

Grand Gulf 1

1Q/2006 Plant Inspection Findings

Initiating Events

G**Significance:** Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Risk Assessment

The inspectors identified two examples of a noncited violation of 10 CFR 50.65, "Maintenance Rule," for failing to include maintenance that could increase the likelihood of an initiating event in the plant risk assessment. On February 2, 2006 and again on March 28, 2006, the licensee's risk assessment did not include maintenance activities that increased the likelihood of a reactor scram. The licensee entered this into their corrective action program as Condition Reports CR-GGN-2006-1041 and CR-GGN-2006-1277.

This finding is more than minor since the maintenance that was performed increased the likelihood of an initiating event. Using Inspection Manual Chapter 0609 Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding is of very low safety significance since in both cases the change in incremental core damage probability and incremental large early release probability were less than 1E-6 and 1E-7, respectively. This finding has human performance crosscutting aspects because the inadequate risk assessments were due to personnel error.

Inspection Report# : [2006002\(pdf\)](#)**G****Significance:** Mar 31, 2006

Identified By: Self-Revealing

Item Type: FIN Finding

Plant Service Water Leak During Excavation

The inspectors reviewed a self-revealing finding for a failure to follow procedure that resulted in a significant plant service water header leak. The licensee failed to perform an adequate review of documents to identify potential hazards as required by Procedure EN-S-112, "Trenching, Excavation and Ground Penetrating Activities," Revision 2. The licensee entered this into their corrective action program as Condition Report CR-GGN-2006-0219.

This finding is more than minor since it was associated with the human performance attribute of the initiating events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance (Green) since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. The cause of this finding has human performance cross-cutting aspects associated with a failure to follow procedures.

Inspection Report# : [2006002\(pdf\)](#)**G****Significance:** Sep 30, 2005

Identified By: Self-Revealing

Item Type: FIN Finding

Inadvertent Plant Service Water Pump Trip

A Green self-revealing finding was identified for the inadvertent trip of a plant service water pump due to a failure to follow procedure. In addition, the procedure did not meet its stated purpose to verify the operation of a service water pump support system, specifically the well level indication system. The licensee entered this performance deficiency in their corrective action program for resolution.

This finding is more than minor since it affected the configuration control and human performance attributes of the initiating events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance (Green) since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. This finding also had crosscutting aspects associated with human performance.

Inspection Report# : [2005004\(pdf\)](#)**G****Significance:** Sep 30, 2005

Identified By: Self-Revealing

Item Type: FIN Finding

Improper Maintenance Results in Partial Loss of Component Cooling Water

A Green self-revealing finding was reviewed involving the failure of a newly installed corrosion monitor probe that resulted in a leak in the component cooling water system. Licensee personnel used an inadequate procedure to install the probe and therefore failed to verify the pressure retaining capability of the probe prior to installation. The licensee entered this performance deficiency in their corrective action program for resolution.

This finding is more than minor since it affected the design control attribute of the initiating events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance (Green) since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. The finding also had crosscutting aspects associated with human performance.

Inspection Report# : [2005004\(pdf\)](#)

Mitigating Systems

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Untimely Corrective Actions Associated with Condensate Storage Tank Level Instrumentation

The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI for the failure to take prompt corrective actions to address a design deficiency involving condensate storage tank level instrumentation. The licensee identified the design deficiency on April 30, 1999, and issued compensatory actions for the operators to manually transfer high pressure core spray and reactor core isolation cooling from the condensate storage tank to the suppression pool in the event of failure of the tank. The licensee corrected the design deficiency on December 8, 2005. The licensee entered this issue in their corrective action program as CR-GGN-2006-1096.

This finding is more than minor because it affected the design control attribute of the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events. The finding was of very low safety significance because it was a design deficiency that did not result in a loss of operability. This finding had cross-cutting aspects associated with problem identification and resolution in that station personnel did not implement corrective actions in a timely manner.

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Alternate Shutdown Cooling Mode Not Properly Implemented in Alternate Shutdown Procedure

A noncited violation of Grand Gulf License Condition 2.C(41), Fire Protection Program, was identified for failure to have an alternative shutdown procedure to restore power following a control room evacuation with loss of offsite power that was independent of the control room. Procedure 05-1-02-II-1, "Shutdown from the Remote Shutdown Panel," Revision 30, required operators to use System Operating Instruction 04-1-01-P75-1, "Standby Diesel Generator System," Revision 67, to locally start the Division 1 EDG in the event that offsite power was not available. However, this procedure included steps to shut the diesel generator output breaker from inside the control room, which would not be possible once the control room was evacuated. The licensee promptly corrected the procedure and entered this issue in their corrective action program under Condition Report 2005-01865. This issue had human performance cross-cutting aspects associated with an inadequate procedure.

This issue was more than minor because it affected the Mitigating Systems Cornerstone objective under the procedure quality and protection from external factors attributes. This issue was categorized as a Post-fire Safe Shutdown issue associated with response procedure quality. The degradation rating was determined to be Low because operator experience and familiarity with performing the required response actions were adequate to overcome the procedure deficiency. Therefore, this issue screened as having very low safety significance (Green) in Phase 1 of the Fire Protection Significance Determination Process (Manual Chapter 0609, Appendix F).

Inspection Report# : [2006002\(pdf\)](#)

Significance:  Oct 13, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Foreign Material in the Drywell

The inspectors identified a Green noncited violation (NCV) of TS 5.4.1(a) for the failure of licensee personnel to perform an adequate drywell closeout inspection for foreign material. On October 13, 2005, licensee personnel failed to follow Integrated Operating Instruction 3-1-01-1, "Cold Shutdown to Minimum Generator Load," Attachment II, steps 2, 16, 21, and 34 of the drywell closeout sheet. The inspectors conducted a general inspection of the drywell and discovered approximately 50 foreign material items totaling a volume of approximately one and a half cubic feet in the drywell floor area. This foreign material included plastic wrappings and tie-wraps, articles of protective clothing, loose paper, metal objects and other miscellaneous material. This issue was entered into the licensee's corrective action program as CR-GGN-2006-00236.

The finding is more than minor because it is associated with the mitigating systems cornerstone attribute of equipment performance and affects the associated 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, the finding is determined to have very low safety significance because there was no loss of safety function of the emergency core cooling system suction strainers. The cause of the finding is related to the crosscutting element of human performance in that licensee personnel did not follow the drywell closeout procedure.

Inspection Report# : [2005005\(pdf\)](#)

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Significance: Sep 30, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Disabling of Diesel Generator Alarms due to Failure to Follow Procedure

The inspectors reviewed a self-revealing Green noncited violation of Technical Specification 5.4.1 involving a failure to follow procedure that resulted in the disabling of required supervisory alarms on the Division II emergency diesel generator. Specifically, operators failed to reset the alarm panel following routine testing. The licensee entered this performance deficiency into their corrective action program.

This finding is more than minor since the disabling of required alarm functions for the emergency diesel generators could become a more significant safety concern if left uncorrected. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance (Green) since it did not result in an actual loss of the safety function. This finding also had crosscutting aspects associated with human performance.

Inspection Report# : [2005004\(pdf\)](#)

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Significance: May 12, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Alternative Shutdown Procedure Did Not Implement Safe Shutdown Analysis Assumption to Isolate Containment in a Timely Manner

A noncited violation of 10 CFR 50, Appendix R, Section III.L.3 was identified for an inadequate alternative shutdown procedure. The team identified that Procedure 05-1-02-II-1, "Shutdown from the Remote Shutdown Panel," Revision 30, was not consistent with the safe shutdown analysis with respect to main steam isolation. The procedure did not require shutting the main steam isolation valves in a timely manner to prevent an excessive loss of reactor coolant in the event of a control room evacuation due to fire. Operators might not recognize the loss of coolant due to the limited indications available on the remote shutdown panel. This could result in loss of the reactor coolant makeup and decay heat removal functions. The licensee promptly corrected the procedure and entered this issue in their corrective action program under Condition Report 2005-01865.

Failure to assure that an important safe shutdown analysis assumption was translated into the alternative shutdown procedure was a performance deficiency. This issue was more than minor because it affected the Mitigating Systems cornerstone attributes of protection from external factors (fire) and procedure quality. Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Appendix F states that it excludes findings associated with control room evacuation. Therefore, in accordance with Manual Chapter 0609, the safety significance of this issue was determined by regional management review. This review concluded this finding was of very low safety significance because a licensee evaluation determined that the inventory lost from the reactor and containment through open main steam isolation valves following a control room fire would not affect low pressure injection for more than 24 hours. Also, during the initial stages, the inventory loss would be beneficial compared to promptly shutting the main steam isolation valves, since the steam would be removing significant heat that would otherwise have been retained in containment and would have to be removed through the remaining engineered safety features train. Therefore, additional assistance would be available from the technical support center and repair teams to help identify the problem and direct closure of the main steam isolation valves.

Inspection Report# : [2005008\(pdf\)](#)

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Significance: May 12, 2005

Identified By: NRC

Item Type: FIN Finding

Inadequate Fire Drill Critique

A finding was identified for fire brigade performance deficiencies that were not identified by the licensee during the drill critique. The deficiencies identified by the inspection team but not noted by the licensee's critique included not using lense inserts, using a fire hose that did not reach the fire properly, not maintaining a two-person rescue team, and not considering requesting offsite assistance. The licensee identified a number of additional performance deficiencies, and determined that performance during the May 10, 2005, unannounced fire drill was unsatisfactory. In accordance with the licensee's program, the individuals involved required remediation and the drill must be re-performed within 30 days.

The licensee's incomplete assessment of fire brigade during the unannounced May 10, 2005, fire drill was a performance deficiency because the corrective action process would not have addressed the missed performance problems. This finding was more than minor because the Mitigating Systems cornerstone objective attribute to provide protection against external factors (fires) was affected. Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," states that it excludes findings associated with the onsite manual fire brigade. Therefore, in accordance with Manual Chapter 0609, the safety significance was determined by regional management review. This review concluded that this finding was of very low safety significance because it reflected a training drill, rather than fire brigade fire performance during an actual fire. The fire brigade performance aspect of this finding affects the cross-cutting area of human performance. The incomplete drill evaluation aspect of this finding affects the crosscutting area of problem identification and resolution. This issue was entered into the licensee's corrective action program under Condition Report 2005-01872.

Inspection Report# : [2005008\(pdf\)](#)

Significance:  May 12, 2005

Identified By: NRC

Item Type: FIN Finding

No Procedures for Implementing Two Repairs Needed to Achieve Cold Shutdown Following A CR Fire

A finding was identified for not properly identifying repairs needed to achieve and maintain cold shutdown following a control room fire and documenting them in analyses and procedures. The team identified two repairs which were necessary in order to be able to achieve cold shutdown according to the licensee's alternate shutdown methodology. An alternate air supply was needed to maintain safety relief valves open during prolonged implementation of alternate shutdown cooling, and temporary instrumentation was needed to monitor reactor temperature and cooldown rate in the same mode. This issue was entered into the licensee's corrective action program under Condition Report 2005-02369.

Failure to properly identify repairs needed to achieve and maintain cold shutdown following a control room fire and document them in analyses and procedures was a performance deficiency. This issue was more than minor because it affected the Mitigating Systems cornerstone attributes of protection from external factors (fire) and procedure quality. This finding was determined to have very low safety significance using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because it involved an issue that only affected cold shutdown.

Inspection Report# : [2005008\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Control a High Radiation Area with Dose Rates Greater than One Rem per Hour

The inspector reviewed a self-revealing non-cited violation of Technical Specification 5.7.3 involving the licensee's failure to control a high radiation area with dose rates greater than 1,000 millirem per hour. Specifically, on September 22, 2005, a radiation worker was performing a visual inspection of a low pressure coolant injection pipe penetration in the drywell. The worker climbed three feet above the floor elevation, at which time the worker's electronic dosimeter alarmed with peak dose rate of 582 millirem per hour. Radiation protection personnel performed a survey of the area and determined that dose rates were as high as 1,200 millirem per hour at one foot from the low pressure coolant injection pipe. This finding was entered into the licensee's corrective action program.

This finding is greater than minor because it is associated with the Occupational Radiation Safety Cornerstone attribute of program and process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation. The finding involves the potential for a worker's unplanned or unintended dose resulting from actions contrary to technical specifications. When processed through the Occupational Radiation Safety Significance Determination Process, the finding is of very low safety significance because it did not involve ALARA planning or work controls, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.

Inspection Report# : [2005004\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : May 25, 2006