

# Pilgrim 1

## 4Q/2014 Plant Inspection Findings

---

### Initiating Events

**Significance:**  Dec 12, 2014

Identified By: NRC

Item Type: FIN Finding

#### **Failure to Fully Derive the Cause of a Manual Scram**

Inspectors identified a Green finding because Entergy did not fully derive the causes of the manual scram on August 22, 2013, following a loss of all feedwater. Specifically Entergy did not investigate the causes of a failed cable splice which directly caused an electrical transient that resulted in the automatic tripping of all three reactor feed pumps (RFPs) in accordance with the standards in Entergy procedures EN-LI-118, "Cause Evaluation Process," and EN-LI-118-01, "Event and Causal Factor Charting." Entergy entered the issue into the CAP as condition report (CR)-PNP-2014-5796 and initiated additional causal analysis to determine why the splice was improperly fabricated.

This performance deficiency affects the equipment performance attribute of the Initiating Events cornerstone, because the failure to fully derive the causes of the failed splice prevented them from taking appropriate actions to evaluate and correct those causes. This impacts the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations because unidentified deficiencies could lead to similar electrical transients which could cause similar plant transients and scrams. The inspectors determined the significance of the finding using IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." The finding was determined to be of very low safety significance (Green) because the finding was a transient initiator and, although the event being evaluated for causal factors caused a reactor scram and loss of mitigation equipment, the failure to identify all the causes of the event and plan appropriate corrective actions has not resulted in a subsequent reactor scram or loss of mitigating equipment. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, because Entergy did not thoroughly evaluate the issue of the manual scram to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, Entergy focused on the causes related to the modification of the feed pump trips and did not fully evaluate the causes related to the failed splice. [P.2]

Inspection Report# : [2014008](#) (*pdf*)

**Significance:**  Dec 12, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Complete Several Corrective Actions as Required by Program Requirements**

The inspectors identified a Green finding for Entergy's failure to identify and correct conditions adverse to quality by implementing adequate and timely actions to address similar conditions. Specifically, inspectors identified multiple examples of failure to implement the corrective actions in accordance with CAP requirements which resulted in failing to identify and correct several conditions adverse to quality. Two of the finding examples also involved a NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action." Entergy's immediate corrective actions included entering the issues into their CAP as CR-PNP-2014-5909, CR-PNP-2014-5976; CR-PNP-2014-5977, CR-PNP-2014-5682, CR-PNP-2014-5625, CR-PNP-2014-5826, CRPNP-2014-

5735, and CR-PNP-2014-06067. Additionally, Entergy took action to address the conditions adverse to quality by revising procedures and specifying additional procedure reviews to identify and correct other conditions adverse to quality.

The failure to implement CAP procedural requirements with respect to corrective action response and documentation was a performance deficiency. This finding was determined to be more than minor because it was similar to IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," example 3.j in that it represents a significant programmatic deficiency that could lead to worse errors if uncorrected. Specifically, if left uncorrected this issue would have the potential to lead to a more significant safety concern because not following an established process for completing corrective actions could result in a failure to identify and correct conditions adverse to quality or other adverse conditions. Additionally, this performance deficiency affects the procedure quality, equipment performance, and human performance attributes of the Initiating Events cornerstone, and impacts the objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, a severe weather procedure did not prescribe sufficient actions that would limit the likelihood of ice bridging or place the plant in a condition that it could respond to a loss of offsite power (LOOP) without potentially upsetting plant stability, and the failure to conduct insulator testing prevented the station from assessing its replacement strategy. Additionally, several surveillance procedures did not provide sufficient barriers (e.g. critical step annotation, test equipment verification, etc.) in accordance with the station programs to limit the likelihood of scrams and other transients during testing.

The inspectors determined the significance of the finding using IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." The finding was determined to be of very low safety significance (Green) because the failure to implement corrective actions has not resulted in a subsequent reactor scram or loss of mitigating equipment. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Resolution, because Entergy did not take effective corrective actions to address issues in a timely manner commensurate with their safety significance. Specifically, corrective actions were not completed in accordance with Entergy's CAP and, in some cases, after identification of unsatisfactory closure by Entergy, follow-up actions were inadequate to resolve the deficiencies. [P.3]

Inspection Report# : [2014008](#) (pdf)

**Significance:** **W** Jul 01, 2014

Identified By: NRC

Item Type: FIN Finding

#### **Parallel White Unplanned Scrams with Complications PI Finding**

The NRC assigned two parallel White PI inspection findings involving a significant weakness identified in Entergy's causal evaluation and corrective actions for the White Unplanned Scrams with Complications PI.

In accordance with IP 95002 and NRC IMC 0305, "Operating Reactor Assessment Program," parallel PI inspection findings are assigned the same safety significance as the initiating PIs. This parallel PI inspection finding provides for additional NRC review of Entergy's actions to address the weaknesses identified in this report. This finding takes the color (White) of the PI. The parallel inspection finding associated with the White Unplanned Scrams with Complications PI will take effect in the 3rd quarter of 2014, which is the quarter the White PI was no longer considered an Action Matrix input in accordance with Section 11.02.b of IMC 0305, "Operating Reactor Assessment Program."

Inspection Report# : [2014008](#) (pdf)

**Significance:** **W** Jan 01, 2014

Identified By: NRC

Item Type: FIN Finding

### **Parallel White Unplanned Scrams per 7000 Critical Hours PI Finding**

DRAFT - The NRC assigned a parallel White PI inspection findings involving a significant weakness identified in Entergy's causal evaluation and corrective actions for the White Unplanned Scrams per 7000 Critical Hours PIs.

In accordance with IP 95002 and NRC IMC 0305, "Operating Reactor Assessment Program," parallel PI inspection findings are assigned the same safety significance as the initiating PIs. This parallel PI inspection findings provides for additional NRC review of Entergy's actions to address the weaknesses identified in this report. This finding takes the color (White) of the PIs. The parallel inspection finding associated with the White Unplanned Scrams per 7000 Critical Hours PI will take effect in the 1st quarter of 2014, which is the quarter the White PI was no longer considered an Action Matrix input in accordance with Section 11.02.b of IMC 0305, "Operating Reactor Assessment Program."

Inspection Report# : [2014008](#) (*pdf*)

---

## **Mitigating Systems**

**Significance:**  Mar 31, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Procedure for Determining Operability of the Shutdown Transformer**

Green. The inspectors identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," in that Entergy did not correctly translate the design basis into procedures. Specifically, as of February 26, 2014, procedure 2.4.A.23 did not provide correct information for determining operability of the Shutdown Transformer (SDT) when the SDT is energized from one of its alternate sources. Entergy entered this issue into their corrective action program (CR-PNP-2014-00861).

The inspectors determined that Entergy's failure to provide adequate control for determining operability of the SDT was a performance deficiency that was reasonably within Entergy's ability to foresee and prevent. The performance deficiency was determined to be more than minor because it was associated with the configuration control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Appendix A, the inspectors determined that the finding was very low safety-significance because this finding did not represent an actual loss of function of the SDT for greater than its Technical Specification allowed outage time. The finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Evaluation, in that, Entergy personnel did not thoroughly evaluate the problems, which included understanding the results of the calculation and subsequently translating those results into the operating procedure. (P.2, IMC 0310) (Section 40A2.1.b.1)

Inspection Report# : [2014002](#) (*pdf*)

---

## **Barrier Integrity**

**Significance:** N/A Dec 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

### **Modification to the Spent Fuel Pool Cask Area without Prior NRC Approval**

The inspectors identified a Severity Level IV NCV of 10 CFR Part 50.59 in that Entergy did not obtain a licensee amendment prior to implementing a change to the plant that required a change to Technical Specifications. Specifically, Entergy removed the energy absorbing pad described in TS 4.3.4.b, "Design Features" and FSAR section 10.3.6, "Consequences of a Dropped Fuel Cask" without receiving prior NRC approval. Entergy submitted a LAR supplement to the NRC on September 11, 2014 to remove the energy absorbing pad language from TS, and performed an extent of condition review on previous engineering changes and prohibited placing a cask in the spent fuel pool until receiving NRC approval for a change to TS 4.3.4.b. The issue was entered into the CAP as CR 2014-4109.

The inspectors determined that Entergy did not perform an adequate 10 CFR 50.59 evaluation and obtain a license amendment prior to removing the spent fuel pool energy absorbing pad. The inspectors determined this was a performance deficiency that was within Entergy's ability to foresee and correct and should have been prevented. Because the issue had the potential to affect the NRC's ability to perform its regulatory function, the inspectors evaluated this performance deficiency in accordance with the traditional enforcement process. Using the Enforcement Manual, the inspectors determined that the violation was a Severity Level IV (a 10 CFR 50.59 violation that resulted in conditions that required NRC approval before implementation) violation. Because this violation involves the traditional enforcement process and does not have an underlying technical violation that would be considered more-than-minor, inspectors did not assign a cross-cutting aspect to this violation in accordance with IMC 0612, Appendix B.

Inspection Report# : [2014005](#) (*pdf*)

**Significance:**  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Manage a Yellow Risk Condition for Unavailable Torus Vent Valve**

The inspectors identified a Green NCV of Title 10 of the Code of Federal Regulations (10 CFR) 50.65 paragraph (a) (4) because Entergy did not identify and manage risk for emergent maintenance on primary containment isolation valves (PCIVs). Specifically, an incorrect risk assessment resulted in Entergy not recognizing an increase in risk to a Yellow condition, and therefore no risk management actions were taken. Entergy has captured this issue in condition report (CR)-PNP-2014-2007, has corrected the inadequate risk assessment, and has initiated an apparent cause evaluation (ACE) to determine causes and appropriate corrective actions.

The performance deficiency was more than minor because if left uncorrected the failure to recognize risk and take appropriate risk management actions has the potential to lead to more significant safety concerns. Moreover, a review of IMC 0612, Appendix E, "Minor Examples," identified that Section 7, "Maintenance Rule," Example e, reflected a similar more than minor example, in that the outcome of the overall elevated plant risk put the plant into a higher risk management category and thereby required additional risk management actions. In accordance with IMC 0609.04, "Initial Characterization of Findings," and IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," issued May 19, 2005, the inspectors determined that this finding is of very low safety significance (Green) because the Incremental Core Damage Probability Deficit for the duration of the activity was less than 1.0 E-6 per year (approximately 1.29 E-7 per year). This finding has a cross-cutting aspect in the area of Human Performance, Consistent Process, because when faced with the requirement to perform emergent, unscheduled maintenance, Entergy did not use a consistent, systematic approach to make decisions, and did not incorporate appropriate risk insights. Specifically, while Entergy had the tools and processes in place to assess risk for emergent conditions, individuals did not consistently use this process, and therefore did not recognize the elevated risk condition.

Inspection Report# : [2014003](#) (*pdf*)

**Significance:**  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Comply with TS Required Actions for Inoperable PCIV**

The inspectors identified a Green NCV of Technical Specification (TS) 3.7.A, “Primary Containment,” because Entergy failed to comply with the TS-required actions for inoperable PCIVs. Specifically, while maintenance was being performed on an inoperable automatic PCIV, Entergy failed to either isolate and deactivate at least one containment isolation valve in the same line, or to complete an orderly shutdown to the Cold Shutdown condition within 24 hours. Entergy has captured this issue in CR-PNP-2014-2008, and has assigned corrective actions to update the Pilgrim TS bases document to provide additional guidance on acceptable methods of PCIV isolation.

The performance deficiency is more than minor because it is associated with the configuration control attribute of the Barrier Integrity cornerstone, and adversely affected the associated cornerstone objective to provide reasonable assurance that physical design barriers (i.e. containment) protect the public from radionuclide releases caused by accidents or events. Specifically, Entergy’s failure to close and deactivate a valve in the same line as the inoperable PCIV as required by TS did not ensure the operability of the primary containment. In accordance with IMC 0609.04, “Initial Characterization of Findings,” and IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” effective July 1, 2012, the inspectors determined that this finding is of very low safety significance (Green) because it did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components. This finding has a cross-cutting aspect in the area of Human Performance, Conservative Bias, because Entergy did not use decision-making practices that emphasize prudent choices over those that are simply allowable, or in this case, those that are perceived to be allowable. Specifically, Entergy’s reliance on the design characteristics of the PCIVs to meet the TS requirement, while refraining to take additional measures to ensure the valves remained closed in the case of personnel error or equipment malfunction, was not conservative.

Inspection Report# : [2014003](#) (*pdf*)

---

## Emergency Preparedness

---

## Occupational Radiation Safety

---

## Public Radiation Safety

---

## Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related

information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

---

## **Miscellaneous**

Last modified : February 26, 2015