Pilgrim 1
3Q/2011 Plant Inspection Findings

Initiating Events

Significance: W Jul 20, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Implement Conduct of Operations and Reactivity Control Procedures during Reactor Startup
Preliminary White: A self-revealing finding was identified involving the failure of Pilgrim personnel to implement conduct of operations and reactivity control standards and procedures during a reactor startup, which contributed to an unrecognized subcriticality followed by an unrecognized return to criticality and subsequent reactor scram.

The significance of the finding has preliminarily been determined to be White, or of low to moderate safety significance. The finding is also associated with one apparent violation of NRC requirements specified by Technical Specification 5.4, “Procedures.” There was no significant impact on the plant following the transient because the event itself did not result in power exceeding license limits or fuel damage. Additionally, interim corrective actions were taken, which included removing the Pilgrim control room personnel involved in the event from operational duties pending remediation, providing additional training for operators not involved with the event, and providing increased management oversight presence in the Pilgrim control room while long term corrective actions were developed. Entergy staff entered this issue, including the evaluation of extent of condition, into its corrective action program (CR-PNP-2011-2475) and performed a Root Cause Evaluation (RCE).

The finding is more than minor because it was associated with the Human Performance attribute of the Initiating Events cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure of Pilgrim personnel to effectively implement conduct of operations and reactivity control standards and procedures during a reactor startup caused an unrecognized subcriticality followed by an unrecognized return to criticality and subsequent reactor scram. Because the finding primarily involved multiple human performance errors, probabilistic risk assessment tools were not well suited for evaluating its significance. The inspection team determined that the criteria for using IMC 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria,” were met, and the finding was evaluated using this guidance, as described in Attachment 4 to this report. Based on the qualitative review of this finding, the NRC has preliminarily concluded that the finding was of low to moderate safety significance (preliminary White).

The inspection team determined that multiple factors contributed to this performance deficiency, including: inadequate enforcement of operating standards, failure to follow procedures, and ineffective operator training. The Entergy RCE determined that the primary cause was a failure to adhere to established Entergy standards and expectations due to a lack of consistent supervisory and management enforcement. The inspection team concluded that the finding had a cross-cutting aspect in the Human Performance cross-cutting area, Work Practices component, because Entergy did not adequately enforce human error prevention techniques, such as procedural adherence, holding pre-job briefs, self and peer checking, and proper documentation of activities during a reactor startup, which is a risk significant evolution. Additionally, licensed personnel did not effectively implement the human performance prevention techniques mentioned above, and they proceeded when they encountered uncertainty and unexpected circumstances during the reactor startup [H.4(a)]. (Section 2)

Inspection Report# : 2011012 *(pdf)*

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: FIN Finding
Submerged Medium Voltage Cables

Green. The inspectors identified a Green finding for the improper maintenance of underground non-safety related medium voltage electric cables. The inspectors identified that Entergy allowed non-safety related medium voltage cables to remain submerged in water for extended periods of time. Entergy entered this into their Corrective Action Program, specified corrective actions to increase the dewatering frequency of the affected manhole, and then installed an automatic dewatering pump.

The inspectors determined that the finding was more than minor because it was associated with the Design Control attribute of the Initiating Events cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, continued submergence of the non-safety related power cables (from the start-up transformer to electrical buses A2 and A4) could lead to cable failure and cause an event that would affect plant stability. The inspectors performed a Phase 1 Significance Determination Process screening of the finding in accordance with NRC 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 because the condition did not contribute to both the likelihood of a reactor trip and the unavailability of mitigating systems equipment.

The inspectors determined this finding has a cross-cutting aspect in the area of problem identification and resolution within the Corrective Action Program component because Entergy personnel did not implement corrective actions in a timely manner to ensure that underground cables were not submerged commensurate with the safety significance and complexity of the degraded condition [P.1(d)]. (Section 1R06)

Inspection Report# : 2011003 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Verify the Adequacy of the Design for the 'C' Salt Service Water Pump
Green. The inspectors identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, Design Control because Entergy's design control measures did not ensure two-over-one seismic protection of the 'C' Salt Service Water (SSW) Pump. Specifically, Entergy did not ensure that a Class I to Class II interface would not result in a failure of a Class I component ('C' SSW Pump). Corrective actions included installing a temporary modification (i.e. water shield), to protect the pump motor from potential spray effects of the Class II piping failure and performing an extent of condition review.

The inspectors performed a review of Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," and did not find a similar more than minor example. The finding was determined to be more than minor because it was associated with the Protection Against External Events (i.e., seismic) attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone's objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the 'C' SSW pump motor was vulnerable to water spray from a failed Class II pipe during a seismic event which could have rendered the pump inoperable. The inspectors used IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and determined that further evaluation was required since the finding was potentially risk significant due to a seismic initiating event. As a result of this screening, a Phase 3 evaluation was conducted by a regional Senior Reactor Analyst (SRA). The condition was assessed as a seismically induced transient. The exposure period was assumed to be 1 year. It was also assumed that for all measured seismic events the 'C' SSW pump would fail due to water impingement. The seismic transient frequency of 1E-2/yr was developed from the Pilgrim Individual Plant Examination for External Events (IPEEE) Figure 3-21. No recovery of the 'C' SSW pump was assumed. Based on these assumptions the condition was assessed as Green, with a change in core damage frequency (CDF) calculated to be 1.29E-8. Since the finding was assessed to have a CDF of less than 1E-7, large early release frequency was not required to be assessed. The finding does not have a cross-cutting aspect since the failure to verify the adequacy of design with respect to ensuring two-over-one seismic protection for the 'C' SSW pump is not indicative of current licensee performance. In addition, current Entergy design procedures require rigorous Class II-over-I criteria for all

new modifications. (Section 1R06)

Inspection Report# : 2011004 *(pdf)*

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Enter Technical Specifications after Loss of Control Rod Indication
Green. The inspectors identified a Green non-cited violation (NCV) of Technical Specification (TS) 3.3.B.1 "Control Rod Operability", for Entergy's failure to enter and perform the actions prescribed in TS after losing control rod position indication. Entergy has since restored control rod position indication by repairing a failed power supply. Corrective actions included replacing the power supply and restoring Control Rod position indication. Condition Report CR-PNP-2011-0272 was written to address the power supply failure and Condition Report CR-PNP-2011-0511 was subsequently written to address Entergy's administration of TS.

The Inspectors determined that Entergy not entering and performing the actions required by TS 3.3.B.1 was a performance deficiency. This condition did not impact the regulatory process and did not contribute to any actual consequences therefore no Traditional Enforcement applied. The inspectors determined that the issue was more than minor because the finding was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone's objective to ensure the reliability of systems that respond to events to prevent undesirable consequences (i.e., core damage). Specifically, the locations of the control rods were indeterminate which could substantially impact operator's abilities to implement Emergency Operating Procedures. IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1-Initial Screening and Characterization of Findings," was used to evaluate the significance of the finding. Attachment 0609.04, Table 4a, was used to evaluate the impact of the finding on loss of operability or functionality. The inspectors determined that the function of the control rods to add negative reactivity to the core during an event was not affected (SCRAM time and control rod worth were not affected). In addition, alternate means were available to operators to determine control rod position and once the power supply was restored, the control rods were determined to have remained in their original positions. Also, since the finding is not potentially risk significant due to a seismic, flooding or severe weather initiating event, the finding was determined to be of very low safety significance (Green).

The Inspectors determined that this issue had a cross-cutting aspect in the Decision Making component of the Human Performance area. Specifically, Entergy did not use conservative assumptions in decision making and adopt a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disprove the action. In this case, Entergy did not take the conservative approach to enter Technical Specifications when faced with a degraded condition affecting control rod operability [H.1(b)]. (Section 1R15).

This finding closes URI 05000293/2011002-01.

Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Transient Combustible Loading in SLC Room in Excess of the Fire Hazards Analysis Limit
Green. The inspectors identified a Green non-cited violation (NCV) of License Condition 3.F of the Facility Operating License (DPR-35) for the failure to evaluate transient combustible fire loading in the Standby Liquid Control (SLC) room. Specifically, Entergy did not evaluate the acceptability of transient combustibles that had been moved into the SLC room and which were in excess of the allowed combustible loading discussed in the Fire Hazards Analysis. Entergy immediately walked down the area, established compensatory measures, and completed a transient combustibles evaluation. Entergy has since removed the transient combustibles from the area.

The inspectors determined that the failure to evaluate the transient combustibles was more than minor based on a similar example described in Inspection Manual Chapter 0612, "Power Reactor Inspection Reports", Appendix E,

“Examples of Minor Issues”, Section 4k. Specifically, the fire loading exceeded the Fire Hazard Analysis assumption and was not evaluated for acceptability. The finding is also associated with the Protection Against External Events attribute of the Mitigating Systems cornerstone and could have adversely affected the cornerstones objective to ensure the availability of systems that respond to events to prevent undesirable consequences (i.e., core damage). Specifically, a fire in the SLC room could affect the availability of the system to respond to an event. IMC 0609, “Significance Determination Process,” Appendix F, “Fire Protection Significance Determination Process,” was used to evaluate the significance of the finding. The safety significance of the finding was determined to be very low because the degradation factor was LOW, that is, the transient combustible evaluation process subsequently identified nearly the same level of fire protection effectiveness and reliability for the SLC room as it would had the degradation not been present.

This finding is related to the cross-cutting area of Work Control in that Entergy did not coordinate work activities to ensure the interdepartmental coordination necessary to assure plant and human performance. Specifically, the refueling organization did not notify fire protection engineering to ensure an evaluation of the transient combustible loading was completed for the SLC room [H.3(b)]. (Section 1R05)

Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Risk Assessment for Planned Maintenance and Testing on RCIC, SLC and ATS Systems
Green. The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50.65(a)(4) for Entergy's failure to conduct an adequate risk assessment for planned Analog Trip System (ATS) testing. Specifically, the inspectors identified that Entergy had not analyzed the impact to the risk of the plant with a reactor low pressure master trip unit removed from service during the ATS test. The removal of this instrument resulted in an Orange risk condition. Entergy has implemented corrective actions to revise the risk assessment procedure to provide specific guidance on assessing surveillance procedures which affect multiple components, complete risk assessment reviews six weeks prior to the scheduled performance of planned work and test activities, and provide guidance and training on the above to personnel involved in the risk assessment process.
This finding is associated with the equipment performance attribute of the Mitigating Systems cornerstone and is more than minor because the risk assessment had incorrect assumptions that changed the outcome of the assessment. The inspectors performed a screening in accordance with IMC 0609, “Significance Determination Process,” Appendix K, “Maintenance Risk Assessment and Risk Management Significance Determination Process.” The finding was determined to be of very low safety significance (Green) because the Incremental Core Damage Probability Deficit for the timeframe that the reactor low pressure instrument was removed from service was less than 1E-6 (approximately 1E-8) due to the short amount of time the instrument was unavailable.

This finding has a cross-cutting aspect in the area of Human Performance, Decision Making, because Entergy did not use a systematic process to make a risk-significant decision [H.1(a)]. (Section 1R13)

Inspection Report# : 2011003 *(pdf)*

Significance: G Mar 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Corrective Actions for RCIC Torus Suction Valve (Mo-1301-26)
Green. A self-revealing Green NCV of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” was identified for Entergy’s failure to correct a condition adverse to quality. Entergy did not correct a Reactor Core Isolation Cooling (RCIC) torus suction valve which had failed to close during testing on October 4, 2010. On January 5, 2011, the same valve again failed to close during testing. Pilgrim’s corrective actions included cleaning and replacing circuit breaker contacts and revising maintenance procedures to perform periodic resistance checks on motor control center circuit breaker cubicle secondary disconnects. Entergy has entered this issue into the corrective action program (CR-PNP-2010-3486 and CR-PNP-2011-0046).

The inspectors determined that 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's objective to ensure the reliability and availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the RCIC torus suction valve failure to close affected the reliability of the RCIC system, and the RCIC system was made unavailable during system troubleshooting and repairs in January 2011. The inspectors determined the significance of the finding using IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The finding was determined to be of very low safety significance (Green) because the finding did not involve a design or qualification deficiency resulting in a loss of operability or functionality, did not result in a loss of system safety function of a single train for greater than its Technical Specification outage time, and did not screen as potentially risk significant due to external initiating events. The capability of RCIC to perform its function was not lost since the torus suction valve would have been able to be cycled open in the event RCIC needed to be aligned to the torus. This finding had a cross-cutting aspect in the Problem Identification and Resolution cross-cutting area, Corrective Action Program component, because Entergy did not thoroughly evaluate the problem with the RCIC torus suction valve such that the resolution in October 2010 addressed the causes and corrected the problem. [P.1(c)] (Section 1R19)

Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 04, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Torus Air Temperature 10 CFR 50.65(a)(2) Performance Demonstration Not Met
GREEN. The NRC identified a NCV of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," paragraph (a)(2), for Entergy's failure to adequately demonstrate primary containment system (a)(2) performance was effectively controlled through performance of appropriate preventive maintenance. Specifically, as evidenced by repeat functional failures of torus air temperature indication during the fall of 2009 and January 2010, the (a)(2) performance demonstration was no longer justified in accordance with Entergy's maintenance rule implementing procedure guidance. Entergy entered this issue in their corrective action process (CR-PNP-2011-00880) to evaluate corrective actions needed to address this issue.

The inspectors determined that 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. Specifically, failures of torus air temperature indication present a challenge to operators who rely on the indication to diagnose and respond to initiating events. Per the guidance provided in Inspection Procedure 71111.12,"Maintenance Effectiveness," issued 11/16/2009, inspectors considered this performance deficiency to be a Category lll finding since a historical review revealed a continuing declining trend in performance of the instrument, as indicated by additionalfunctionalfailures. Because this issue was classified as Category lll, the inspectors determined the significance of this finding using IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings." The inspectors determined that this finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of safety system function, and did not screen as potentially risk significant due to external initiating events.

The inspectors determined that this finding has a cross cutting aspect in the area of problem identification and resolution. Specifically, Entergy did not properly evaluate and classify the torus air temperature indication failures with respect to the maintenance rule. [P.1(c)]
Inspection Report# : 2011008 *(pdf)*

Significance: G Mar 04, 2011
Identified By: NRC
Item Type: FIN Finding

Failure to Follow Corrective Action Process for HPCI Diaphragm Degraded Condition
GREEN. The NRC identified a finding of very low significance for Entergy's failure to follow their corrective action process in the identification, documentation, and evaluation of a degraded condition. Specifically, Entergy failed to recognize, fully document, and evaluate in their corrective action process that an installed diaphragm in the High Pressure Coolant lnjection (HPCI) System exceeded its manufacturer-recommended service life. Entergy entered this issue in their corrective action process (CR-PNP-2011-0917) to evaluate and determine corrective actions to address this issue.

The inspectors determined the finding was more than minor because it is similar to example 4(a) of NRC Inspection Manual Chapter (lMC) 0612, Appendix E, 'Minor Examples,' in that Entergy did not perform an evaluation that was later determined to adversely affect safetyrelated equipment. The inspectors determined the finding was of very low safety significance (Green) using IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings" in that the finding involved a qualification deficiency not resulting in the loss of operability of HPCI.

The finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program because Entergy did not identify that exceeding the service life of the PCV-2301-238 diaphragm was a condition adverse to quality. [P.1(a)]
Inspection Report# : 2011008 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Manage a Yellow Risk Condition During HPCI Testing from the Alternate Shutdown Panel
The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50.65 paragraph (a)(4) for Entergy's failure to correctly assess and manage a Yellow risk condition for planned testing of the High Pressure Coolant Injection (HPCI) system from the Alternate Shutdown Panel. Specifically, Entergy considered HPCI available by crediting multiple manual actions to restore the automatic function. However, these actions were not "few" or "simple" and would not have restored the HPCI automatic function in a timeframe consistent with guidance discussed in NUMARC 93-01, Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants. In addition, HPCI's automatic function would not have been restored in a timeframe consistent with Pilgrim's Final Safety Analysis Report, Section 6.4.1, which specifies 90 seconds for HPCI to reach its required design flow rate. Corrective actions included issuing a standing order to alert Operators of the specific requirements to maintain a system "available" during maintenance and testing. Corrective actions planned include revising Entergy's Risk Assessment Procedure to verify systems credited as "available" have clear and simple direction to restore automatic functional status during maintenance and testing.

This finding was determined to be more than minor because Entergy's elevated plant risk would put the plant into a higher risk category and require additional risk management actions, namely protecting the Reactor Core Isolation Cooling system. In addition, the finding affected the Human Performance attribute of the mitigating system's cornerstone objective to ensure the availability of systems to respond to initiating events and prevent undesirable consequences (i.e., core damage). The inspectors performed an evaluation in accordance with IMC 0609, "Significance Determination Process," Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process, " because the finding related to Entergy's assessment and management of risk. The finding was determined to be of very low safety significance (Green) because the Incremental Core Damage Probability Deficit for the unavailability of HPCI for the duration of the activity was less than 1.0E-6 per year (approximately 2.6E-9 per year). The inspectors determined that this finding had a cross-cutting aspect in the Human Performance Cross-Cutting area, work control component, because Entergy did not correctly plan and coordinate work activities by incorporating appropriate risk insights [H.3(a)] (Section 1R13).

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. (Section 4OA2.1.b.1)

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 4OA2.1.b.2)

Inspection Report# : 2010005 *(pdf)*

Barrier Integrity

Significance: G Sep 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify a Primary Containment System Maintenance Rule Functional Failure and therby Estabilish Monitoring Requirements for the System
Green. The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50.65, paragraph (a)(1) and (a)(2), "Requirements for Monitoring the Effectiveness of Maintenance of Nuclear Power Plants," because Entergy did not monitor the performance of the Primary Containment System (Drywell to Torus Vacuum Breaker Components) against license-established goals to provide reasonable assurance that these components are capable of fulfilling their intended functions. Specifically, Entergy did not identify a functional failure of the Drywell to Torus Vacuum Breaker Component portion of the Primary Containment System and thereby did not recognize that the system exceeded its unavailability performance criteria, requiring a Maintenance Rule (a)(1) evaluation. Entergy subsequently conducted an (a)(1) evaluation and concluded that the system should be classified as (a)(1), corrective actions specified, and system monitoring completed. The finding is more than minor because it is associated with the Barrier Performance attribute of the Barrier Integrity cornerstone, in that the issue affected the Primary Containment System reliability due to the failure to recognize the need to evaluate the system for goals, corrective actions, and monitoring. A review of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Minor Examples," revealed that no minor examples were applicable to this finding. The inspectors determined the significance of the finding using IMC 0609-04, "Phase 1 - Initial Screening and Characterization of Findings." The finding was determined to be of very low safety significance (Green) because the degraded condition had been corrected by the time of the failure to accurately evaluate the maintenance rule functional failure. As a result, this finding did not involve a design or qualification deficiency, did not result in a loss of system safety function, and did not screen as potentially risk significant due to external initiating events. The finding has a cross-cutting aspect in the Human Performance cross-cutting area, Decision Making component; in that, Entergy did not use conservative assumptions when evaluating the degraded Drywell to Torus Vacuum Breakers condition to correctly conclude that a functional failure had occurred. Specifically, Entergy did not consider that the function of these vacuum breakers would be required as soon as plant conditions exceeded 212F, and therefore, the procedural guidance for Technical Specification applicability not being exceeded was an incorrect basis for this decision [H.1(b)]. (Section 1R12)
Inspection Report# : 2011004 *(pdf)*

Significance: G Sep 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Accurately Assess Risk of Maintenance on Standby Gas and Secondary Containment
Green. The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50.65(a)(4) because Entergy did not assess and manage risk during elective maintenance for both 'A' and 'B' trains of the StandBy Gas Treatment (SBGT) system. Specifically, Entergy did not consult qualitative guidance in their risk assessment process procedures before removing both trains of SBGT and therefore removing the Secondary Containment key safety function while online. Corrective actions planned include evaluating and revising risk assessment procedures and communicating qualitative risk assessment guidance to Senior Reactor Operators and Work Week Managers.

A review of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Minor Examples," identified that Section 7, Maintenance Rule, Example e, reflected a similar more than minor example. This finding was determined to be more than minor because Entergy's risk assessment failed to account for the loss or significant, uncompensated impairment of a key operating or shutdown safety function. In addition, the finding affected the Human Performance attribute of the Barrier Integrity cornerstone's objective to ensure that physical design barriers (containment) protect the public from radionuclide releases caused by accidents or events. The inspectors performed an evaluation in accordance with IMC 0609, "Significance Determination Process," Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," because the finding related to Entergy's assessment and management of risk. The finding was determined to be of very low safety significance (Green) because the finding only represented an inadequate risk assessment to the radiological barrier function provided by secondary containment and the standby gas treatment system. The inspectors determined that this finding had a cross-cutting aspect in the Human Performance cross-cutting area, work control component, because Entergy did not plan work activities by incorporating appropriate risk insights [H.3(a)]. (Section 1R13)

Inspection Report# : 2011004 *(pdf)*

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to enter Technical Specifications for CHREAFS
Green. The inspectors identified a Green non-cited violation (NCV) of Technical Specification (TS) 3.7.B.2.f, "Standby Gas Treatment System and Control Room High Efficiency Air Filtration System (CRHEAFS)," for Entergy's failure to enter and perform the actions prescribed in TS after the Control Room Envelope (CRE) was breached during work on a vital area door into the CRE. Entergy has since repaired the vital area door and restored the CRE.

This finding is more than minor because the finding was associated with the human performance attribute of the Barrier Integrity cornerstone (maintain the radiological barrier function of the control room) and adversely affected the cornerstones objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the inoperable CRE could affect the operator's ability to occupy the control room under adverse radiological, chemical or smoke conditions while responding to an event. IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1- Initial Screening and Characterization of Findings," was used to evaluate the impact of the finding on loss of operability or functionality of the CRE and CHREAFS and it was determined that further evaluation was required since the finding had the potential to impact the control room envelope due to the effects of smoke and toxic gas. As a result of this screening a Phase 3 evaluation was conducted by a Senior Reactor Analyst (SRA). The SRA conducted a qualitative evaluation and determined the risk impact on control room habitability, due to this finding, from smoke and toxic gas to be low (GREEN). Specifically, the Pilgrim Station, Individual Plant Examination for External Events (IPEEE), sections 5.3.3 and 5.3.4, identify that the overall risk from on-site and off-site chemical release to be low. Smoke impacts on the control room were evaluated and determined to be low for the identified exposure period. This was mainly due to the fact that the risk significant impacts from smoke would be from fires and smoke originating within the control room envelope and the impairment on the barrier would not impact this state.

The inspectors determined that this issue had a cross-cutting aspect in the Work Control component of the Human Performance area. Specifically, Entergy did not plan and coordinate work activities affecting the CRE such that interdepartmental coordination assured plant and human performance. In this case, Operations was not made aware that Maintenance would be working on the control room vital door [H.3(b)]. (Section 1R15)

Inspection Report# : 2011003 *(pdf)*

Significance: G Apr 15, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
This inspection item is Official Use Only - Security-Related Information. See inspection report for details.
This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution (Corrective Action Program). [P.1(c)]. See inspection report for more details.
Inspection Report# : 2011011 *(pdf)*

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 Mar 04, 2011
Identified By: NRC
Item Type: FIN Finding
Pilgrim 2011 Biennial PI&R Inspection Summary
The inspectors concluded that Entergy was generally effective in identifying, evaluating, and resolving problems. Entergy personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with their safety significance. However, the inspectors identified one finding which was not a violation of regulatory requirements, in the area of problem identification. In most cases, Entergy appropriately screened issues for operability and reportability, and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. However, the inspectors identified one finding that was a violation of NRC requirements, in the area of effectiveness of prioritization and evaluation of issues. The inspectors also determined that Entergy typically implemented corrective actions to address the problems identified in the corrective action program in a timely manner.

The inspectors concluded that, in general, Entergy adequately identified, reviewed, and applied relevant industry operating experience to Pilgrim Nuclear Power Station operations. ln addition, based on those items selected for review, the inspectors determined that Entergy's selfassessments and audits were thorough.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual corrective action program and employee concerns program issues, the inspectors did not identify any indications that site personnel were unwilling to raise safety issues, nor did they identify any conditions that could have had a negative impact on the site's safety conscious work environment.

Inspection Report# : 2011008 *(pdf)*

Last modified : January 17, 2012