

# Grand Gulf 1

## 3Q/2014 Plant Inspection Findings

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### Initiating Events

**Significance:**  Sep 30, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

#### **Failure to Implement Corrective Actions Leads to Automatic Plant Scram**

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.

Inspection Report# : [2014004](#) (*pdf*)

**Significance:**  Jun 20, 2014

Identified By: NRC

Item Type: FIN Finding

#### **Failure to Correct Degraded Viewing Ports in a Timely Manner**

The inspectors identified a Green finding resulting from the licensee's failure to follow Procedure EN-LI-102, "Corrective Action Process," Revision 23, and Procedure EN-OP-104, "Operability Determination Process," Revision 7, for an adverse condition. The licensee failed to repair degraded viewing ports on the isophase bus ducting in a timely manner. The licensee documented this issue in their corrective action program as Condition Report CR-GGN-2013-00319.

The failure to implement adequate corrective actions in a timely manner after the discovery and evaluation that the

viewing windows on the isophase bus duct had the potential to cause a reactor scram is a performance deficiency. The performance deficiency was more than minor because it was associated with the Initiating Events cornerstone attribute of Human Performance and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Using Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process (SDP) for Findings At Power," dated June 19, 2012, Exhibit 1, Section B, Transient Initiators, the inspectors determined that the issue has a very low safety significance (Green) because it only caused a reactor trip and did not cause a loss of mitigating equipment relied on to transition the plant from the onset of a trip to a stable shutdown condition. This finding has a cross-cutting aspect in the problem identification and resolution area, associated with operating experience, because the licensee failed to systematically and effectively collect, evaluate, and implement relevant internal and external operation experience in a timely manner [P.5].

Inspection Report# : [2014009](#) (*pdf*)

**Significance:**  Jun 20, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Correct A Significant Condition Adverse to Quality and Preclude Repetition**

The inspectors reviewed a self-revealing, Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "corrective Action," resulting from the licensee's failure to prevent the repetition of a break of the first stage turbine sensing line, which resulted in a reactor scram. The licensee documented this issue in their corrective action program as Condition Report CR-GGN-2014-02824.

The failure to implement adequate corrective actions from the previous first stage turbine pressure sensing line break to preclude repetition of a significant condition adverse to quality was the performance deficiency. The performance deficiency was more than minor because it was associated with the Initiating Events cornerstone attribute of Human Performance and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Using Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process (SDP) for Findings At Power," dated June 19, 2012, Exhibit 1, Section B, Transient Initiators, the inspectors determined that the issue required a detailed risk evaluation by the senior reactor analyst because the violation caused a reactor trip and the loss of mitigation equipment. The licensee performed an inadequate evaluation of the root cause of the 2012 steam sensing line break, resulting in inadequate corrective actions to prevent repetition. Therefore, this violation has a cross-cutting aspect in the problem identification and resolution performance area, associated with evaluation, because the licensee failed to thoroughly evaluate the issue to ensure that resolutions address causes and extent of conditions commensurate with their safety significance [P.2].

Inspection Report# : [2014009](#) (*pdf*)

## Mitigating Systems

**Significance:**  Sep 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Control Transient Combustible Material in Accordance with a Fire Protection Procedure**

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]. Inspection Report#: [2014004](#) (*pdf*)

**Significance:** G Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

**Failure to Promptly Reinstate an Essential-Critical Preventative Maintenance Task for a High-Critical Component**

The inspectors reviewed a self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly reinstate an essential-critical preventative maintenance task after they identified that it had been improperly retired. Specifically, the licensee did not reinstate and complete Preventive Maintenance Task PMRQ 50024451-04 prior to the failure of diode CR6 on May 21, 2013, which resulted in the division 2 diesel generator failing its monthly functional test and the licensee declaring it inoperable. The operators secured the diesel generator and wrote Condition Report CR-GGN-2013-03423 documenting the issue. The licensee performed a

Failure Modes Analysis evaluation to determine the possible cause for the observed conditions. During troubleshooting efforts, the licensee addressed the potential transformer (PT1), the potential transformer's fuses, inline fuses, and the voltage regulator circuit bridge diodes. The Failure Modes Analysis evaluation showed that all of the listed components were in satisfactory condition, except that one of the six diodes used in the voltage regulator circuit diode bridge, Diode CR6, had shorted. The licensee replaced the shorted diode and returned the diesel generator to operational status on May 24, 2013.

The licensee's failure to implement PMRQ 50024451-04 after discovering it had been improperly retired was a performance deficiency, in that it represented a failure to promptly correct a condition adverse to quality. The performance deficiency is more than minor and therefore a finding because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to prevent undesirable consequences. Specifically, Diode CR6 remained in the voltage regulator circuit bridge until it failed, thereby triggering a failure of the division 2 diesel generator, which caused the diesel generator to be inoperable. 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. In accordance with NRC Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings at Power," dated June 19, 2012, the

inspectors determined that the issue required a detailed risk evaluation because the finding represents an actual loss of function of a single train for greater than its Technical Specification allowed outage time. The total exposure period was 15 days. The allowed outage time was 14 days. The senior reactor analyst performed a detailed risk analysis and determined the delta-CDF was less than  $1.0 \times 10^{-6}$  and the delta-LERF was less than  $1.0 \times 10^{-7}$ , therefore this finding was of very low safety significance (Green). The apparent cause of this finding was that the licensee did not recognize the risk of not performing the preventive maintenance task, which led to the decision to exclude the task from the division 2 allowed outage time schedule. Therefore, the finding has a cross-cutting aspect in the human performance area associated with conservative bias because the licensee did not use decision-making practices that emphasize prudent choices over those that are simply allowable.  
Inspection Report# : [2014003](#) (pdf)

**Significance:**  May 02, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Provide Adequate Emergency Lighting**

The team identified a Green non-cited violation of License Condition 2.C.(41), “Fire Protection Program,” for the failure to provide adequate 8-hour emergency lights. Specifically, the licensee failed to provide adequate lighting at all locations operators perform actions within 8 hours during an alternative shutdown outside of the control room. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2014-03508 and confirmed operators are required to carry flashlights.

The failure to provide adequate 8-hour emergency lights for safe shutdown outside of the control room was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences because it affected the ability to reach and maintain safe shutdown conditions in case of a fire. The team evaluated this finding using Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” dated September 20, 2013. The team assigned the finding a low degradation rating because the failure to provide adequate 8-hour emergency lights at all locations would not prevent reaching and maintaining safe shutdown conditions in the event of a control room fire. Specifically, the team determined that operators performing the alternative shutdown are required to carry flashlights. Because this finding had a low degradation rating, it screened as having very low safety significance (Green).

The team reviewed Inspection Manual Chapter 0310 and assigned a cross-cutting aspect in the area of Human Performance for failure to ensure equipment was available and adequate to support nuclear safety. Specifically, the Licensee added steps to operate breakers in an electrical panel in 2005 and 2012. On both occasions the Licensee failed to provide adequate emergency lighting at that location as required by the fire protection program [H.1].

Inspection Report# : [2014007](#) (pdf)

**Significance:**  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Ensure Scaffold Activity Would not Interfere with Fire Brigade Response**

The inspectors identified a non-cited violation of License Condition 2.C(41), “Fire Protection Program,” for the failure to adhere to procedural requirements to ensure that scaffold installed in the plant would not prevent or restrict the fire brigade from accessing a certain route used for response to a fire in the area. On February 4, 2014, the licensee installed a scaffold in the containment building for an inspection. The licensee’s procedure required a walkdown of proposed scaffold to determine if the scaffold would prevent or restrict fire brigade access. The initial reviewer identified that the ladder to access the scaffold would restrict fire brigade access, thus the ladder was not installed until it was required. On March 1, 2014, the ladder was installed for the four hour inspection. Once completed, the licensee

failed to remove the scaffold ladder to restore normal access to the area. On March 4, 2014, the inspectors identified that the scaffold ladder was still installed. The inspectors brought their concern to the licensee, who determined that the scaffold would adversely affect the response of fire brigade members to that area of containment. As an immediate corrective action, the licensee removed the scaffold ladder to allow adequate access for the fire brigade members. The licensee documented this issue in Condition Report CR-GGN-2014-02363.

The failure to ensure fire brigade members had adequate access passed a scaffold installed in the containment building was a performance deficiency. The performance deficiency was more than minor and therefore a finding because it adversely impacted the protection against external factors attribute of the Mitigating System Cornerstone in that the fire brigade's inability to gain access to certain areas in containment could result in preventing prompt extinguishing of fires. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, the inspectors determined that the issue affected the Mitigating Systems Cornerstone and that the finding pertained to a degraded condition while the plant was shutdown for refueling outage RF19. As a result, the inspectors were directed to Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated February 28, 2005. The inspectors determined that Appendix G did not address fire brigade issues and solicited input from the senior reactor analyst. The senior reactor analyst performed a detailed risk evaluation and determined that Inspection Manual 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," June 19, 2012, Exhibit 2, "Mitigating System Screening Questions," adequately bounded the performance deficiency. The inspectors determined that the finding involved the response time of the fire brigade to a fire, and the finding was of very low safety consequence (Green) because the fire brigade's response time was mitigated by other defense-in-depth elements such as area combustible limits were not exceeded, installed fire detection systems were functional, and alternate means of safe shutdown were not impacted. Specifically, there were no combustibles in the area beyond limits, all fire detectors for the area were functional, and the plant was in a shutdown condition with the cavity flooded at the time. The apparent cause of this finding was the work groups involved did not communicate the significance of the impact the scaffold ladder had on fire brigade access to the area and the importance of having the ladder removed upon completion of the work. Therefore, the finding has a cross-cutting aspect in the human performance area associated with team work, in that the individuals and workgroups failed to communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained.

Inspection Report# : [2014002](#) (*pdf*)

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## Barrier Integrity

**Significance:**  Dec 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Comply with Technical Specification 3.4.11**

The inspectors identified a non-cited violation of Technical Specification 3.4.11 for the failure to comply with the Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR) during plant cold startups. Specifically, the PTLR had a lower limit of zero psig, and the licensee operated the reactor pressure vessel (RPV) below zero psig during the plant start-up that commenced on November 2, 2013. A review of plant data showed that the RPV pressure was maintained below zero psig for approximately 2 hours. The licensee performed an engineering evaluation and determined that the maximum compressive stress experienced by the RPV did not exceed the maximum yield strength of RPV. Immediate corrective action included revising Procedure 03-1-01-1, "Cold Shutdown to Generator Carrying Minimum Load," to ensure the RPV is pressurized prior to opening the main steam isolation valves (MSIVs) and providing training on the procedural changes to all the operating crews. The licensee entered this issue into the corrective action process under Condition Report CR-GGN-2013-07021.

The failure to comply with the RCS Pressure and Temperature Limits Report specified in Technical Specification 3.4.11 was a performance deficiency. The performance deficiency was determined to be more than minor, and therefore a finding, because it was associated with the human performance attribute of the Barrier Integrity Cornerstone and had the potential to adversely affect the associated cornerstone objective of providing reasonable assurance that a physical design barrier (reactor coolant system) protects the public from radionuclide release caused by accidents or events. Specifically, without NRC review and approval of revised pressure and temperature limits that include operating the RPV below zero psig, the inspectors did not have reasonable assurance the RPV would not be adversely affected. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, the inspectors determined that the issue affected the Barrier Integrity Cornerstone. Using NRC Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," June 19, 2012, Exhibit 3, the inspectors determined that since this finding involved the reactor coolant system boundary, a detailed risk evaluation was required. The Senior Reactor Analyst reviewed the finding and determined that a detailed risk evaluation was not required. The licensee performed an engineering evaluation and concluded that there was no impact to the reactor vessel. As a result, the Senior Reactor Analyst concluded that there was no change in risk due to the performance deficiency. The inspectors determined that since the procedural steps to perform Attachments VIII and X concurrently had been in place since 1994, this was a latent issue; therefore no cross-cutting aspect was assigned.

Inspection Report# : [2013005](#) (*pdf*)

**Significance:**  Dec 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Provide Adequate Procedures Results in Loss of Safety Function**

The inspectors reviewed a self-revealing, non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to provide an adequate procedure for a safety related activity. On December 17, 2013, while performing Surveillance Procedure 06-IC-1E31-Q-1016-02, "RCIC Steam Supply Pressure Low Functional Test," Revision 111, the reactor core isolation cooling (RCIC) system became inoperable due to the procedure being incorrectly revised. Furthermore, the procedure error resulted in the containment isolation capability for RCIC being lost for approximately 1 hour. As an immediate corrective action, the licensee restored the breakers regaining isolation capability, and reopened the RCIC inboard isolation valve, thus restoring RCIC to operable status. The licensee entered this issue into the corrective action process under Condition Reports CR-GGN-2013-07720, CR-GGN-2013-07733, and CR-GGN-2013-07374.

The failure to have an adequate procedure for the reactor core isolation cooling steam supply pressure low functional test is a performance deficiency. The performance deficiency was more than minor and therefore a finding because it was associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This performance deficiency was also associated with the procedural quality attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstones objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, the inspectors determined the issue affected the Barrier Integrity Cornerstone. The inspectors used Inspection Manual Chapter 0609, Appendix H, "Containment Integrity Significance Determination Process," May 6, 2004, and determined the finding was a type B finding at full power. Using Table 6.1, "Phase 1 Screening-Type B Findings at Power," the inspectors concluded that since this issue involved containment isolation valves in a BWR Mark III containment, a Phase 2 analysis was necessary. Using Table 6.2, "Phase 2 Risk Significance – Type B Findings at Full Power," the inspectors concluded that the risk significance was very low (Green) because the exposure time was less than 3 days. Furthermore, the inspectors determined that this issue affected the Mitigating System Cornerstone. Using NRC Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power", June 19, 2012, Exhibit 2, the inspectors determined that since the finding represented a loss of system and/or

function, a detailed risk evaluation was required. The inspectors utilized the Grand Gulf Standardized Plant Analysis Risk model to determine the change in core damage frequency (CDF) due to the loss of safety function. The inspectors assigned the RCIC system a failure probability of 1.00 for a conservative duration of 1 hour. The resulting change in CDF was 1.9E-9/year, thus the finding was of very low safety significance (Green). The Senior Risk Analyst reviewed the inspectors' evaluation and verified the conclusions to be correct. The apparent cause of this finding was that the licensee failed to effectively utilize human error prevention techniques. Therefore, the finding had a cross-cutting aspect in the area of human performance, work practices because the licensee did not perform adequate self and peer checking while performing an activity affecting quality [H.4(a)]

Inspection Report# : [2013005](#) (pdf)

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Mar 31, 2014

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Failure to Control a Locked High Radiation Area Due to Unsecured Highly Radioactive Materials Stored in the Pool**

The inspectors reviewed a self-revealing, non-cited violation of Technical Specification 5.7.3, resulting from the licensee's failure to control a high radiation area with radiation levels greater than 1000 millirem per hour. As immediate corrective actions, the licensee stopped the work activity, placed a senior radiation protection technician in control of the area, surveyed all affected areas, and properly posted and controlled the area. The licensee also checked qualifications of the involved individuals and conducted a root cause evaluation for the event. This event was documented in the licensee's corrective action program as Condition Reports CR-GGN-2014-02219, CR-GGN-2014-02221, and CR-GGN-2014-02224.

The failure to control a high radiation area with radiation levels greater than 1000 millirem per hour was a performance deficiency and a violation of Technical Specification 5.7.3. The performance deficiency was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of program and process (exposure control) and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation because it removed a barrier intended to prevent the worker from receiving unexpected dose. Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, the inspectors determined the violation has very low safety significance because: (1) it was not an as low as is reasonably achievable (ALARA) finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. This violation has a cross-cutting aspect in the human performance area, associated with procedure adherence, because the licensee failed to follow process, procedures, and work instructions when they did not inventory and ensure control of the dry tube plunger end as it was stored in the horizontal fuel transfer system pool within containment.

Inspection Report# : [2014002](#) (pdf)

**Significance:**  Dec 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Entry Into A High Radiation Area Without A Required Radiation Monitoring Device**

The inspectors reviewed a self-revealing, non-cited violation of Technical Specification 5.7.1, resulting from an individual entering a high radiation area without the required radiation monitoring device. This issue was entered into the licensee's corrective action program as Condition Report CR-GGN-2012-04112. As a corrective action, the radiation protection manager coached the individual on the need for proper dosimetry devices in high radiation areas. The entry into a high radiation area without all required radiation monitoring devices was a performance deficiency and was a violation of Technical Specification 5.7.1. The performance deficiency was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of program and process (exposure control) and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation because it removed a barrier intended to prevent the worker from receiving unexpected dose. Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, the inspectors determined the violation had very low safety significance because: (1) it was not an as low as is reasonably achievable (ALARA) finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. This violation had a cross-cutting aspect in the human performance area, associated with the work practices component, because the worker and crew members did not use human error prevention techniques, such as self and peer checking [H.4(a)].

Inspection Report# : [2013005](#) (pdf)

**Significance:**  Dec 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Failure To Survey Resulting in Personnel Entry To A High Radiation Area**

The inspectors reviewed a self-revealing, non-cited violation of 10 CFR 20.1501(a) for failure to survey, which resulted in a worker entering an unposted high radiation area. This issue was entered into the licensee's corrective action program as Condition Reports CR-GGN-2012-08436 and CR-GGN-2012-09225. As corrective actions, the licensee coached radiation protection personnel on exhibiting a questioning attitude, walked down all affected areas; verified correct postings were used, and surveyed for any other unanticipated dose rate alarms.

The failure to survey and determine radiation levels was a performance deficiency. The significance of the performance deficiency was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of program and process (exposure control) and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation because the failure exposed a pipefitter to higher than anticipated radiation dose rates. The inspectors used Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, to determine the significance of the violation. The violation had very low safety significance because: (1) it was not an as low as is reasonably achievable (ALARA) finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. This violation had a cross-cutting aspect in the human performance area, associated with the work control component, because licensee personnel failed to appropriately plan a work activity by not incorporating risk insights, job site conditions, including environmental conditions, which may impact human system interface and radiological safety, and the need for planned contingencies or compensatory actions, such as surveying and up-posting affected areas after a power ascension [H.3(a)].

Inspection Report# : [2013005](#) (pdf)

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## **Public Radiation Safety**

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## Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

**Significance:** N/A Dec 05, 2013

Identified By: NRC

Item Type: FIN Finding

### **Grand Gulf 2013 Biennial Problem Identification and Resolution Inspection Summary**

The team reviewed a sample of system health reports, self assessments, trending reports and metrics, and various other documents related to the corrective action program. Licensee identified problems were entered into the corrective action program at a low threshold. Problems were generally prioritized and evaluated commensurate with the safety significance of the problems and corrective actions were generally implemented in a timely manner. Corrective actions were generally implemented in a timely manner commensurate with their importance to safety and addressed the identified causes of problems.

The licensee appropriately evaluated industry operating experience for relevance to the facility and had entered applicable items in the corrective action program. The licensee used industry operating experience when performing root cause and apparent cause evaluations. The licensee performed effective quality assurance audits and self assessments, as demonstrated by self identification of poor corrective action program performance and identification of ineffective corrective actions.

Inspection Report# : [2013007](#) (*pdf*)

Last modified : November 26, 2014