

Pilgrim 1

3Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to provide adequate instructions for adjusting MO-1201-85 packing resulted in premature packing failure.

A self-revealing non-cited violation of very low safety significance was identified for Entergy's failure to provide adequate work instructions, as required by Pilgrim Technical Specification 5.4.1, "Procedures," to adjust packing on reactor water cleanup valve MO-1201-85, in October 2003. The lack of adequate instructions led to premature packing failure on March 17, 2007, which increased unidentified drywell reactor coolant system leakage, and required a plant shutdown. The direct cause was the failure to apply sufficient compression to the packing when last adjusted in October 2003. Entergy personnel repaired and successfully retested the valve. Entergy entered this issue into their corrective action program and initiated action to develop a packing adjustment procedure, evaluate back seating inaccessible valves, and institute preventive maintenance items to verify the packing gland fastener torque for inaccessible valves.

The finding was more than minor because it adversely affected the equipment performance attribute and objective of the Initiating Events cornerstone of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding screened to very low safety significance (Green) per IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," because the maximum observed leak rate did not exceed the Technical Specifications limit for identified reactor coolant system leakage, the finding did not contribute to both the likelihood of a reactor trip and the unavailability of a function of a mitigating system, and the finding did not increase the likelihood of a fire or internal/external flood. This finding has a cross-cutting aspect in the area of Human Performance, Resources, in that Entergy did not ensure that packing adjustment procedures were adequate [H.2(c)]. (Section 1R12)

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadvertent decrease in reactor vessel level due to personnel error.

A self-revealing non-cited violation of very low safety significance was identified for Entergy's failure to properly implement procedure EN-OP-102, "Protective and Caution Tagging," as required by Pilgrim Technical Specification 5.4.1, "Procedures." Specifically, on May 3, 2007, a senior reactor operator approved the removal of a danger tag from 4-HO-50 without ensuring the appropriateness of the component's specified restoration position. As a result, the valve, which was serving as a single point of isolation between the reactor coolant system and the drywell equipment sump, was opened, and approximately six inches of reactor coolant drained from the reactor vessel before the drain path was identified and isolated. Entergy entered this issue into their corrective action program and initiated additional controls and oversight for tagout operations with the potential to interface with the reactor vessel fluid boundary.

The failure to specify the appropriate restoration position constituted a performance deficiency that resulted in an inadvertent decrease of the reactor vessel level totaling six inches. The finding is more than minor because it is associated with the configuration control attribute of the Initiating Events cornerstone, and it affected the associated cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Because this event involved a six inch loss of level, the finding screened to very low safety significance (Green) in accordance with Table 1 of IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The finding had a cross-cutting aspect in the area of Human Performance, Work

Control, in that Entergy made a change to a planned work activity, the restoration of 4-HO-50, without fully evaluating the impact of this change on the plant [H.3(b)]. (Section 1R20)

Inspection Report# : [2007003](#) (*pdf*)

Mitigating Systems

Significance:  Sep 29, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to establish goals and monitor the performance of the HVAC system against them per 10 CFR 50.65(a)(1)

The inspector identified a NCV of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," for Entergy's failure to establish goals or monitor the performance of the Heating, Ventilation, and Air Conditioning (HVAC) system per 10 CFR 50.65(a)(1). The system was placed in (a)(1) status and corrective action was performed to resolve a fan belt failure. The system was then returned to (a)(2) status without setting goals and establishing monitoring requirements. The system subsequently experienced a fan belt failure during the time frame that normally would have been monitored.

The inspector determined that the licensee's failure to set goals and monitor system performance against them in a manner sufficient to provide reasonable assurance that such systems and components were capable of fulfilling their intended functions was a performance deficiency. The performance deficiency was more than minor because it affected the Equipment Performance attribute of the Mitigating Systems Cornerstone and because it affected the associated Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesired consequences. The finding was of very low safety significance because it did not result in the loss of system safety function; did not represent the actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; and was not risk significant due to seismic, flooding, or severe weather initiating events. (Section 1R12.2)

Inspection Report# : [2007004](#) (*pdf*)

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Take Effective Corrective Actions to Correct Recurring SRV Surveillance Failures

Green. The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure to take timely or effective corrective action to resolve repetitive and longstanding Technical Specification (TS) 3.6.D.1, Safety and Relief Valves (SRV), surveillance test failures. Specifically, Entergy has not resolved recurring SRV lift setpoint surveillance test failures despite the existence of this condition since the 1990's and despite industry experience with a known cause and several recommended corrective actions. Entergy entered this condition into their corrective action program as CR-07-02920. Corrective action for this issue will be to install a plant modification to independently actuate the SRVs using the Automatic Depressurization System (ADS).

This finding is more than minor because it is associated with the mitigating systems cornerstone and effects the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable circumstances. Specifically, the failure to adequately address SRV pilot valve corrosion bonding and setpoint drift in a timely manner, has resulted in repeat high SRV lift points above TS limits. This can increase the peak plant pressure reached following events that rely on the SRVs to lift within specified ranges to maintain margin to design pressure or stress limits. Following a Phase 1 evaluation, this finding was determined to be of very low safety significance (Green) since no loss of function has occurred. This finding is related to the cross-cutting component of problem identification and resolution and the aspect of the corrective action program in that Entergy has not taken timely or effective corrective actions to address a safety issue commensurate with its significance and complexity. [H.2(c)] (Section 40A2.XXX)

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

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to provide adequate instructions for lubricating governor linkages which led to the unplanned unavailability of the 'A' EDG

A Green self-revealing non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified when Entergy failed to adequately describe in procedures the lubrication of mechanical governor linkages associated with the 'A' emergency diesel generator (EDG). The inadequately lubricated governor linkages caused the 'A' EDG to be shutdown during a monthly operability surveillance test on May 15, 2007.

The inspectors determined that this finding was more than minor because it is associated with the Procedure Quality attribute of the Mitigating Systems cornerstone; and, it affected the cornerstone objective of ensuring the reliability, availability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of this finding using Inspection Manual Chapter (IMC) 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," and determined that the finding was of very low safety significance (Green) since the finding did not result in a loss of operability, a loss of system safety function, an actual loss of a single train for greater than its Technical Specification allowed outage time, or screen as potentially risk significant due to a seismic, flooding, or a severe weather initiating event. The inspectors also determined that this finding had a cross-cutting aspect in the area of human performance because procedure resources available to personnel to ensure lubrication of the 'A' EDG governor linkages were inadequate. [P.1(d)] (Section 4OA2xxx)

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

Significance:  Jun 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to follow procedures resulted in the loss of shutdown cooling.

A self-revealing non-cited violation of very low safety significance was identified for Entergy's failure to implement procedures for testing the analog trip system (ATS) as required by Pilgrim Technical Specification 5.4.1, "Procedures." Specifically, on April 12, 2007, Instrumentation and Controls (I&C) technicians calibrated pressure transmitter PT-263-50A when plant conditions and the requirements of procedure 8.M.2-8.1 did not allow that activity. This resulted in an inadvertent Group 3 primary containment isolation signal which isolated reactor shutdown cooling for 25 minutes. After recovering shutdown cooling, Entergy entered this issue into their corrective action program, conducted a stand down to review this event with I&C personnel, and initiated action to review this and similar procedures which require varying plant conditions.

The finding is more than minor because it is associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring 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, in accordance with IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," because it did not increase the likelihood of a loss of reactor coolant system (RCS) inventory or degrade Entergy's ability to terminate a leak path or add RCS inventory if needed. Throughout this event, adequate thermal margin was maintained since the calculated RCS time-to-boil was greater than 32 hours. This finding has a cross-cutting in the area of Human Performance, Work Practices, in that personnel did not follow the procedure for testing the ATS [H.4(b)]. (Section 1R13)

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Jan 25, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to thoroughly evaluate degraded condition on "B" EDG following January overhaul

A Green self-revealing NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified for Entergy's failure to promptly correct a condition adverse to quality associated with the "B" emergency diesel generator (EDG). During the post overhaul surveillance of the "B" EDG on January 25, 2007, the "B" EDG experienced unexpected load oscillations of approximately 150 kilowatt (kW). Subsequently, on February 23, 2007, oscillations of greater than 200 kW were seen, which resulted in the shutdown of the "B" EDG and an entry into a 72 hour Technical Specification (TS) Limiting Condition for Operation (LCO). Entergy corrected the kW load oscillations by replacing the mechanical portion of the "B" EDG governor. The "B" EDG was declared operable following successful testing. The issue was entered into Entergy's corrective action program.

The inspector determined that this finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone; and, it affected the cornerstone objective of ensuring the reliability, availability, and capability of systems that respond to initiating events to prevent undesirable consequences. A Phase 3 SDP evaluation was necessary due to a potential for a greater than green finding as indicated in the site specific pre-solved Phase 2 worksheets. The Phase 3 evaluation concluded that the finding was of very low safety significance (Green). The inspector also determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution in that Entergy personnel failed to thoroughly evaluate the unexpected kW oscillations. [P.1(c)] (Section 1R19)

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

SL IV NCV for Inadequate 50.59 Evaluation for RFO 15 Emergency Diesel LOCA/LOOP Test Change

Green. The inspector identified a non-cited violation (NCV) for Entergy's failure to perform an adequate safety evaluation per 10 CFR 50.59. Specifically, a screening safety evaluation (SE) for surveillance 8.M.3-1, Special Test for Automatic ECCS [Emergency Core Cooling Systems] Load Sequencing of Diesels and Shutdown Transformer with Simulated Loss of Offsite Power and Special Shutdown Transformer Load Test, dated March 10, 2005, failed to provide an adequate basis to demonstrate that the surveillance procedure could be modified without obtaining a Technical Specification (TS) amendment from the NRC for TS 4.9.A.1. As a result, Entergy failed to conduct a complete surveillance test, as required by TS 4.9.A.1, to demonstrate functionality of the 'B' train systems. Entergy entered this issue into the corrective action program as condition reports (CRs) 200503343 and 200604598, invoked the provisions of TS 4.0.3 for an incomplete surveillance, and completed a risk evaluation for a surveillance delayed greater than 24 hours.

Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process. The finding was determined to be more than minor because the change in test method required NRC review and approval prior to implementation. The finding was classified as Severity Level IV because it involved conditions evaluated as having very low safety significance by the Significance Determination Process (SDP). Specifically, the failure to conduct a complete surveillance test in accordance with TS 4.9.A.1 did not result in the loss of operability of a safety system. The finding had a cross-cutting aspect related to the Decision-Making component of the Human Performance area in that Entergy did not use conservative assumptions in their 50.59 decision making process and failed to fully evaluate the licensing basis in their 50.59 safety evaluation. [H.1(b)] (Section 1R02)

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

Barrier Integrity

Emergency Preparedness

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

Significance: N/A Jun 22, 2007

Identified By: NRC

Item Type: FIN Finding

Biennial Assessment of the Pilgrim Problem Identification and Resolution Program.

The team determined that Entergy was effective at identifying problems and placing them in the corrective action program (CAP). Once entered into the CAP, these items were screened and prioritized in a timely manner using established criteria, and they were properly evaluated commensurate with their safety significance. The condition review group (CRG) performed thorough discussions of new issues and ensured the issues were classified properly. Overall, the evaluations identified the causes of the problem, assessed the extent of condition, and developed appropriate corrective actions. An exception was noted for the resolution of emergency diesel generator (EDG) load oscillations. There were multiple occurrences of small load oscillations before the problem was identified and corrected; this resulted in a finding. Corrective actions were typically implemented in a timely manner, but the team found that in one case, main steam safety relief valve corrective actions were not timely and did not prevent recurrence; this resulted in a finding. On the basis of interviews conducted during this inspection, workers at the site felt free to input safety findings into the corrective action program. The team found that Entergy's self-assessments and audits were self-critical and consistent with the team's observations.

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

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