

Three Mile Island 1

Initiating Events

G

Significance: Oct 25, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control of Transient Combustibles

AmerGen Energy Company failed to control transient combustibles in the relay room in accordance with the limits established in the Fire Hazard Analysis Report and Administrative Procedures 1035, "Control of Transient Combustible Materials." The failure to properly control transient combustible materials can result in an increase in the ignition frequency for a fire area. This finding was determined to be greater than minor significance based on the example provided in Section 4.k of NRC Manual Chapter 0612, Appendix E, "Power Reactor Inspection Reports."

Inspection Report# : [2002011\(pdf\)](#)

Mitigating Systems

G

Significance: Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Test Procedure Results in Inadvertent Emergency Diesel Generator Start and Increased Unavailability

A human performance related procedure error resulted in an unexpected start of the 'B' emergency diesel generator (EDG) during emergency safeguards actuation system (ESAS) surveillance testing. The procedure error occurred when an auxiliary operator manipulated keyed test switches on the 'A' EDG instead of the desired 'B' EDG. A self-revealing non-cited violation of technical specification 6.8, "Procedures and Programs," was identified. This finding is more than minor because the procedure error resulted in unplanned unavailability to the 'B' EDG, a mitigating system important to safety. The finding is of very low safety significance, because the redundant 'A' EDG was not affected, and the increased unavailability was less than the technical specification allowed outage time for a single EDG.

Inspection Report# : [2002007\(pdf\)](#)

G

Significance: Oct 12, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Assure a Leaking EDG Governor Oil Fitting was Promptly Evaluated and Repaired

Operators failed to promptly evaluate an oil leak on the 'A' emergency diesel generator (EDG) mechanical governor that was of sufficient magnitude to render the diesel inoperable. The delay in assessing the significance of the degraded condition resulted in the diesel being inoperable for over five hours with no compensatory actions in place. The safety significance of AmerGen's failure to promptly evaluate and correct an oil leak on the 'A' EDG that rendered the diesel inoperable was very low (Green), because the time period the diesel was inoperable was less than the technical specification allowed outage time for a single EDG and the redundant 'B' EDG was not affected. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," requires in part that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to this requirement, plant operators failed to assure that an oil leak that affected the operability of the 'A' EDG, was promptly identified and repaired.

Inspection Report# : [2002006\(pdf\)](#)

G

Significance: Mar 22, 2002

Identified By: NRC

Item Type: FIN Finding

Inadequate Operability Evaluation for the Service Water Traveling Screens

A finding of very low safety significance was identified in regard to an evaluation that did not fully identify the impact of inoperable differential pressure instruments used to control service water traveling screen operation. The inoperable instruments precluded the operation of the traveling screens in fast speed, which could have impacted the reliability of the screen river debris removal function. While no violation of NRC requirements was identified in regard to this non-safety related equipment, the screen operation supports safety related cooling systems

and affects the mitigating system cornerstone. The issue was of very low safety significance because the condition did not result in an actual loss of adequate debris removal function.

Inspection Report# : [2002003\(pdf\)](#)



Significance: Feb 19, 2002

Identified By: NRC

Item Type: FIN Finding

Failure to initiate prompt actions to identify an inoperable SSC

Operators failed to initiate prompt actions to identify an inoperable intake structure bar rake and to evaluate the affect on plant risk from this emergent equipment issue. The intake structure is a support system for several safety-related river water cooling systems. The error resulted in AmerGen not taking appropriate risk management actions in response to the failed rake. The safety significance of AmerGen's failure to promptly initiate actions to investigate the inoperable 'C' bar rake was very low (Green), because the 'C' traveling screen, and the bar rakes and traveling screens in the 'A' and 'B' intake channels remained operable.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Feb 19, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Adequate Corrective Actions for Monitoring Equipment Performance

AmerGen failed to take adequate corrective actions to address previous ventilation system heater failures and allowed the auxiliary building temperature to fall below the design basis limit. The failure challenged the operability of the containment purge isolation valve and the boric acid heat trace system located in the auxiliary building. This problem also occurred in November 2000. The safety significance of AmerGen's failure to maintain auxiliary building temperatures above the design basis limit was very low (Green), because maintenance personnel restored the temperature above the 60 F limit prior to the operability of risk significant structures, systems, or components being adversely affected. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to this requirement, AmerGen failed to identify auxiliary building temperature below the design limit in December 2001 and also failed to take adequate corrective actions in response to the November 2000 problem to assure that auxiliary building temperatures remained above the design basis limit at all times.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Feb 19, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Regulatory Requirements for Monitoring Equipment Performance

AmerGen failed to establish proper inservice test (IST) reference values and acceptance criteria for the 'B' decay heat removal river water pump (DR-P-1B) following a modification that replaced the pump internals with an improved design. The errors resulted in establishing non-conservative acceptance criteria that would have allowed significant pump degradation to occur before requiring corrective actions to be taken. The safety significance of this finding was very low (Green) because DR-P-1B remained within the correct acceptable performance range and there was no undetected, negative trend in pump performance. TMI technical specification 4.2.2 requires inservice testing of DR-P-1B to be conducted in accordance with the American Society of Mechanical Engineers (ASME) Code. The IST engineers' failure to establish proper reference values and acceptance criteria for DR-P-1B following modification to improve pump performance was a violation of the technical specification requirement to conduct inservice testing in accordance with the ASME Code.

Inspection Report# : [2001013\(pdf\)](#)



Significance: Mar 31, 2001

Identified By: NRC

Item Type: VIO Violation

Emergency Feedwater Pump Found Inoperable

AmerGen failed to promptly identify and correct a significant condition adverse to quality for an oil leak and vibrations on the 'A' emergency feedwater pump (EF-P-2A) of sufficient magnitude to cause the pump to be inoperable. An excessive oil leak was known by auxiliary operators to have existed for more than ten days before initiating corrective action to identify the cause. System engineers failed to investigate an unexplained step change in pump vibrations during the most recent pump inservice test. The increased vibrations were later determined to be directly related to the condition causing the oil loss. AmerGen's failure to promptly identify and correct this significant condition adverse to quality constituted a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." This finding was evaluated as low to moderate safety significance (White). The oil loss and increased pump vibrations resulted from loose bolts on the pump bearing housing. The condition that resulted in the loosening of the bolts during pump operation existed for 39 days. The significance determination process (SDP) Phase 2 analysis evaluated EF-P-2A being inoperable for greater than 30 days as low to moderate safety significance. An SDP Phase 3 analysis was performed to confirm this result. On July 5, 2001, the finding was determined to be White following a June 25, 2001, regulatory

conference.

Inspection Report# : [2001002\(pdf\)](#)

Barrier Integrity



Significance: Oct 12, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Adequate Procedures for Process Radiation Monitoring System Operation

Control room operators secured an inoperable reactor coolant drain tank (RCDT) vent radiation monitor and placed its associated interlock defeat switch in defeat for several weeks without adequate compensatory actions. The defeat position disabled a high radiation isolation signal for two normally open reactor building isolation valves on the RCDT vent line in the auxiliary building. The operators' oversight caused by inadequate procedure guidance was determined to be of very low safety significance (Green). Only the radiological barrier function of the reactor building containment to the auxiliary building was degraded. Engineered safeguards isolation capability was maintained operable to the isolation valves for the duration. Technical specification 6.8.1.a. requires in part that written procedures shall be established, implemented and maintained covering the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978.

Regulatory Guide 1.33, Revision 2, February 1978 recommends written procedures for process radiation monitoring system operation.

Contrary to this requirement, on May 1, 2002, to August 4, 2002, control room operators secured the RCDT vent line radiation monitor and disabled associated high radiation signals without adequate procedure instruction.

Inspection Report# : [2002006\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Mar 22, 2002

Identified By: NRC

Item Type: FIN Finding

Summary Conclusion from the Problem Identification and Resolution Inspection Regarding Effectiveness of the PI&R Program

Based on the sample selected for review, the NRC concluded the implementation of the corrective action program at Three Mile Island Unit 1 was adequate. The licensee was generally identifying problems and entering them into the corrective action program at an appropriate threshold. Problems were evaluated and corrected in a timely fashion based on the risk significance of the issue. However, some instances were identified where lower risk significant equipment problems were not entered into the corrective action program for resolution. The licensee's evaluations were generally of sufficient detail to reasonably identify the problem causes and provide for effective corrective actions. The evaluations of significant problems were of sufficient depth to identify likely root or apparent causes, and address the potential extent of the circumstances contributing to the problem. Corrective actions were specified to address the causes of problems. However, instances were identified where evaluations were not sufficiently detailed to assess the impact of equipment deficiencies or delayed maintenance on plant systems. One instance, regarding an incomplete evaluation of the impact of inoperable service water traveling screen control instruments, was

determined to be a finding of very low safety significance (Green).

Inspection Report# : [2002003\(pdf\)](#)

Last modified : March 25, 2003