Grand Gulf 1
3Q/2011 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Reactor Shutdown Procedure Causes Power and Level Oscillations
Green. The inspectors identified a green, noncited violation of 10 CFR 50 Appendix B, Criterion V, for an inadequate shutdown procedure resulting in power and level oscillations in the reactor. The revised procedure failed to require the plant to be placed in startup feedwater level control during low power operations. In addition, the operators performed shutdown training on the old procedure. The performance deficiency was self-revealing, however the inspectors added significant value by identifying inadequate condition report classification, causal evaluation, and corrective actions. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-05140.
The finding is more than minor because it was associated with the initiating events cornerstone attribute of procedure quality and affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Screening Worksheet, the inspectors determined that the finding impacted both the initiating events and mitigating systems cornerstones. The inspectors determined that the initiating event cornerstone best reflected the dominant risk of the finding. The finding was determined to be of very low safety significance (Green) because the transient initiator did not contribute to both the likelihood of a reactor trip and to the likelihood that mitigation equipment or functions would not be available. The cause of this finding has a crosscutting aspect in the area of human performance associated with decision-making, because station management failed to use conservative assumptions to demonstrate that the change to the shutdown operating procedure was safe prior to proceeding [H.1(b)]. (Section 4OA2)

Inspection Report# : 2010005 *(pdf)*

Mitigating Systems

Significance: G Sep 27, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Establish Preventative Maintenance for Components Used in Critical Applications
Green. The inspectors reviewed a self-revealing, noncited violation of Technical Specification 5.4.1.a for the licensee’s failure to follow a procedure that required them to evaluate components of critical systems in order to establish a preventive maintenance strategy, which resulted in unscheduled unavailability of safety-related systems and associated unscheduled entries into 72-hour shutdown Technical Specification action statements. The inspectors noted the following two examples dealing with failures of safety related equipment, which resulted in entering into shutdown limiting condition of operation. On June 2, 2011, Grand Gulf Nuclear Station experienced a failure of a relay in the standby service water B pump house ventilation system, which rendered the standby service water B system inoperable. The immediate corrective actions were to replace the relays and to restore the ventilation system. On June 22, 2011, the station experienced a failure of a motor contactor coil on breaker 52-154128, which caused the engineered safety feature electrical switchgear room cooler fan coil unit 1T46B003A not to run. The maintenance personnel determined the failure was due to a burnt motor contactor coil. The immediate corrective action was to replace the contactor coil and restore the room cooler. In both cases, the failed equipment was original plant equipment and preventive maintenance measures had not been established. The licensee entered these issues into the corrective action program as Condition Reports CR-GGN-2011-3730 and CR-GGN-2011-4313.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Inspectors performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it did not result in a loss of system safety function of a single train for more than its technical specification's allowed outage time. This issue is a latent issue associated with original plant equipment and is not indicative of current performance; therefore, no cross-cutting aspect was identified (Section 4OA2).
Inspection Report# : 2011004 *(pdf)*

Significance: G Aug 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Provide An Adequate Alternative Shutdown Procedure
• Green. The team identified a noncited violation of License Condition 2.C(41), "Fire Protection Program," for failing to ensure that the postfire safe shutdown procedure for fires requiring control room evacuation could be performed within the critical times required by the approved fire protection program. Specifically, two crews of operators simulating performance of Procedure 05-1-02-II-1, "Shutdown from the Remote Shutdown Panel," Revision 036, did not give priority to the required safe shutdown components which are protected against fire damage and did not complete the equipment alignments within the times required by the thermal-hydraulic analysis. The team confirmed at the end of each walkdown that the operators involved did not know what the credited shutdown equipment was for a postfire safe shutdown or the critical time limits to be met. The team also confirmed that the licensee had not performed timed walkdowns to validate that the procedure would complete the required actions for postfire safe shutdown within the times required by the thermal-hydraulic analysis. The licensee entered this into their corrective action program as CR GGN 2011 02721, implemented compensatory measures to focus the operators' priority on the required safe shutdown components and implemented a procedure revision.

The failure to provide an adequate procedure to implement the requirements of the approved fire protection program for a fire in the control room is a performance deficiency. The performance deficiency was more than minor because it was associated with the reactor safety mitigating systems cornerstone attribute for protection against external events (fire), and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Because the finding involved control room evacuation, a Phase 3 SDP risk assessment was performed by a senior reactor analyst. The scenario impacted operators being ready to emergency depressurize the reactor and reflood using a residual heat removal pump. Because a bounding change to core damage frequency was 4.13 x 10-7, and the finding was not significant with respect to large, early release frequency, this

finding is of very low safety significance (Green). The finding did not have a crosscutting aspect since the primary cause did not fit any crosscutting aspects. (Section 1R5.5.b.1)

Inspection Report# : 2011007 *(pdf)*

Significance: G Aug 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Assure Equipment Required For Postfire Safe Shutdown Was Protected Against Fire Damage
Green. The team identified a noncited violation of License Condition 2.C(41), "Fire Protection Program," for failing to assure that equipment relied upon for safe shutdown following a fire in the control room was protected against fire damage. Specifically, Procedure 05-1-02-II-1, "Shutdown from the Remote Shutdown Panel," Revision 036, relied on the automatic operation of and indications from the load shedding and sequencing system. The team identified that this system was not isolated from potential damage due to a fire in the control room and the procedure did not adequately address the potential that fire damage to the system could effect the postfire safe shutdown capability by spuriously starting or stopping electric loads. The licensee entered this into their corrective action program as CR GGN 2011 02721.

The failure to assure that equipment required to successfully implement the safe shutdown procedure for a fire in the control room was protected against fire damage is a performance deficiency. The performance deficiency was more than minor because it was associated with the reactor safety mitigating systems cornerstone attribute for protection against external events (fire), and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Since the finding involved control room evacuation, a Phase 3 SDP risk assessment was performed by a senior reactor analyst. Because a bounding change to core damage frequency was 1.97 x 10-8, and the finding was not significant with respect to large, early release frequency, this finding was determined to have very low safety significance (Green). The finding did not have a crosscutting aspect since it was not indicative of current performance, in that the licensee had established the current procedure more than three years prior to this finding. (Section 1R5.5.b.2)

Inspection Report# : 2011007 *(pdf)*

Significance: G Aug 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Timely Corrective Actions to Protect Safe Shutdown Equipment From Fire Damage
Green. The team identified a noncited violation of 10 CFR 50, Appendix B,
Criterion XVI, "Corrective Action," for failure to take timely corrective action to modify the control circuits for 33 motor operated valves that are relied upon during safe shutdown due to fire. Noncited violation NCV 05000416/2008006-04, "Failure to Ensure That Damage to Motor-Operated Valve Circuits Would Not Prevent Safe Shutdown," documented the licensee's inadequate review of Information Notice 92-18, "Potential for Loss of Remote Shutdown Capability During Control Room Fire." The licensee failed to develop modification packages such that motor operated valve control circuit modifications could be implemented during the fall 2010 refueling outage. As a result, 33 motor operated valves associated with safe shutdown equipment continue to remain susceptible to potential damage during spurious operation due to circuit hot shorts. The licensee has maintained a fire watch as a compensatory measure. The licensee entered this into their corrective action program as CR GGN 2011 02779.

The failure to take timely corrective actions to address the potential for fire induced hot shorts to impact the ability to safely shutdown the plant following a fire is a performance deficiency. The performance deficiency was more than minor because it was associated with the reactor safety mitigating systems cornerstone attribute for protection against external events (fire), and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Since the finding involved control room evacuation, a Phase 3 SDP risk assessment was performed by a senior reactor analyst. Because a bounding change to core damage frequency was 9.58 x 10-7, and the finding was not significant with respect to large, early release frequency, this finding was determined to have very low safety significance (Green). The finding had a crosscutting aspect in the area of Human Performance associated with Decision Making, because the licensee failed to demonstrate that nuclear safety is an overriding priority. Specifically, the licensee did not promptly initiate control circuit reviews and implement modifications required for corrective actions after the licensee's inadequate evaluation of Information Notice 92-18 was identified in the 2008 violation. [H.1(a)] (Section 1R5.6)

Inspection Report# : 2011007 *(pdf)*

Significance: G Aug 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Corrective Actions To Assure Postfire Safe Shutdown
Green. The team identified a noncited violation of 10 CFR 50, Appendix B,
Criterion XVI, for inadequate corrective actions to address the potential for fire induced hot shorts to impact the ability to trip a control rod group as described in Information Notice 2007-07. The licensee's evaluation of Information Notice 2007-07 stated in part, "provisions have been included in 05-1-02-II-1, 'Shutdown from the Remote Shutdown Panel,' to trip the proper reactor protective system breakers to ensure that the reactor scram occurs." The team noted that Procedure 05-1-02-II-1 contained a conditional statement for the operator to determine if opening the reactor protective system breakers is required. The procedure did not provide assurance that all control

rod groups insert since the control room indications to be utilized by the operator were not identified and confirmed to be reliable during fires requiring control room evacuation. The licensee entered this finding into its corrective action program under CR-GGN-2011-02780, implemented compensatory measures to ensure the operators de-energized the reactor protection system, and implemented a procedure change.

The failure to take adequate corrective actions to address the potential for fire induced hot shorts to impact the ability to safely shutdown the plant following a fire is a performance deficiency. The performance deficiency was more than minor because it was associated with the reactor safety mitigating systems cornerstone attribute for protection against external events (fire), and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Since the finding involved control room evacuation, a Phase 3 SDP risk assessment was performed by a senior reactor analyst. Because a bounding change to core damage frequency was 9.58 x 10-7, and the finding was not significant with respect to large, early release frequency, this finding was determined to have very low safety significance (Green). The finding did not have a crosscutting aspect since it was not indicative of current performance. The licensee had incorrectly assessed the applicability of Information Notice 2007-07 more than three years prior to this finding. (Section 4OA2.b)

Inspection Report# : 2011007 *(pdf)*

Significance: G Jun 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform an Adequate Inspection of Probable Maximum Precipitation Door Seals Protecting Safety Related Equipment
Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for failure to perform an adequate inspection of probable maximum precipitation door seals protecting safety related equipment. Inspectors found the entrance door to the diesel generator building and the entrance door to the division 2 diesel generator in a degraded condition. The inspectors identified that the door seals did not make complete contact with the door frames all the way around as required by procedure. The licensee initiated compensatory actions for the degraded seals, staging sand bags in the area and requiring monitoring of the affected doors during heavy rainfall. This issue was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-02575.
The finding is more than minor because it is associated with the protection against external factors attribute of Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” the inspectors used the seismic, flooding, and severe weather Table 4b and determined it would affect multiple trains of safety equipment. The inspectors consulted the regional senior reactor analyst, who performed a Phase 3 analysis. The result was a delta-core damage frequency of 3.3E-7/yr and a delta-large early release frequency of 6.6E-8/yr. These results confirmed that the finding had very low safety significance (Green). The inspectors determined the apparent cause of this finding was that licensee personnel were not adequately trained to perform these inspections. Therefore this finding has a cross-cutting aspect in the area of human performance associated with resources in that the licensee’s training of personnel was not adequate in performing inspection of the probable maximum precipitation door seals [H.2(b)](Section 1R01).
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Scaffold Control Procedure
Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to adequately implement scaffolding control procedural requirements related to post-installation inspections and engineering safety evaluations for scaffolding constructed within 2 inches of safety-related or fire protection equipment. During plant walkdowns, inspectors identified multiple examples of the licensee not properly implementing Entergy’s corporate and site procedures for the control of scaffolding. The licensee’s immediate corrective actions included inspecting the scaffolding that had been installed, modifying or removing it where appropriate, and properly posting the scaffolds. This issue was entered into the licensee’s corrective

action program as Condition Reports CR-GGN-2011-03480, CR-GGN-2011-03601, CR-GGN-2011-03602, and CR-GGN-2011-03603.
The inspectors determined that this finding is more than minor because it is associated with the external factors and equipment performance attributes of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined the finding was of very low safety significance (Green), because it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.
The inspectors determined the apparent cause of this finding was lack of supervisor oversight during scaffold construction. Therefore the finding has a cross-cutting aspect in the area of human performance associated with work practices, in that the licensee did not provide effective supervisor oversight of workers constructing scaffolding to ensure these activities were performed per procedural requirements [H.4(c)](Section 1R04).
Inspection Report# : 2011003 *(pdf)*

Significance:  Jun 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Conditions Adverse to Fire Protection
Green. The inspectors identified a noncited violation of License Condition 2.C(41) for the failure to identify conditions adverse to the fire protection program. Specifically, during required inspections of the material condition of the sprinkler system, the licensee failed to identify several instances of bent or misaligned sprinkler head deflector plates and a painted sprinkler head. Corrective action included correcting bent or misaligned plates and replacing the painted sprinkler head. This issue was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-03132.
The finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the safety concern is that the number of bent or misaligned sprinkler heat canopies and painted sprinkler heads would not provide an adequate area-wide coverage of suppression. The inspectors evaluated the significance of this finding using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." The deficiency involved the Fixed Fire Protection Systems category. Using Appendix F,

Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," the inspectors determined that the deficiency had low degradation since less than 10 percent of the heads in the affected fire area were nonfunctional, a functional head remained within 10 feet of the combustibles of concern, and the system remained nominally code compliant. This finding screened as having very low safety significance (Green) in Phase 1of Manual Chapter 0609, Appendix F. This finding has a cross-cutting aspect in the area of human performance associated with resources because the procedure used to inspect the condition of these sprinklers did not contain specific criteria for identifying unacceptable sprinkler conditions [H.2(c)](Section 1R05).
Inspection Report# : 2011003 *(pdf)*

Significance:  Jun 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure that Safety Related Manholes were Properly Sealed to Prevent the Entry of Flammable Liquid
Green. The inspectors identified a noncited violation of Facility Operating License Condition 2.C(41), involving the failure to ensure that manholes MH01, MH20 and MH21 were properly sealed to prevent the entry of flammable liquid. During the performance of the manhole/vault inspection, the inspectors were reviewing engineering change packages associated with solar sump pumps for MH20 and MH21. During their review, they determined that the licensee was not meeting the requirements of their license bases documents for MH20 and MH21, which contain safe shutdown cables for standby service water trains A and B. The licensee’s immediate corrective action included placing hazmat barricades around each manhole to prevent flammable fluids from entering the manholes. This issue was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-00562.

This finding was more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” Table 3b, Item 1 directs the inspectors to Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” However, an NRC senior reactor analyst determined that the unique nature of this performance deficiency did not lend itself to analysis by the methods provided in Appendix F. Therefore, a Phase 3 analysis was performed. Based on a bounding analysis, the analyst determined that the change in core damage frequency was approximately 1.5E-7/yr. The result was low because of the relatively short periods of time that fuel was actually being transferred, the low probability of transfer system failures, and the low likelihood that a loss of normal service water initiator would occur following a fire in the subject manholes. This noncited violation was therefore determined to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of problem identification and resolution associated with corrective actions because licensee personnel failed to initiate a condition report when the issue was identified during the development of their engineering change package, which resulted in the failure to ensure the safety related manholes were sealed in accordance with their license based documents [P.1(a)](Section 1R06).
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 27, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Provide Adequate Procedures for High Pressure Core Spray Minimum Flow Valve Surveillance Testing
Green. The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a for the licensee’s failure to provide adequate testing procedures, which resulted in the high pressure core spray minimum flow valve inadvertently stroking approximately 11 times during a surveillance test. The excessive stroking of the valve resulted in the unplanned inoperability of the high pressure core spray system because the valve’s feeder breaker overcurrent instantaneous trip setpoint had drifted below the manufacturer’s tolerance for the existing setting. As immediate corrective action, the licensee replaced the degraded breaker. This finding was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-01901.
The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined that the finding was of very low safety significance (Green) because it did not result in a loss of system safety function since the high pressure core spray system would still have been functional even with the minimum flow valve potentially failing open. Additionally, it did not represent a loss of a system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.
This finding had a cross-cutting aspect in the area of problem identification and resolution associated with operating experience in that licensee had not incorporated operating experience from a similar event that had occurred at another Entergy site [P.2(b)](Section 1R12).
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 27, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Loose Fuse Clips in Division 3 Emergency Diesel Generator
Green. The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the licensee's failure to take adequate corrective actions for a significant condition adverse to quality associated with the division 3 emergency diesel generator. While performing a maintenance effectiveness review of the diesel generators, the inspectors noted on October 17, 2009, at 9:07 p.m., the FU-7 fuse for the division 3 diesel generator was determined to have a faulty fuse clip, resulting in the inoperability of the diesel generator due to loss of power to the direct current powered fuel pumps. Then on March 18, 2011, the division 3 emergency diesel generator was again rendered inoperable due to a faulty fuse clip on the FU-8 fuse holder, which is of the same design and function as the FU-7 fuse holder in the previous occurrence. Short term corrective action included replacing the fuse holder. This finding was entered into the licensee’s corrective action program as Condition Report CR-GGN-

2011-01868.
The finding is more than minor because it is associated with equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.
The finding had a cross-cutting aspect in the area of human performance associated with resources because the training provided to correct the initial event was not adequate to ensure proper fuse installation and verify good connection existed between the fuse and fuse holder [H.2(b)](Section 1R12).
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assure Configuration Control of Safety Related Systems
Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the failure to review the suitability of leaving test fittings on reactor coolant system flow transmitter equalizing block drain ports instead of the design specified manifold plugs. As corrective action, the licensee replaced the test fittings with the correct drain plugs. This finding was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-04485.
This finding is more than minor because it is associated with the design control attribute of the Mitigating System Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined that the finding was of very low safety significance (Green) because it was a design or qualification deficiency confirmed not to result in loss of operability of functionality, did not represent a loss of a system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.
The inspectors determined that the finding had a cross-cutting aspect in the area of human performance, associated with work practices, because the licensee failed to ensure that human error prevention techniques, such as holding pre-job briefings, self- and peer-checking, and proper documentation of activities were utilized such that work activities were performed safely and personnel did not proceed in the face of uncertainty or unexpected circumstances Specifically, the licensee failed to review the suitability of installing test and brass fittings on pressure, differential pressure and flow transmitter block valve drain ports instead of the design specified manifold plugs. [H.4(a)](Section 1R12).
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 27, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow a Procedure Resulting in the Inoperability of the Reactor Core Isolation Cooling System Primary Containment Isolation Valve
Green. The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a, for failure to follow a procedure resulting in the inoperability of the reactor core isolation cooling system primary containment isolation valve. This occurred while the licensee was performing surveillance on the reactor core isolation cooling system and incorrectly attached a jumper to the wrong terminal point resulting in blowing a fuse that caused a loss of control power to the reactor core isolation cooling primary containment isolation valve 1E51-F031. As immediate corrective action, the licensee removed the jumper and replaced the control power fuse. The finding was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-01932.
The finding is more than minor since it is associated with the human performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of a

system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. In addition, this finding had a human performance cross-cutting aspect associated with work practices in that the licensee did not use the proper human performance techniques of self-checking to prevent the loss of control power to a primary containment isolation valve [H.4(a)](Section 1R22).
Inspection Report# : 2011003 *(pdf)*

Significance: SL-IV Mar 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Update Available Low Pressure Coolant Injection Loops in the Updated Final Safety Analysis Report
SLIV. Inspectors identified a noncited violation of 10 CFR 50.71(e)(4), which requires the final safety analysis report be updated, at intervals not exceeding 24 months, to reflect changes made in the facility or procedures described in the final safety analysis report. Licensee personnel failed to update the original revision of the final safety analysis report to reflect the actual number of low pressure coolant injection loops available for automatic initiation during shutdown cooling operations in Mode 3. The licensee plans to update the final safety analysis report at the next scheduled revision. This finding was entered into the licensee's corrective action program as condition report CR-GGN-2011-01631.
The failure of licensing personnel to update the final safety analysis report to reflect the available low pressure coolant injection loops for automatic initiation during shutdown cooling operations in Mode 3 was a performance deficiency. This finding was evaluated using traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. The inspectors used the NRC Enforcement Policy, dated September 30, 2010, to evaluate the significance of this violation. Consistent with the NRC Enforcement Policy, this finding was determined to be a Severity Level IV noncited violation.
Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Demonstrate Maintenance Effectiveness of Train B Control Room Air Conditioner
Green. The inspectors identified a noncited violation of 10 CFR Part 50.65(a)(2) for the licensee's failure to demonstrate that the performance of the train B control room air conditioner was being effectively controlled through the performance of appropriate preventive maintenance. Engineering did not properly evaluate maintenance rule functional failures resulting in the system remaining in an a(2) status instead of an a(1) status. As corrective action, the train B control room air conditioner was moved into an a(1) status. The licensee entered this issue into their corrective action program as Condition Report
CR-GGN-2011-01623.
The finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Inspectors performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because the maintenance rule aspect of the finding did not cause an actual loss of safety function of the system nor did it cause a component to be inoperable. As corrective action, the train B control room air conditioner was moved into an (a)(1) status. This finding had a crosscutting aspect in the area of human performance associated with the decision making component because licensee personnel failed to make appropriate safety-significant or risk-significant decisions to address the multiple failures of the train B control room air conditioner compressor. [H.1(a)] (Section 1R12.b.2)
Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 27, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Prevent Recurrence of Control Room Air Conditioner Compressor Tripping Due to Low Oil Pressure

Green. The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, after the licensee failed to determine the cause and prevent recurrence of a significant condition adverse to quality associated with the train B control room air conditioner compressor tripping due to low oil pressure. Specifically, on December 13, 2010, the train B control room air conditioner compressor tripped on low oil pressure after the licensee had performed a root cause analysis to identify the cause and prevent recurrence of a similar compressor trip on October 14, 2010. As immediate corrective action, the licensee installed an inline suction filter. No additional failures have occurred since its installation. The finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2010-07315. This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, the inspectors determined that a Phase 2 analysis was required because the finding represented a loss of system safety function. The plant-specific risk informed notebook does not include the evaluation of risk caused by the loss of cooling to the main control room. Therefore, the senior reactor analyst conducted a Phase 3 analysis. Based on the bounding analysis, the analyst determined that the change in core damage frequency result was 5.9 x 10-7. This noncited violation was therefore determined to be of very low safety significance (Green). This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because licensee personnel failed to thoroughly evaluate the multiple failures of the train B control room air conditioner compressor. [P.1(c)] (Section 4OA3.1.b)
Inspection Report# : 2011002 *(pdf)*

Significance: G Dec 31, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Untimely Corrective Actions to Address the deficiencies in the RCIC Flow Control System
Green. The inspectors reviewed a self-revealing noncited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," was identified associated with the licensee's failure to take timely corrective actions to correct a condition adverse to quality associated with degradation of the Reactor Core Isolation Cooling (RCIC) flow control system. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-06850. This performance deficiency is more than minor because it is associated with the mitigating systems cornerstone attribute of equipment performance as it adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual 0609, "Significance Determination Process," Phase 1 Screening Worksheet, the inspectors determined that the finding affects the mitigating systems cornerstone because the deficiency degraded the short term heat removal capability of the RCIC system. The finding does not represent a loss of system safety function for RCIC, therefore it is determined to be of very low safety significance, or green. The cause of this finding has a crosscutting aspect in the area of human performance associated with resources because the licensee failed to properly prioritize the work order associated with correcting the degraded condition with the RCIC flow control system [H.2(a)]. (Section 1R22)

Inspection Report# : 2010005 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Operability Evaluation Following a Spurious Actuation of the Standby Service Water Pump House Ventilation Fan
Green. The inspectors identified a Green noncited violation of 10 CFR 50 Appendix B, Criterion V, involving a failure to follow procedures, which resulted in an inadequate operability evaluation. On December 5, 2010, a spurious actuation of the standby service water pump house ventilation system occurred, resulting in the pump house temperatures dropping below the design limit. The operability evaluation failed to consider the impact of the actual freezing conditions occurring at the site at that time, and operations did not secure the fan after the spurious actuation until questioned by the inspectors. The licensee entered this issue into their corrective action program as Condition Report CR GGN 2011 00151.

This performance deficiency is more than minor because it is associated with the mitigating systems cornerstone attribute of equipment performance as it adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, this finding was of very low safety significance since it did not result in a loss of operability, nor did it screen as potentially risk significant due to a seismic, flooding, or severe weather-initiating event. The cause of this finding had a crosscutting aspect in the area of problem identification and resolution associated with corrective actions because licensee personnel failed to thoroughly evaluate the impact of the spurious actuation of the standby service water pump house ventilation fan [P.1 (c)]. (Section 1R15)

Inspection Report# : 2010005 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Required Quality Control Inspections
Green. Inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion X, “Inspection,” for the failure to ensure that Quality Control verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee’s conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of Quality Control verification inspections. This issue was entered into the corrective action program under Condition Reports CR-HQN 2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the Design Control attribute of the Mitigating Systems cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the SDP, since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a cross-cutting aspect related to the human performance in decision-making (H.1a), because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether Quality Control verification inspections were appropriate. [H.1(a)] (Section 4OA2)

Inspection Report# : 2010005 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement the Experience and Qualification Requirements of the Quality Assurance Program
Green. Inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion II, “Quality Assurance Program,” for the failure to implement the experience and qualification requirements of the Quality Assurance Program. As a result, the licensee failed to ensure that an individual assigned to the position of Quality Assurance Manager met the qualification and experience requirements of ANSI/ANS 3.1-1978 as required by the Quality Assurance Program. Specifically, the individual assigned to be the responsible person for the licensee’s overall implementation of the Quality Assurance Program did not have at least 1 year of nuclear plant experience in the overall implementation of the Quality Assurance Program within the quality assurance organization prior to assuming those responsibilities. This issue was entered into the corrective action program as Condition Report CR-HQN-2010-00386.
Failure to ensure that an individual assigned to the position Quality Assurance Manager met the qualification and experience requirements of ANSI/ANS 3.1-1978 as required by the Quality Assurance Program was a performance

deficiency. This performance deficiency was determined to be more than minor because, if left uncorrected, it could create a more significant safety concern. Failure to have a fully qualified individual providing overall oversight to the Quality Assurance Program had the potential to affect all cornerstones, but this finding will be tracked under the Mitigating Systems cornerstone as the area most likely to be impacted. The issue was not suitable for quantitative assessment using existing Significance Determination Process guidance, so it was determined to be of very low safety significance using IMC 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria.” The inspectors determined that there was no cross-cutting aspect associated with this finding because this issue was not indicative of current performance because the violation occurred more than 3 years ago. (Section 4OA2)

Inspection Report# : 2010005 *(pdf)*

Barrier Integrity

Significance: G Sep 27, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Ensure Correct Fuses were Installed in the Hydrogen Igniter Control Circuits
Green. The inspectors reviewed a self-revealing, noncited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the failure to install the correct amperage fuses in the hydrogen igniter control circuit. On August 4, 2011, the inspectors were performing an operability review of a condition report dealing with the division 1 hydrogen igniters. The licensee had determined that half the division 1 hydrogen igniters would not energize, and in their investigation, they determined that the loss of power to the hydrogen igniters was due to a blown fuse. The licensee also determined that the blown fuse was 0.3 amps and should have been 0.8 amps per plant drawings. The licensee performed an operability determination for the “as found” condition and determined that the circuit required 0.193 amps to power the circuit, which included the light bulbs. The inspectors reviewed the operability determination and the calculations and determined that the licensee’s conclusions were reasonable. The licensee immediate corrective action was to replace the incorrect fuses one division at a time with the correct size 0.8 amp fuses and restore the hydrogen igniters to operable status. This issue was entered into the licensee’s corrective action program as Condition Report CR-GGN-2011-005388.
This finding is more than minor because it is associated with the design control attribute of the Barrier Integrity Cornerstone, and it adversely affected the cornerstone’s objective to ensure that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” inspectors determined that Appendix H, “Containment Integrity Significance Determination Process,” was required. Inspectors determined that this was a type B finding and, using section 6.0, determined that the finding was of very low safety significance (Green) because during their review, the inspectors noted that the hydrogen igniters had maintain functionality over the life of the plant based on satisfactory surveillance tests and no previous failures. Therefore, the exposed time for the de-energized hydrogen igniters was less than 3 days, resulting in very low safety significance. The Appendix H evaluation and the final risk significance determination were reviewed and concurred on by a regional senior reactor analyst. This issue is a latent issue associated with original plant equipment and is not indicative of current performance; therefore, no cross-cutting aspect was identified (Section 1R15).
Inspection Report# : 2011004 *(pdf)*

Significance: G Sep 27, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform Preventative Maintenance on the Fuel Handling Bridge Paddle Switch
Green. The inspectors reviewed a self-revealing, noncited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for inadequate preventative maintenance instructions, which resulted in the loss of control of the fuel handling bridge in the spent fuel pool. On July 15, 2011, while moving spent fuel from the spent fuel pool to the dry cask loading pool, the fuel handling platform did not stop when the paddle switch was released from the reverse position. The paddle switch did not return to the neutral position as designed, and the bridge continued to move in the reverse direction. The fuel handling bridge tripped the zone limit switches and came to a

stop. The licensee concluded that the switches had to be cleaned, adjusted, and re-greased periodically to ensure proper operation. Immediate corrective actions included replacing the paddle switch and revising the preventive maintenance instruction to clean and re-grease the paddle switch before every dry cask fuel campaign. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2011-04896.
The finding is more than minor because it is associated with the procedure quality attribute of the Barrier Integrity Cornerstone and adversely affected cornerstone's objective to ensure that physical design barriers (fuel cladding, reactor coolant system and containment) protect the public from radionuclide releases caused by accidents or events. Inspectors performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it did not result from fuel handling errors that caused damage to fuel clad integrity because the fuel handling bridge movement was arrested prior to coming in contact with the spent fuel pool wall. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the operational experience component because the licensee failed to evaluate the need to update the preventative maintenance procedure for known issues associated with the fuel handling bridge paddle switch prior to the implementation of the dry fuel storage campaign [P.2(b)] (Section 4OA2).
Inspection Report# : 2011004 *(pdf)*

Significance: G Mar 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Transient Combustible Stored in the Fire Exclusion Zone Near the Independent Spent Fuel Storage Installation
Green
. The inspectors identified a noncited violation of Facility Operating License Condition 2.C(41), involving the failure to ensure that transient combustible were not stored in the fire exclusion zone near the independent spent fuel storage installation. The inspectors performed a quarterly fire protection inspection of independent spent fuel storage installation and identified a large air conditioner with combustible material covering it located in the fire exclusion zone that was within 60 feet of the dry fuel storage pad. The inspectors determined through interviews that the material had been placed there the previous day by the maintenance department. As immediate corrective action the licensee removed the combustible material from the area. The finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-00455.
This finding was more than minor because it was associated human performance attribute of the Barrier Integrity Cornerstone to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," the inspectors determined that the finding impacted the fire prevention and administrative controls category. The inspectors assigned a low degradation rating due to the fact that the amount of combustible material in the area was minimal. The inspectors concluded that the finding was of very low safety significance (Green) due to the fact there were no fire ignition sources in the area. The cause of this finding has a crosscutting aspect in the area of human performance associated with the work practices component because the licensee failed to effectively communicate expectations regarding storage of combustible material near the dry fuel storage pad. [H.4(b)] (Section 1R05.1.b)

Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 27, 2011
Identified By: NRC
Item Type: FIN Finding
Inadequate Design Control for the Mitigation Monitoring System Modification
Green. The inspectors reviewed a self-revealing, Green finding of EN-DC-115, "Engineering Change Process," involving the failure to maintain adequate design control measures associated with the installation of the mitigation monitoring system. On November 8, 2010, a reactor coolant pressure boundary failure occurred at the skid mounted Online Noble Chemical - Mitigation Monitoring System pump inside primary containment. The positive displacement sample pump ejected the pump piston from the housing, resulting in an approximate
7 gpm leak of reactor coolant. The steam leak resulted in a reactor recirculation system flow control valve lockup (due to hydraulic power unit motor failure) and approximately 15,000 square feet of contaminated area in the primary containment structure. The licensee failed to ensure proper validation testing for the pump prior to installation.

Specifically, the licensee did not ensure that the pump could withstand the operating pressures and temperatures of the system in which it was installed. The licensee removed the mitigation monitoring system from service and isolated the skid from the reactor water cleanup system. This finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2010-07852.
The finding is more than minor because it affects the design control attribute of the Barrier Integrity Cornerstone to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Therefore, using inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet for LOCA initiators, the inspectors concluded that the finding was of very low safety significance (Green) because the failure of the mitigation monitoring system would not have exceeded technical specifications limits for identified leakage in the reactor coolant system. This finding has a crosscutting aspect in the work practices component of the human performance area; because the licensee failed to adequately oversee the design of the mitigation monitoring system such that nuclear safety is supported. [H.4(c)] (Section 4OA3.2.b)
Inspection Report# : 2011002 *(pdf)*

Emergency Preparedness

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: VIO Violation
Failure to Have Guidelines for the Choice of Protective Actions During an Emergency Consistent with Federal Guidance
Green. A cited violation of 10 CFR 50.47(b)(10) was identified for failure to develop and have in place guidelines for the choice of protective actions during an emergency that were consistent with federal guidance. Federal guidance for the choice of protective actions during an emergency is described in EPA-400-R-92-001 and states, in part, that evacuation is seldom justified when doses are less than protective action guides. The licensee's automatic process that extended existing protective action recommendations with changes in wind direction without considering radiation dose was identified as a performance deficiency.

This finding is more than minor because it affects the Emergency Preparedness Cornerstone objective of implementing adequate measures to protect the health and safety of the public during a radiological emergency, and is associated with the cornerstone attributes of emergency response organization performance and procedure quality. This finding was determined to be of very low safety significance because it was a failure to comply with NRC requirements, was associated with risk significant planning standard 10 CFR 50.47(b)(10), and was not a risk significant planning standard functional failure or a planning standard degraded function. The finding was not a functional failure or degraded planning standard function because appropriate protective action recommendations for the public would have been made for all areas where protective action guides were exceeded. This finding is a cited violation of 10 CFR 50.47(b)(10) because the licensee failed to restore compliance with NRC requirements in a timely manner. The finding is related to the corrective action element of the problem identification and resolution crosscutting aspect because the licensee failed to take corrective actions to address the safety issue in a timely manner [P1.d] (Section 1EP5)

Inspection Report# : 2010005 *(pdf)*

Occupational Radiation Safety

Significance: G Mar 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to use a qualified radiation protection technician to provide direct continuous coverage of work in a

locked high radiation area
Green. The inspectors identified a noncited violation of Technical Specification 5.7.2, resulting from the licensee's failure to use a qualified radiation protection technician to provide direct continuous coverage of work in a locked high radiation area. The finding was placed into the corrective action program as Condition Report CR-GGN-2011-01045, and corrective action was being evaluated.
The failure to use a qualified radiation protection technician to provide direct continuous coverage of work in a locked high radiation area is a performance deficiency. The finding was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, the failure to use qualified radiation protection technicians to provide job coverage in a high radiation area with dose rates in excess of 1000 mrem/hr had the potential to increase personnel dose. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. (Section 2RS01.b)

Inspection Report# : 2011002 *(pdf)*

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : January 04, 2012