exclusion zone. This violation is being treated as a non-cited violation (NCV), consistent with Section 2.3.2 of the Enforcement Policy. The violation was entered into the licensee's corrective action program as CR-GGN-2014-005842. (NCV 05000416/2014004-01, "Failure to Control Transient Combustible Material in Accordance with a Fire Protection Procedure").

# 1R05 Fire Protection (71111.05)

- .1 Quarterly Inspection
  - a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on five plant areas important to safety:

- July 1, 2014, residual heat removal C pump room (1A118)
- July 1, 2014, high pressure core spray pump room (1A109)
- July 1, 2014, low pressure core spray pump room (1A119)
- July 10, 2014, auxiliary building refuel floor (1A603 and 1A604)
- August 11, 2014, division three diesel generator room

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constituted five quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

# 1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On September 17, 2014, the inspectors completed an inspection of the station's ability to mitigate flooding due to internal causes. After reviewing the licensee's flooding analysis, the inspectors chose the floor drain system installed in three plant areas containing risk-significant structures, systems, and components that were susceptible to flooding:

• September 17, 2014, emergency core cooling system equipment rooms floor drain system

The inspectors reviewed plant design features and licensee procedures for coping with internal flooding. The inspectors walked down the selected areas to inspect the design features, including the material condition of seals, drains, and flood barriers. The inspectors evaluated whether operator actions credited for flood mitigation could be successfully accomplished.

In addition, on July 11, 2014, the inspectors completed an inspection of underground bunkers susceptible to flooding. The inspectors selected two underground bunkers that contained risk-significant or multiple-train cables whose failure could disable risk-significant equipment:

• July 11, 2014, manholes MH20 and MH21

The inspectors observed the material condition of the cables and splices contained in the bunkers and looked for evidence of cable degradation due to water intrusion. The inspectors verified that the cables and vaults met design requirements.

These activities constitute completion of one flood protection measures sample and one bunker/manhole sample, as defined in Inspection Procedure 71111.06.

#### b. Findings

No findings were identified.

# 1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

#### .1 Review of Licensed Operator Regualification

#### a. Inspection Scope

On July 16, 2014, the inspectors observed an evaluated simulator scenario performed by an operating crew. The inspectors assessed the performance of the operators and the evaluators' critique of their performance.

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.

#### .2 Review of Licensed Operator Performance

#### a. Inspection Scope

On September 5, 2014, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity due to a scheduled down power to 55 percent reactor thermal power to perform a control rod sequence exchange, control rod scram time testing, and turbine testing. The inspectors observed the operators' performance of the following activities:

- Power reduction by reducing core flow
- Power reduction by inserting control rods
- Minimization of control room distractions
- Operators response to control room annunciators

In addition, the inspectors assessed the operators' adherence to plant procedures, including conduct of operations procedure and other operations department policies.

These activities constitute completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

#### 1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed two instances of degraded performance or condition of safetyrelated structures, systems, and components (SSCs):

- August 28, 2014, Maintenance Rule a(3) self-assessment review
- September 22, 2014, low pressure core spray and standby service water

The inspectors reviewed the extent of condition of possible common cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constituted completion of two maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed three risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- July 21, 2014, residual heat removal system B scheduled maintenance
- August 8, 2014, change in risk due to severe weather in the area
- August 10, 2014, change in risk due to severe weather in the area

The inspectors verified that these risk assessment were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessment and verified that the licensee implemented appropriate risk management actions based on the result of the assessment.

The inspectors also observed portions of two emergent work activities that had the potential to affect the functional capability of mitigating systems:

- July 1, 2014, division two diesel generator causing the completion of scheduled maintenance to be delayed
- August 29, 2014, division one diesel generator oil leak repair

The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected SSCs.

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

## b. Findings

No findings were identified.

## 1R15 Operability Determinations and Functionality Assessments (71111.15)

#### a. Inspection Scope

The inspectors reviewed six operability determinations and functionality assessments that the licensee performed for degraded or nonconforming SSCs:

- July 1, 2014, operability determination of residual heat removal pump B that failed to meet in-service testing criteria, Condition Report CR-GGN-2014-05029
- July 9, 2014, operability determination of standby service water A degraded pipe hanger, Condition Report CR-GGN-2014-05074
- July 28, 2014, operability determination of division two diesel generator faulty tachometer, Condition Report CR-GGN-2014-05485
- August 7, 2014, operability determination of residual heat removal system B time delay relay found out of calibration beyond technical specification allowed limits, Condition Report CR-GGN-2014-05407
- August 29, 2014, operability determination of the division one diesel generator that had an oil leak, Condition Report CR-GGN-2014-06093
- September 17, 2014, functionality assessment of reactor core isolation cooling system steam supply piping after the discovery of a missed ASME Code pressure test, Condition Report CR-GGN-2014-06162

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable or functional, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability or functionality. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability or functionality of the degraded SSC.

These activities constitute completion of six operability and functionality review samples, as defined in Inspection Procedure 71111.15.

#### b. <u>Findings</u>

No findings were identified.

## 1R18 Plant Modifications (71111.18)

#### a. Inspection Scope

The inspectors reviewed a temporary plant modification that affected risk-significant SSCs:

• September 10, 2014, temporary bypass of recirculation pump A thermal shock interlocks and the disabling of the associated control room annunciator

The inspectors verified that the licensee had installed and this temporary modification in accordance with technically adequate design documents. The inspectors verified that this modification did not adversely impact the operability or availability of affected SSCs. The inspectors reviewed design documentation and plant procedures affected by the modification to verify the licensee maintained configuration control.

These activities constitute completion of one sample of temporary modifications, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

#### 1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed six post-maintenance testing activities that affected risk-significant SSCs:

- July 21, 2014, residual heat removal system B functional test following scheduled maintenance
- July 21, 2014, residual heat removal system B motor operator valve functional test following scheduled maintenance
- July 21, 2014, power range neutron monitoring system functional test following permanent plant modification
- August 19, 2014, 119 foot elevation containment airlock test following scheduled maintenance
- August 29, 2014, division one diesel generator following oil leak repair
- September 9, 2014, standby liquid control system following maintenance

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

These activities constitute completion of six post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

#### 1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed five risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the structures, systems, and components (SSCs) were capable of performing their safety functions:

In-service tests:

• August 7, 2014, standby liquid control A functional surveillance

Other surveillance tests:

- July 23, 2014, containment pressure trip unit channel B functional test
- July 25, 2014, division two load shedding sequencer functional test
- July 28, 2014, division two diesel generator monthly functional test
- August 13, 2014, reactor core isolation coolant pump low pressure functional test

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the test satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

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

b. Findings

No findings were identified.

#### **Cornerstone: Emergency Preparedness**

#### 1EP6 Drill Evaluation (71114.06)

- .1 <u>Emergency Preparedness Drill Observation</u>
  - a. Inspection Scope

The inspectors observed an emergency preparedness drill on August 13, 2014, to verify the adequacy and capability of the licensee's assessment of drill performance. The inspectors reviewed the drill scenario, observed the drill from the emergency operating facility (EOF), and attended the post-drill critique. The inspectors verified that the

licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the licensee in the post-drill critique and entered into the corrective action program for resolution.

These activities constitute completion of one emergency preparedness drill observation sample, as defined in Inspection Procedure 71114.06.

#### b. Findings

No findings were identified.

#### 4. OTHER ACTIVITIES

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

#### 4OA2 Problem Identification and Resolution (71152)

- .1 Routine Review
  - a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

#### .2 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors selected two issues for an in-depth follow-up:

 On August 4, 2014, the inspectors reviewed the licensee's back log of long standing technical requirements manual limiting condition of operation (LCO). The inspectors reviewed the required actions associated with each LCO and determined the licensee had maintained compliance with the technical requirements manual by performing the required actions within the prescribed time limits. The inspectors also reviewed the condition reports and work orders associated with the deficient equipment and found the long standing LCOs shared a common theme in that the required LCO action was to write an appropriate deficiency document (i.e. a condition report) if the equipment had not been restored within the LCO time limit. Since all required LCO actions were complete, and compensatory actions were established, the licensee prioritized the work orders in accordance with the normal work management process. As a result, the equipment often remained deficient for long periods of time.

For example, the inspectors analyzed data from October 2011, through August 2014, relating to Technical Requirements Manual Sections TRM 6.2.1 "Fire Detection Instrumentation", TRM 6.3.1 "Radiation Monitoring Instrumentation", and TRM 6.3.2 "Seismic Monitoring Instrumentation." The LCO times for these sections are either 14 or 30 days, and the associated action for each is to initiate a deficiency document. The inspectors found that the time for resolving the deficient equipment ranged from 17 to 464 days, with an average of 161 days. The inspectors shared these insights with the licensee who agreed the resolution of long standing equipment issues was untimely and that they had already identified the need for improvement. The licensee provided the inspectors with system health reports and work order completion data and demonstrated they were making a reasonable effort to resolve their long standing equipment issues.

The inspectors assessed the licensee's problem identification threshold and compensatory actions. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the condition. However, the inspectors determined that, although no violations of regulatory requirements were identified, the frequent occurrence of long standing LCO represents a weakness in the work management process in that technical requirements manual related equipment deficiencies are allowed to exist for long periods.

On August 22, 2014, the inspectors completed a review of Condition Report CR-GGN-2014-02598, which addressed the discovery of contaminated soil outside of the radiologically controlled area boundary. The inspectors observed the licensee's response to the discovery of the contamination and the subsequent clean-up and disposal. The source of the contamination was determined to be a buried pipe that was not properly sealed during plant construction. The licensee excavated the contaminated soil and sent it for disposal in accordance with their radioactive waste disposal process. They also used a robot to inspect the integrity of the buried pipe and verified no other leaks were present. Finally, the pipe was sealed with a permanent cap. Additionally, the licensee installed monitoring wells for continued monitoring of the soil. The inspectors reviewed the licensee's evaluation of the event and determined their conclusions were reasonable and their corrective actions were appropriate.

The inspectors assessed the licensee's problem identification threshold, cause analyses, extent of condition reviews, and compensatory actions. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the condition.

These activities constitute completion of two annual follow-up samples as defined in Inspection Procedure 71152.

#### b. Findings

No findings were identified.

# 4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)

- .1 (Closed) Licensee Event Report 05000416/2014-003-00: Automatic Actuation of the Reactor Protection System (RPS) due to Main Turbine Overspeed Protection Load Reject Relay Fault
  - a. Inspection Scope

On March 29, 2014, at approximately 10:08 AM, Grand Gulf Nuclear Station experienced an automatic actuation of the reactor protection system and plant scram due to a main turbine overspeed protection load reject relay fault. All control rods fully inserted and safety systems operated as designed. No safety relief valves lifted and no isolation signals were received.

The cause of the event was a failed capacitor in a multiplier module of the main turbine overspeed protection circuit. Corrective actions included replacement of the multiplier module, the load reject relay power supply, the power measurement input module, and the voltage measurement input module. A design change is planned to replace the load reject relay with an upgrade that is not vulnerable to single component failure. The inspectors reviewed the root causes as well as the associated corrective actions and determined that the actions taken and planned by the licensee were reasonable. The enforcement aspects of the event are discussed below. Documents reviewed as part of this inspection are listed in the attachment.

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

b. Findings

<u>Introduction</u>. The inspectors reviewed a self-revealing Green finding for the licensee's failure to follow Procedure EN-LI-102, "Corrective Action Process", Revision 12, which requires the licensee to appropriately complete assigned corrective actions within the prescribed time frame.

<u>Description</u>. On March 29, 2014, with Grand Gulf Nuclear Station operating at 87 percent power, a capacitor in a multiplier module of the main turbine overspeed protection circuit failed, causing the load reject relay to actuate. The main turbine control valves closed and an automatic actuation of the reactor protection system occurred, resulting in a plant scram.

Following the scram, the licensee performed a root cause analysis. The root cause analysis observed that a corrective action initially assigned in 2007 in association with a single point vulnerability review was not completed in the prescribed time frame. The corrective action required that the module in question, which contained a single point vulnerability, either be rebuilt so as to reduce the probability that an age-related failure capable of triggering the vulnerability would occur, or replaced with a new design that eliminated the vulnerability altogether.

The inspectors discussed the finding with the licensee and reviewed the licensee's root cause analysis. The inspectors also reviewed Procedure EN-LI-102, "Corrective Action Process", Revision 12. The inspectors concluded that the licensee failed to follow Step 4.a.2 of the procedure, which required that the licensee "ensure the assigned corrective actions are appropriately completed within the prescribed time frame." The assigned corrective action had an initial due date of August 30th, 2009, and was closed, without being appropriately completed on August 13th, 2009.

The licensee entered this issue into the corrective action program under Condition Report CR-GGN-2014-03131. Immediate corrective actions following the scram included replacing the failed module with a spare module that had been visually inspected and functionally checked. Long term corrective actions include replacing the module with a component that does not exhibit single point vulnerability.

<u>Analysis</u>. The licensee's failure to follow procedure by failing to appropriately complete assigned corrective actions was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective, in that it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated June 19, 2012, the inspectors determined that the issue affected the Initiating Events Cornerstone. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19th, 2012, the finding was determined to be of very low safety significance (Green) because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding was a latent issue and is not reflective of present licensee performance; therefore no cross-cutting aspect was assigned.

<u>Enforcement</u>. This finding does not involve enforcement action because no regulatory requirements were violated. The licensee documented the issue in the corrective action program as Condition Report CR-GGN-2014-03131. (FIN 05000416/2014004-02, "Failure to Implement Corrective Actions Leads to Automatic Plant Scram").

#### 40A6 Meetings, Including Exit

#### Exit Meeting Summary

On October 2, 2014, the inspectors presented the inspection results to K. Mulligan, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

## SUPPLEMENTAL INFORMATION

#### **KEY POINTS OF CONTACT**

#### Licensee Personnel

- C. Boschetti, Manager, Nuclear Oversight
- K. Boudreaux, Manager, Systems and Components
- T. Coutu, Director, Regulatory Assurance and Performance Improvement
- J. Dorsey, Security Manager
- V. Fallacara, General Manager, Plant Operations
- H. Farris, Assistant Operations Manager
- J. Gerard, Senior Manager, Operations
- M. Goodwin, Assistant Operations Manager
- G. Hawkins, Senior Manager, Site Projects
- C. Lewis, Manager, Emergency Preparedness
- E. Meaders, Manager, Training
- R. Miller, Manager, Radiation Protection
- M. Milly, Senior Manager, Maintenance
- K. Mulligan, Site Vice President
- J. Nadeau, Manager, Regulatory Assurance
- C. Robinson, Site Vice President
- P. Salgado, Manager, Performance Improvement
- R. Scarbrough, Senior Regulatory Engineer, Licensing
- R. Sumrall, Manager, Chemistry
- T. Thornton, Manager, Design and Program
- D. Wiles, Director, Engineering

# LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed		
05000416/2014004-01	NCV	Failure to Control Transient Combustible Material in Accordance with a Fire Protection Procedure (Section 1R04)
05000416/2014004-02	FIN	Failure to Implement Corrective Actions Leads to Automatic Plant Scram (Section 40A3)
<u>Closed</u>		
05000416/2014-003-00	LER	Automatic Actuation of the Reactor Protection System (RPS) due to Main Turbine Overspeed Protection Load Reject Relay Fault (Section 40A3)

## LIST OF DOCUMENTS REVIEWED

# Section 1R04: Equipment Alignment

## Procedures

<u>Number</u>	Title	Revision
04-1-01-P41-1	Standby Service Water System	138
04-1-01-E12-1	Residual Heat Removal	144
04-1-01-P81-1	High Pressure Core Spray Diesel Generator	74
EN-DC-161	Control of Combustibles	10

# Condition Reports (CRs)

CR-GGN-2014-05842

# Section 1R05: Fire Protection

# Other Documents

<u>Number</u>	Title	<u>Revision</u>
GG UFSAR LDC 02009	GGNS UFSAR Appendix 9A Fire Hazards Analysis Report	
GG UFSAR LDC 05022	GGNS UFSAR Appendix 9B Fire Protection Program	
GG USFAR	GGNS UFSAR Appendix 9C Analysis of Safe Shutdown in the Event of a Major Fire	6
Fire Pre-Plan A- 06	HPCS Room, Room 1A109, Area 8, Elevation 93'	2
Fire Pre-Plan A- 10	LPCS Room and Pipe Penetration Rooms 1A119 and 1A115, Area 9, Elevation 93'	1
Fire Pre-Plan A- 11	RHR C and Pipe Penetration Room, Rooms 1A118 and 1A116, Area 10, Elevation 93'	1
Fire Pre-Plan A- 48	Spent Fuel Pool Area – 1A431, Shipping Cask Storage Area – 1A438, Cask Washdown Area – 1A532	1
Fire Pre-Plan DG-01	Fresh Air Corridor	4
Fire Pre-Plan DG-04	HPCS Diesel Generator 1D304	
Condition Reports CR-GGN-2014-05	<u>(CRs)</u> 062 CR-GGN-2014-05192 CR-GGN-2014-	-05819

## Section 1R06: Flood Protection Measures

## Drawings

<u>Number</u>	Title	<u>Revision</u>
M-1094B	Floor and Equipment Drain System	21

## Condition Reports (CRs)

CR-GGN-2004-02894	CR-GGN-2008-03620	CR-GGN-2012-06112
CR-GGN-2004-03283	CR-GGN-2008-07116	CR-GGN-2012-06241
CR-GGN-2004-03983	CR-GGN-2009-01208	CR-GGN-2012-06856
CR-GGN-2004-04451	CR-GGN-2009-01342	CR-GGN-2012-09570
CR-GGN-2005-03903	CR-GGN-2009-05151	CR-GGN-2012-12567
CR-GGN-2006-04444	CR-GGN-2009-06091	CR-GGN-2012-12587
CR-GGN-2007-00503	CR-GGN-2010-01515	CR-GGN-2013-01223
CR-GGN-2007-00524	CR-GGN-2010-02127	CR-GGN-2013-01275
CR-GGN-2007-02534	CR-GGN-2010-04556	CR-GGN-2013-01809
CR-GGN-2007-03448	CR-GGN-2010-04746	CR-GGN-2013-04272
CR-GGN-2007-04504	CR-GGN-2010-04818	CR-GGN-2013-06956
CR-GGN-2007-05415	CR-GGN-2010-04893	CR-GGN-2014-02400
CR-GGN-2008-02766	CR-GGN-2010-05968	CR-GGN-2014-04404
CR-GGN-2008-03559	CR-GGN-2011-05079	CR-GGN-2014-05531

#### Work Orders (WOs)

WO 52490291

WO 00217855

WO 00217854

# Section 1R12: Maintenance Effectiveness

# Procedures

Number	<u>Title</u>	Revision
EN-DC-203	Maintenance Rule Program	2
EN-DC-204	Maintenance Rule Scope and Basis	3
EN-DC-205	Maintenance Rule Monitoring	5

Other Documents

<u>Number</u>	<u>Title</u>	<u>Date</u>
	GGNS Maintenance Rule Assessment A Requirement of 10 CFR 50.65 (a)(3) Fuel Cycle 19 and Refueling Outage 19 (RF19)	August 7, 2014

Condition Reports (CRs)		
CR-GGN-2013-02609	CR-GGN-2013-06249	CR-GGN-2013-07857
CR-GGN-2014-01696	CR-GGN-2014-00004	CR-GGN-2013-01979
CR-GGN-2013-02175	CR-GGN-2013-02201	CR-GGN-2013-02393
CR-GGN-2013-02915	CR-GGN-2013-02936	CR-GGN-2013-02958
CR-GGN-2013-02990	CR-GGN-2013-03034	CR-GGN-2013-03221
CR-GGN-2013-03321	CR-GGN-2013-03357	CR-GGN-2013-03576
CR-GGN-2013-03673	CR-GGN-2013-03863	CR-GGN-2013-03939
CR-GGN-2013-04116	CR-GGN-2013-04268	CR-GGN-2013-04270
CR-GGN-2013-04289	CR-GGN-2013-04424	CR-GGN-2013-04429
CR-GGN-2013-04456	CR-GGN-2013-04634	CR-GGN-2013-04667
CR-GGN-2013-04674	CR-GGN-2013-04682	CR-GGN-2013-04856
CR-GGN-2013-04907	CR-GGN-2013-04965	CR-GGN-2013-05217
CR-GGN-2013-05218	CR-GGN-2013-05238	CR-GGN-2013-05309
CR-GGN-2013-05392	CR-GGN-2013-05568	CR-GGN-2013-05604
CR-GGN-2013-05611	CR-GGN-2013-05610	CR-GGN-2013-05613
CR-GGN-2013-05617	CR-GGN-2013-05631	CR-GGN-2013-05881
CR-GGN-2013-05951	CR-GGN-2013-06004	CR-GGN-2013-06140
CR-GGN-2013-06145	CR-GGN-2013-06146	CR-GGN-2013-06504
CR-GGN-2013-06685	CR-GGN-2013-06692	CR-GGN-2013-07117
CR-GGN-2013-07119	CR-GGN-2013-07372	CR-GGN-2013-07385
CR-GGN-2013-07395	CR-GGN-2013-07421	CR-GGN-2013-07426
CR-GGN-2013-07446	CR-GGN-2013-07465	CR-GGN-2013-07502
CR-GGN-2013-07579	CR-GGN-2014-00026	CR-GGN-2014-00051
CR-GGN-2014-00163	CR-GGN-2014-00216	CR-GGN-2014-00280
CR-GGN-2014-00380	CR-GGN-2014-00521	CR-GGN-2014-00550
CR-GGN-2014-00578	CR-GGN-2014-00622	CR-GGN-2014-00623
CR-GGN-2014-00715	CR-GGN-2014-00805	CR-GGN-2014-00812

CR-GGN-2014-01176 CR-GGN-2014-02250 CR-GGN-2014-02993 CR-GGN-2014-03420 CR-GGN-2014-03806 CR-GGN-2014-03988 CR-GGN-2014-04457 CR-GGN-2014-05074 CR-GGN-2013-02201 CR-GGN-2013-04270 CR-GGN-2013-05392 CR-GGN-2013-06504 CR-GGN-2013-07426 CR-GGN-2014-00216 CR-GGN-2014-00812 CR-GGN-2014-04960 CR-GGN-2013-02201 CR-GGN-2013-03034 CR-GGN-2013-04116 CR-GGN-2013-04270 CR-GGN-2013-04856 CR-GGN-2013-04907 CR-GGN-2013-05392 CR-GGN-2013-05568 CR-GGN-2013-04965 CR-GGN-2013-04116 CR-GGN-2013-03939 CR-GGN-2013-03863 CR-GGN-2013-03673 CR-GGN-2013-02201 CR-GGN-2013-03034 CR-GGN-2013-04116

CR-GGN-2014-01649 CR-GGN-2014-02260 CR-GGN-2014-03317 CR-GGN-2014-03527 CR-GGN-2014-03838 CR-GGN-2014-04147 CR-GGN-2014-04653 CR-GGN-2014-05200 CR-GGN-2013-03034 CR-GGN-2013-04856 CR-GGN-2013-05568 CR-GGN-2013-07117 CR-GGN-2013-07446 CR-GGN-2014-00622 CR-GGN-2014-01176 CR-GGN-2014-05596 CR-GGN-2013-05611 CR-GGN-2013-06504 CR-GGN-2013-07117 CR-GGN-2013-07372 CR-GGN-2013-07426 CR-GGN-2013-07446 CR-GGN-2014-00051 CR-GGN-2013-05392 CR-GGN-2013-05568 CR-GGN-2013-05611 CR-GGN-2013-06504 CR-GGN-2013-07117 CR-GGN-2013-07372 CR-GGN-2013-07426 CR-GGN-2013-07446 CR-GGN-2014-00051

CR-GGN-2014-01744 CR-GGN-2014-02523 CR-GGN-2014-03402 CR-GGN-2014-03714 CR-GGN-2014-03949 CR-GGN-2014-04256 CR-GGN-2014-04960 CR-GGN-2014-05215 CR-GGN-2013-04116 CR-GGN-2013-04907 CR-GGN-2013-05611 CR-GGN-2013-07372 CR-GGN-2014-00051 CR-GGN-2014-00805 CR-GGN-2014-04147 CR-GGN-2014-00216 CR-GGN-2014-00622 CR-GGN-2014-00805 CR-GGN-2014-00812 CR-GGN-2014-01176 CR-GGN-2014-04147 CR-GGN-2014-04960 CR-GGN-2014-05596 CR-GGN-2014-00622 CR-GGN-2014-00805 CR-GGN-2014-00812 CR-GGN-2014-01176 CR-GGN-2014-04147 CR-GGN-2014-04960 CR-GGN-2014-05596 CR-GGN-2014-00623 CR-GGN-2014-01649

CR-GGN-2013-04270	CR-GGN-2014-00216	CR-GGN-2014-02993
CR-GGN-2013-04856	CR-GGN-2013-05392	CR-GGN-2014-00622
CR-GGN-2013-04907	CR-GGN-2013-05568	CR-GGN-2014-00805

# Section 1R13: Maintenance Risk Assessments and Emergent Work Control

# Procedures

<u>Number</u>	Title	<u>Revision</u> <u>Date</u>
EN-WM-101, Attachment 9.1	Online Emergent Work Add/Delete Approval Form	June 29, 2014
EN-WM-101, Attachment 9.1	Online Emergent Work Add/Delete Approval Form	June 16, 2014
EN-WM-101, Attachment 9.1	Online Emergent Work Add/Delete Approval Form	June 30, 2014
EN-WM-101, Attachment 9.1	Online Emergent Work Add/Delete Approval Form	August 2, 2014
EN-WM-101, Attachment 9.1	Online Emergent Work Add/Delete Approval Form	August 1, 2014
02-S-01-41, Attachment IV	Risk Activity Evaluation Checksheet, Work Order Task # 385434-04	11
02-S-01-41, Attachment IV	Risk Activity Evaluation Checksheet, Work Order Task # 387753	11
02-S-01-41, Attachment IV	Risk Activity Evaluation Checksheet, Work Order Task # 387656	11
01-S-18-6	Risk Assessment of Maintenance Activities	13
02-S-01-17	Control of Limiting Conditions for Operation	127
02-S-01-41	On Line Risk Assessment	11
EN-OP-119	Protected Equipment Postings	6
EN-WM-104	On Line Risk Assessment	9
05-1-02-VI-2	Off-Normal Event Procedure Hurricanes, Tornados, and Severe Weather	127
05-1-02-VI-2	Off-Normal Event Procedure Hurricanes, Tornados, and Severe Weather for August 9, 2014	127
05-1-02-VI-2	Off-Normal Event Procedure Hurricanes, Tornados, and Severe Weather for August 10, 2014	127

# Section 1R15: Operability Determinations and Functionality Assessments

# Procedures

<u>Number</u>	Title	Revision
06-OP-1E12-Q- 0024	LPCI/RHR Subsystem B Quarterly Functional Test	119
EN-OP-104	Operability Determination Process	7
06-OP-1E12-Q- 0023, Attachment I	LPCI/RHR Subsystem A Quarterly Functional Test, Model WO # 50287431	125
01-S-02-3	Reactor Vessel In Service Leak Test	121
03-1-01-6	Reactor Vessel In Service Leak test	115
06-ME-1M61-V- 0001	Local Leak Rate Test	104
07-S-74-E51-1	LLRT Valve Alignment for Reactor Core Isolation Cooling Penetrations	4
17-S-05-1	Performance and System Engineering Instruction Guideline for Local Leak Rate Test Program for the Appendix J Program	110
Drawings		
<u>Number</u>	Title	<b>Revision</b>
E-1109-020	4.16 KV ESF System Diesel Gen Breaker 152-1508 Unit 1	16
E-1109-021	4.16 KV ESF System Diesel Gen Breaker 152-1508 Unit 1	11
E-1109-024	4.16 KV ESF System Diesel Gen Breaker 152-1608 Unit 1	15
E-1109-025	4.16 KV ESF System Diesel Gen Breaker 152-1608 Unit 1	9
E-1110-012	P75 Standby Diesel Generator Sys Div I Train A Start & Stop Circuit	18
E-1110-013	P75 Standby Diesel Generator Sys Div I Train B Start Circuit	18
E-1110-014	Standby Diesel Generator Sys Div I Run Relay Circuits Unit I	12
E-1111-012	P75 Stand-by Diesel Generator Sys Div II Train A Start & Stop Circuit	13
E-1111-013		17
	P75 Standby Diesel Generator Sys Div II Train B Start Circuit	17
E-1111-014	<ul><li>P75 Standby Diesel Generator Sys Div II Train B Start Circuit</li><li>P75 Standby Diesel Generator Sys Div II Run Relay Circuits Unit I</li></ul>	11

<u>Title</u>			<b>Revision</b>	
Control Pane	I Schematic		16	
<u>Title</u>			<u>Revision</u> <u>Date</u>	
System Des	ign-Standby Diesel Genera	ator System (P75)	1	
Seismic Qualification Requirements for Class 1E Control			June 10, 1976	
<u>s (CRs)</u>				
CR-GGN-2014-05048 CR-GGN-2014-04911			05470	
5481	CR-GGN-2014-05485	CR-GGN-2014-	CR-GGN-2014-05407	
5029	CR-GGN-2014-06093	CR-GGN-2013-	07556	
)712	CR-GGN-2014-06162			
Work Orders (WOs)           WO 52552243 01         WO 00160319         WO 001				
lant Modifica	tions			
<u>Title</u>			<u>Revision</u>	
Idle Recircul Operation	ation Loop Startup, One Re	ecirc Loop in	104	
Reactor Ves	sel Thermal Shock Protecti	ion	14	
Temporary M	lodifications		10	
	Title Control Pane <u>Title</u> System Des Seismic Qua Panel Assen (CRs) 6048 6481 6029 0712 50 1012 50 1012 50 1012 50 1012 712 75 1014 1016 Reactor Vess Temporary M	Title   Control Panel Schematic     Title   System Design-Standby Diesel General   Seismic Qualification Requirements for Panel Assemblies   Seismic Qualification Requirements for Panel Assemblies   Sold8 CR-GGN-2014-04911   6048 CR-GGN-2014-05485   6029 CR-GGN-2014-06093   712 CR-GGN-2014-06162   's) WO 00160319   Hant Modifications     Title   Idle Recirculation Loop Startup, One Re Operation   Reactor Vessel Thermal Shock Protect Temporary Modifications	Title   Control Panel Schematic     Title   System Design-Standby Diesel Generator System (P75)   Seismic Qualification Requirements for Class   Panel Assemblies   Sold8   CR-GGN-2014-04911   CR-GGN-2014-04911   CR-GGN-2014-05485   CR-GGN-2014-06093   CR-GGN-2014-06093   CR-GGN-2014-06162   Sold   WO 00160319   WO 00160319   WO 00160319   WO 00173923     Int Modification Loop Startup, One Recirc Loop in Operation   Reactor Vessel Thermal Shock Protection Temporary Wolifications	

# Other Documents

<u>Number</u>	Title	<b>Revision</b>
EC 38198	Bypass Recirc Pump "A" Thermal Shock Interlocks, Disable Annunciator 1B33L634A	

Condition Reports (CRs) CR-GGN-2010-04598

# Section 1R19: Post-Maintenance Testing

Procedures			
Number	Title	Rev	vision
06-OP-1000-W- 0001, Attachment 1	Weekly Operating Logs	108	3
Work Orders (WOs	)		
WO 52567171 01	WO 52566213 01	WO 52556074 01	
WO 00381716	WO 00381715 01	WO 00381717	
WO 52438040 01	WO 52565343 01	WO 00372001 01	
WO 00372001 02			
Section 1R22: Su	rveillance Testing		
Procedures			
Number	<u>Title</u>	Rev	vision
06-OP-1R21-M-000	02 Div 1 and 2 Load Shedding and S Test – Div 2	equencing Functional 101	1
Work Orders (WOs	)		
WO 52561427 01	WO 52567489 01	WO 52559232 01	
WO 52560165 01			

## Section 1EP6: Drill Evaluation

Other Documents		
<u>Number</u>	Title	<u>Revision</u> <u>Date</u>
	Grand Gulf Nuclear Station Emergency Drill Scenario	August 31, 2014
	Grand Gulf Emergency Drill Notification Forms	August 13, 2014
	Grand Gulf Nuclear Station Emergency Plan	71
	FSAR Emergency Action Levels	69

# Other Documents

Number	Title	<u>Revision</u> <u>Date</u>
	GGN 1 <sup>st</sup> Qtr 2014 Yellow Team EP Drills	January 27, 2014
	GGN 2 <sup>nd</sup> Qtr 2014 Drill- Blue Team- Revision 1	July 9, 2014

# Section 4OA2: Problem Identification and Resolution

# Procedures

<u>Number</u>	Title	<u>Revision</u>
02-S-01-17	Control of Limiting Conditions for Operation	127
EN-LI-102	Corrective Action Process	23
EN-WM-100	Work Request (WR) Generation, Screening and Classification	9
01-S-06-5	Reportable Events or Conditions	110
04-1-01-P11-2	Refueling Water Storage and Transfer System	62
EN-LI-108	Event Notification and Reporting	10
EN-RP-113	Response to Contaminated Spills / Leaks	8

## Other Documents

<u>Number</u>	Title	<b>Revision</b>
	Program Health Report: FP- Fire Protection Program	Q1-2014

# Condition Reports (CRs)

CR-GGN-2011-07312	CR-GGN-2012-08181	CR-GGN-2013-05387
CR-GGN-2011-08497	CR-GGN-2012-11321	CR-GGN-2013-05388
CR-GGN-2012-01621	CR-GGN-2012-12269	CR-GGN-2013-06514
CR-GGN-2012-02834	CR-GGN-2013-00602	CR-GGN-2013-06554
CR-GGN-2012-04535	CR-GGN-2013-02231	CR-GGN-2013-07862
CR-GGN-2012-05533	CR-GGN-2013-02233	CR-GGN-2014-00258
CR-GGN-2012-05664	CR-GGN-2013-02681	CR-GGN-2014-00438
CR-GGN-2012-06356	CR-GGN-2013-03043	CR-GGN-2014-01061
CR-GGN-2012-07070	CR-GGN-2013-03554	CR-GGN-2014-02288
CR-GGN-2012-07429	CR-GGN-2013-04395	CR-GGN-2014-03426

CR-GGN-2012-07984	CR-GGN-2013-04722	CR-GGN-2014-03666
CR-GGN-2014-00438	CR-GGN-2014-00154	CR-GGN-2014-00181
CR-GGN-2014-01061	CR-GGN-2013-03382	CR-GGN-2013-01451
CR-GGN-2013-06709	CR-GGN-2014-02598	CR-GGN-2014-02615
CR-GGN-2014-04952		

## Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion

## Procedures

<u>Number</u>	Title	Revision
EN-LI-118	Cause Evaluation Process	20
EN-DC-175	Single Point Failure Review Process	1
EN-LI-102	Corrective Action Process	12

## Other Documents

<u>Number</u>	<u>Title</u>			<u>Revision</u> Date
GNRO- 2014/000040	LER 2014-00 Protection S	03-00, Automatic Actuation of the steam of the steam due to Load Reject Rela	ne Reactor y Fault	May 28, 2014
Attachment 9.6 Root Cause Evaluation (RCE)	Unintended I Fault	Reactor SCRAM due to Load F	Reject Relay	0
Condition Reports CR-GGN-2008-4	<u>s (CRs)</u> 1962	CR-GGN-2008-0098	CR-GGN-2009-	-0102
CR-GGN-2014-3	8131			

Procurement Engineering Evaluation 00045462 00035106

Work Orders (WOs) WO 380345