

# Pilgrim 1

## 2Q/2008 Plant Inspection Findings

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### Initiating Events

**Significance:** **G** Dec 31, 2007

Identified By: NRC

Item Type: FIN Finding

#### **Improper Calibration of Vacuum Trip Switch Results in an Automatic Reactor Scram**

A Green self-revealing finding was identified for Entergy's failure to ensure the proper verification and calibration of condenser vacuum trip switch VTS-1 during refueling outage (RFO) 16. Specifically, personnel did not ensure that the proper verification/calibration technique was employed to determine the as-found low condenser vacuum turbine trip setpoint. Additionally, when the technician identified that the as-found data was significantly outside of historical as-found values, he did not question the validity of the data nor did he obtain a peer check. The technician then calibrated the instrument using the incorrect as-found data which resulted in an incorrect low vacuum trip setpoint and a subsequent turbine trip and reactor scram on July 10, 2007.

This finding is more than minor because it is associated with the human performance attribute of the Initiating Events Cornerstone and affects the cornerstone objective of limiting the likelihood of those events that upset plant stability during power operations. The finding is of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would be unavailable. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices, because Entergy proceeded in the face of uncertainty or unexpected circumstances when the VTS-1 setpoint was found significantly outside of expected as-found values. [H.4(a)] (Section 40A3)

Inspection Report# : [2007005](#) (*pdf*)

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### Mitigating Systems

**Significance:** **G** Jun 17, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Corrective Actions for 'B' Battery Charger Circuit Breaker**

Green. The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," in that, Entergy did not promptly correct deficiencies with the 'B' 125 Vdc battery charger supply circuit breaker. Specifically, Entergy did not properly evaluate and take adequate corrective actions for a condition adverse to quality associated with elevated temperatures on the circuit breaker terminals; and subsequently, the circuit breaker failed when recharging the 'B' 125 Vdc battery. Entergy entered the issue into their corrective action system, completed an operability assessment, and reviewed similar circuit breakers to ensure a similar condition did not exist.

The finding is more than minor because the degraded condition represented reasonable doubt on the operability of the 'B' 125 Vdc charger and its associated breaker. The finding is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it did not result in the loss of system safety function. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution because Entergy did not adequately evaluate and correct the condition adverse to quality, which they originally identified in January 2006 (P.1.c).

Inspection Report# : [2008007](#) (*pdf*)

**Significance:** G Jun 17, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Corrective Actions in Response to an Intake De-Watering Event**

Green. The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," in that, Entergy did not properly evaluate and take adequate corrective actions for a condition adverse to quality associated with an intake de-watering event on September 14, 2007. Specifically, a fish intrusion event resulted in a significant lowering of intake level and challenged the continued availability of the 'A' loop of salt service water (SSW). Entergy's issue prioritization, operability review, and subsequent evaluation did not adequately assess and correct the plant response relative to the safety-related SSW design and licensing bases. Entergy entered the issue into their corrective action system, implemented short-term corrective actions, and completed an operability assessment for the affected equipment.

This finding is more than minor because it is associated with the external factors attribute (loss of heat sink) for the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it did not result in the loss of system safety function. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution because Entergy did not thoroughly evaluate a condition adverse to quality, including properly classifying, prioritizing, and evaluating for operability (P.1.c).

Inspection Report# : [2008007](#) (pdf)

**Significance:** G Jun 17, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Non-Conservative Calculation for Salt Service Water Pump Minimum Flow Rate**

The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," in that, Entergy did not properly translate design basis parameters into specifications and procedures for the salt service water (SSW) system. Specifically, the system hydraulic analysis did not establish a system leakage limit, and the plant operating procedures allowed alignments that could have led to a condition where system leakage could have been in excess of the available margin. Entergy entered this issue into their corrective action system and instituted immediate corrective actions.

This finding is more than minor because the deficiency represented reasonable doubt on the operability of the SSW system. The finding is associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it was a design deficiency confirmed not to result in a loss of the SSW system.

Inspection Report# : [2008007](#) (pdf)

**Significance:** G Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Risk Assessment for Emergent Maintenance on A5 Emergency Bus Undervoltage Relays**

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 emergent maintenance on the A5 Emergency Bus undervoltage relays. Specifically, the inspectors noted that Entergy had downgraded an on-line risk assessment from Red to Green without a valid technical basis and did not recognize the unavailability of the automatic function of the Emergency Diesel Generator (EDG); as a result, Entergy did not evaluate or specify risk management actions.

This finding is more than minor because the risk assessment had incorrect assumptions that changed the outcome of the assessment. The inspectors conducted 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 relays were removed from service was significantly less than  $1E-6$  due to

the short amount of time the EDG was unavailable in the automatic mode and the reasonable assurance that operators could manually tie the EDG to the bus in the event of a Loss Of Offsite Power.

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, when faced with an unexpected plant condition. [H.1(a)]  
Inspection Report# : [2008002](#) (pdf)

**Significance:**  Sep 30, 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)

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## Barrier Integrity

**Significance:**  Apr 03, 2008

Identified By: NRC

Item Type: FIN Finding

**B.5.b Phase 2 and 3 Mitigating Strategy**

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 Human Performance (Resources). [H.2(c)]. See inspection report for more details.

Inspection Report# : [2008006](#) (pdf)

**Significance:**  Apr 03, 2008

Identified By: NRC

Item Type: FIN Finding

**B.5.b Phase 2 and 3 Mitigating Strategy**

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 Human Performance (Resources). [H.2(c)]. See inspection report

for more details.

Inspection Report# : [2008006](#) (*pdf*)

**Significance:** **G** Apr 03, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **B.5.b Phase 2 and 3 Mitigating Strategy**

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 Human Performance (Resources). [H.2(c)]. See inspection report for more details.

Inspection Report# : [2008006](#) (*pdf*)

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

**Significance:** **G** Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

### **Non-Representative Sampling of the Reactor Building Exhaust Vent**

The inspector identified a NCV of TS 5.5.4.c, "Radioactive Effluent Controls Program," for Entergy's failure to obtain representative effluent samples. Specifically, the sample flow rate through the isokinetic nozzles for the reactor building vent was too high to allow for representative samples. Entergy evaluated the impact of nonrepresentative (anisokinetic) sampling and determined the impact on the calculated doses to be minimal and within the uncertainties of typical sampling methodology.

The performance deficiency is that Entergy failed to obtain representative effluent samples of the reactor building vent, as required by the TS and the Offsite Dose Calculation Manual (ODCM). The finding is greater than minor because it is associated with the plant equipment and instrumentation attribute of the Public Radiation Safety Cornerstone and affects the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine plant operation. The finding was determined to be of very low safety significance because it impaired Entergy's ability to assess dose, although Entergy was able to assess dose, and dose to the public did not exceed the limits of 10 CFR 50, Appendix I, or 10 CFR 20.1301(d).

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

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## **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.

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# Miscellaneous

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