

Three Mile Island 1

2Q/2007 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Mar 15, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Verification of Manual Capability for EFW Flow Control Valves

The team identified a finding of very low safety significance (Green) involving a non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control. Specifically, the licensee could not provide demonstrative evidence that design control measures had been established to verify the capability of an operator to manually operate the emergency feedwater control valves. This operator action is a credited licensing basis safety function implemented for certain postulated events involving the loss-of-instrument air and the depletion of the backup air bottle system. The action to take local manual control of the valves to maintain steam generator water level following a loss-of-instrument air is procedurally driven by the Emergency Operating Procedures, described in the Updated Final Safety Analysis Report and credited in the plant Probabilistic Risk Assessment. AmerGen entered this issue into the corrective action program for resolution. Following the completion of the onsite inspection, AmerGen successfully performed a test that demonstrated the capability of an operator to cycle the valves manually.

The finding is more than minor because it is associated with the design control attribute of the Mitigating System Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) since it did not result in a loss of system safety function.

Inspection Report# : [2007006](#) (*pdf*)

Significance:  Mar 15, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Control for EDG Loading

The team identified a finding of very low safety significance (Green) involving a non-cited violation of 10CFR50, Appendix B, Criterion III, Design Control. Specifically, AmerGen did not consider the effects of frequency variation on diesel generator loading. The EDG loading calculations of record failed to account for increased loading that would result from allowable frequency variations of up to 61 Hertz (Hz). The existing allowable EDG frequency range within operating and surveillance procedures had not been accounted for in the EDG loading analyses of record. AmerGen entered this issue into the corrective action program and plans to develop a diesel loading calculation revision, in addition to evaluating the existing frequency setting and testing range to ensure consistency between the analyses and procedures.

This design control weakness was considered to be more than minor because it is associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure via analyses the capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green), since it did not result in a loss of system safety function. The issue had a crosscutting performance aspect in the area of Problem Identification and Resolution. Specifically, a previous concern relative to EDG frequency tolerance in the low direction had been identified and evaluated in the corrective action program (Reference IR 551313), without identification or consideration for any impact due to allowable frequency tolerance and nominal setpoints above 60 Hz on EDG loading.

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inattentiveness to Duty by a Shift Manager

A self-revealing violation of Technical Specification 6.8.1 occurred on Sunday, December 11, 2005 at 3:45 AM when the on-duty Operations Shift Manager, a licensed senior reactor operator, was observed by three control room operators to be inattentive to duty in an office in the control room complex. An Office of Investigation (OI) investigation (1-2006-011) was initiated on December 19, 2005 to determine if any willful violations had occurred. The OI investigation concluded that the Shift Manager was inattentive; however, it was not considered an intentional act.

The inattentiveness of the on-duty Shift Manager is a performance deficiency. Traditional enforcement does not apply because the NRC determined that the Shift Manager's actions were neither intentional nor deliberate, the actions did not have the potential for impacting the NRC's ability to perform its regulatory function, and there were no actual safety consequences. The issue is considered more than minor because it affects the Human Performance attribute of the Mitigating Systems cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). There is currently no SDP that applies to FFD events. Therefore, this finding is not suitable for SDP evaluation. However it was reviewed by NRC management and is determined to be a finding of very low safety significance in accordance with IMC 0612, Section 05.04 (c).

Inspection Report# : [2006006](#) (*pdf*)

Significance:  Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow FFD Procedures

A self-revealing violation of 10 CFR Part 26, "Fitness For Duty Programs" occurred on Sunday, December 11, 2005 at 3:45 AM when three control room operators failed to follow station procedures and initiate actions to have an inattentive Operations Shift Manager relieved of duty and escorted while in the protected area until Fitness for Duty (FFD) testing could be completed. The control room operators also failed to promptly notify station management. Each of the control room operators had observed the Operations Shift Manager in an inattentive position in an office within the control room complex.

An OI investigation (1-2006-011) was initiated on December 19, 2005 to determine if any willful violations had occurred. The OI investigation concluded that the three licensed operators failed to follow the FFD procedure, but they did not do so in willful violation since they were unaware that operator inattentiveness was a FFD issue.

The failure of the licensed operators to implement the station FFD procedure requirements after observing an inattentive Shift Manager is a performance deficiency. These requirements were not completed or carried out in a timely manner. Traditional enforcement does not apply since it was determined that the actions of the operators were neither intentional nor deliberate, the actions did not have the potential for impacting the NRC's ability to perform its regulatory function, and did not have actual safety consequences. The issue is considered more than minor because it affects the Human Performance attribute of the Mitigating Systems cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). There is currently no SDP that applies to FFD events; therefore, the finding was not suitable for SDP evaluation. As a result, the finding was reviewed by NRC management and it was determined to be of very low risk significance in accordance with IMC 0612 section 05.04 (c). This finding has a cross-cutting aspect in the area of problem identification and resolution for operating experience because AmerGen failed to effectively evaluate and communicate relevant external operating experience in a timely manner to train TMI operators on fatigue related FFD issues.

Inspection Report# : [2006006](#) (*pdf*)

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Untimely Corrective Actions for Unreliable BWST Level Alarm Instrument.

The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI "Corrective Action" for untimely action to correct degraded performance of the borated water storage tank (BWST) low level alarm. Differential pressure instrument DH-DPIS-914 failed six of its last eight calibration tests. The most recent test failure, on July 11, 2006, found the BWST low level alarm instrument to be inoperable. Previous corrective actions were untimely and permitted the BWST low level alarm to remain unreliable for extended periods of time. Actions (i.e., instrument replacement or reduced surveillance interval) to restore instrument reliability were not implemented. Issue reports 523284 and 525514 were initiated to document and correct the problem.

This issue is more than minor because it affected the human performance attribute of the Mitigating Systems cornerstone. Specifically, the unreliable BWST low level alarm reduced the likelihood that operators would successfully perform the risk critical manual decay heat removal suction swap-over function. This, in turn, reduced the reliability of the low pressure recirculation, low pressure injection, and reactor building spray safety functions in response to a design basis loss of coolant accident. Additionally, the inspectors determined station personnel had not implemented the station-wide instrument performance trending program for over 4 years. This finding is of very low safety significance because it did not involve an actual loss of safety function. This finding has a cross-cutting aspect in the area of problem identification & resolution.

Inspection Report# : [2006005](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  Apr 20, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Critique and Identify a Performance Problem Associated with the Process of Event Classification.

A Green NRC-identified non-cited violation (NCV) of 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E, Section IV.F.2.g, was identified for failure of the licensee's exercise critique process to identify a weakness associated with a risk significant planning standard. The licensee's critique process failed to identify that the Shift Manager made the Unusual Event classification based on an incorrect classification criteria. The licensee entered the deficiency with the exercise into their corrective action program.

This finding is greater than minor because it is associated with the Emergency Response Organization Performance attribute and affected the objective of the Emergency Preparedness Cornerstone to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. In accordance with the Emergency Preparedness Significance Determination Process, this finding is of very low safety significance because it was a successful Performance Indicator opportunity and did not affect the outcome of protecting the health and safety of the public.

[The finding had a cross-cutting aspect in the area of problem identification and resolution, because the licensee did not ensure this issue which potentially impacted nuclear safety was promptly identified. The licensee did not implement a corrective action program with a low threshold for identifying issues. Specifically, station personnel did not recognize that the shift manager made the Unusual Event classification based on an incorrect classification criteria. Therefore, the EP drill critique did not identify and correct the event classification deficiency as required by 10 CFR 50, Appendix E, Section IV.F.2.g. Updated by NRC IR 05000289/2007003.]

Inspection Report# : [2007502](#) (*pdf*)

Occupational Radiation Safety

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 : August 24, 2007