Indian Point 3
4Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Apr 23, 2010
Identified By: NRC
Item Type: FIN Finding
Corrective Actions That Were Developed to Address Causal Factors Associated with Reactor Trips Were Not Implemented in a Timely Manner
The inspectors identified a finding of very low safety significance (Green) related to the untimely completion of corrective actions that were associated with the August 10, 2009, Unit 3 automatic reactor trip due to the generator primary lockout relay trip and the May 15, 2009, Unit 3 manual trip initiated in response to an uncontrollable rise in steam generator water level that was caused when a main feedwater regulating valve did not Enclosure 3 properly control level. Specifically, Entergy personnel did not ensure that some corrective actions to inspect non-safety related components that could contribute to similar initiating conditions were scheduled and completed in a timely manner commensurate with their safety significance. The problem was entered into Entergy's corrective program as CR-IP2-2010-3299. Corrective actions included developing
schedules to complete the corrective actions.

The inspectors determined that this finding was more than minor because it was associated with the protection against external factors attribute (grid stability) and equipment performance attribute (reliability) of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, there is a potential for an increased probability of a reactor trip because corrective actions that were developed were not completed in a timely manner. The inspectors determined that this finding increased the likelihood of a reactor trip and was reasonably within Entergy's ability to foresee and prevent because corrective action program records were available which documented the plant equipment and program status and condition. The inspectors evaluated the significance of this finding using IMC 0609.04, "Phase I - Initial Screening and Characterization of Findings." The finding was determined to be of very low safety significance (Green) because the finding did not
contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available.

The inspectors determined that this finding had a cross-culling aspect in the area of problem identification and resolution within the corrective action program component because Entergy personnel did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, corrective actions to validate and correct the possible causes of the reactor trips were not scheduled and completed in a timely manner.
Inspection Report# : 2010007 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Repeated Control Room Air Conditioner Gasket Failures
An NRC-identified NCV of very low safety significance of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Actions,” was identified because Entergy personnel did not take prompt action to correct a condition adverse to quality regarding the safety-related control room air conditioning units. Specifically, Entergy personnel documented

bulging and leaking control room air conditioning (CCR A/C) condenser gaskets in multiple condition reports between June and November 2010, but did not correct the condition as evidenced by the repeated nature of the gasket issues. As a result, the CCR A/C units incurred periods of unavailability while the gaskets were repaired. Entergy personnel entered this issue into the corrective action program (CAP) as CR-IP3-2011-00018. Corrective actions include performing a higher-tier apparent cause evaluation for the repeated CCR A/C gasket issues and implementing temporary and permanent plant modifications to the CCR A/C condensers.

The inspectors determined the finding is more than minor because the finding is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, on multiple occasions, one of the CCR A/C unit trains would be made unavailable in order for Entergy personnel to conduct repairs on condenser gaskets to ensure continued reliability of the CCR A/C unit. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” and determined it was of very low safety significance (Green) because the issue was not a design or qualification deficiency, did not represent a loss of system safety function, and was not risk significant with respect to external events.

The inspectors determined that this finding had a cross-cutting aspect in the corrective action program area of Problem Identification and Resolution because Entergy personnel did not thoroughly evaluate problems such that the resolutions address causes and extent conditions, as necessary. Specifically, Entergy personnel did not classify and prioritize the repeated gasket failures in accordance with their CAP and fully evaluate the repeated gasket failures and implement corrective actions to correct the causes.
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
The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion II, “Quality Assurance Program (QAP),” because Entergy personnel did not implement the qualification and experience requirements of the QAP to ensure that an individual assigned to the position of quality assurance manager (QAM) met the qualification and experience requirements of ANSI/ANS 3.1-1978. Specifically, the individual assigned as the responsible person for the Entergy’s overall implementation of the QAP did not have at least one year of nuclear plant experience in the overall implementation of the QAP within the quality assurance organization prior to assuming those responsibilities. This issue was entered into Entergy’s CAP as CR-HQN-2010-00386.

This finding is more than minor because if left uncorrected, it could lead to a more significant safety concern. Specifically, the failure to have a fully qualified individual providing overall oversight to the QAP had the potential to affect all cornerstones. However, this finding will be tracked under the Mitigating Systems cornerstone as the area most likely to be impacted. The finding was not suitable for quantitative assessment using existing Significance Determination Process guidance. Using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," NRC management determined the finding to be of very low safety significance (Green) because other quality assurance program functions remained unaffected by this performance deficiency, so defense-in-depth continued to exist.

The inspectors determined there was no cross-cutting aspect associated with this finding because the performance deficiency did not reflect Entergy’s current performance. Specifically, the performance deficiency occurred more than three years ago and was outside the current assessment period.
Inspection Report# : 2010005 *(pdf)*

Significance: G Oct 29, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control of Service Water Strainer Room Flood Barrier
The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion lll,

Design Control, in that Entergy did not verify the adequacy of the flood barrier design for the service water (SW) strainer room to ensure safety-related equipment would not be impacted during a design basis flood. Specifically, electrical conduits which passed through the SW strainer room wall, separating the service water strainer room from the Hudson River, were not sealed. Additionally, the sump pump discharge piping which also passed through the wall did not have a backflow prevention device in the pipe. This resulted in the service water strainers being susceptible to flooding at the design flood level. Entergy entered the issue into their corrective action program for evaluation and installed seals in the conduits.

The finding was more than minor because it was associated with the externalfactors (flood hazard) attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team evaluated the finding using IMC 0609 Attachment 4 "Phase 1 - Initial Screening and Characterization of Findings," which determined that a Phase 3 evaluation was required because the finding screened as potentially risk significant due to a flooding event. The Region I Senior Reactor Analyst (SRA) performed a Phase 3 evaluation based on the plants Individual Plant Examination of External Events (IPEEE) study and determined the risk to be of very low safety significance (Green). The team did not identify a crosscutting aspect with this finding because this was an original design issue and therefore was not reflective of current performance.
Inspection Report# : 2010009 *(pdf)*

Significance: G Sep 30, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Identification and Correction of a Condition Adverse to Quality to Ensure the Continued Availability of the Safety-Related No. 31 Static Inverter
A self-revealing, non-cited violation (NCV) of very low safety significance (Green) of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Actions,” was identified because Entergy personnel did not adequately identify and correct a condition adverse to quality to ensure the continued availability of the safety related 31 static inverter. Specifically, Entergy personnel did not complete previously-identified corrective actions to ensure capacitors in critical components of the inverter were identified and replaced in a timely manner prior to the occurrence of age-related failures. Entergy personnel determined that degraded commutation capacitors were the cause of a fuse failure on September 14, 2010, and were identified to be 13 years old and installed significantly longer than the nine years recommended by the vendor. Entergy personnel entered the issue into the corrective action program and replaced the capacitor.

The finding was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the 31 static inverter incurred unnecessary unavailability hours and was inoperable and unavailable for approximately five days following the fuse failure on September 14, 2010. The inspectors determined the finding was of very low safety significance (Green) because the finding was not a design or qualification deficiency, did not represent a loss of system safety function, and was not risk significant with respect to external events.

The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution because Entergy personnel did not complete adequate and timely corrective actions to implement a capacitor program and identify critical capacitors for replacement prior to a failure that resulted in the unavailability of a safety related inverter.
Inspection Report# : 2010004 *(pdf)*

Significance: G Jul 01, 2010
Identified By: NRC

Item Type: FIN Finding
Procedural Requirements for N-38 Component Classification for Preventative Maintenance Not Implemented
An NRC-identified finding of very low safety significance was identified because Entergy personnel did not implement procedural requirements for component classification. Specifically, Entergy staff did not classify the N-38 neutron detector as a high critical component, contrary to the guidance provided in EN-DC-153, "Preventative Maintenance (PM) Component Classification." As a result, N-38 was not included in the site power supply PM program in 2008 which contributed to the detector's low voltage power supply (LVPS) failure on September 15, 2009, due to age-related degradation, causing a safety system functional failure of N-38. The issue was entered into Entergy's corrective action program. The LVPS was replaced, an extent of condition was performed, and N-38 and other remote shutdown instrumentation were appropriately classified as high critical for preventative maintenance in accordance with site procedures.

The finding is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the age-related failure of the power supply resulted in N-38 being inoperable for a period of time. A Region I Senior Reactor Analyst (SRA) evaluated the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," and qualitatively determined that the finding screened as very low safety significance (Green) because it only affected the ability to reach and maintain cold shutdown conditions.

The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance within the Decision Making component because Entergy personnel did not make safety-significant decisions using a systematic process, to ensure safety was maintained, including obtaining interdisciplinary input and reviews on safety significant decisions. Specifically, Entergy staff did not incorporate the procedural direction within EN-DC-153 to classify N-38 as a high-critical component.
Inspection Report# : 2010003 *(pdf)*

Significance: G Jul 01, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Operability Evaluation for Neutron Detector N-38 Anomalous Behavior
An NRC-identified NCV of very low safety significance of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified because Entergy personnel did not perform an adequate operability evaluation in accordance with procedure EN-OP-104, "Operability Determination Process." Specifically, Entergy personnel did not incorporate interdisciplinary input and adequate technical information to ensure the continued operability of the neutron detector N-38 when testing and subsequent troubleshooting indicated that the N-38 LVPS was degraded on September 24, 2009. As a result, N-38 was not declared inoperable until October 14, 2009, when Entergy personnel recognized that the LVPS had failed and took action to replace the LVPS. Entergy staff performed a past operability evaluation and determined that N-38 was inoperable since September 15, 2009. Entergy personnel entered this issue into their corrective action program. Corrective actions planned include providing neutron detector system training to maintenance and engineering, revising procedural requirements for identifying and correcting potential neutron detector performance issues and revising LER 2009-009 to report the additional N-38 inoperability identified during the past operability review.

The finding is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, because N-38 was inappropriately determined to be operable on September 24, 2009, N-38 accrued an additional 21 days of inoperability, during which time it was unable to perform its safety function. A Region I SRA evaluated the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," and qualitatively determined that the finding screened as very low safety significance (Green) because it only affected the ability to reach and maintain cold shutdown conditions.

The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance within the Decision Making component because Entergy staff did not make safety-significant decisions using a systematic process, especially when faced with uncertain plant conditions, to ensure safety was maintained. Specifically, Entergy

staff did not fully incorporate engineering, maintenance, and vendor input to fully evaluate and properly ascertain the operability of N-38 when instrument performance anomalies were identified in September 2009.
Inspection Report# : 2010003 *(pdf)*

Significance: G Mar 30, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Maintenance Procedures for the Steam-Driven Auxiliary Boiler Feedwater (AFW) Pump
A self-revealing finding of very low safety significance was identified because Entergy personnel did not have adequate procedures appropriate for the circumstances for maintenance associated with the steam-driven auxiliary feedwater (AFW) pump. Specifically, Entergy implemented maintenance procedures associated with the 32 AFW pump, which contained coupling gap dimensions inconsistent with vendor requirements, and did not ensure appropriate shaft axial alignment for continued, reliable pump operation. As a result, in February 2010, high pump axial vibrations exceeded operability limits during scheduled surveillance testing, the pump was removed from service, and troubleshooting was initiated to determine the cause. Entergy personnel performed turbine-end bearing replacements, oil flush and refill of all bearing housings, performed coupling inspections and shaft alignment, successfully performed post-maintenance surveillance testing, and performed an apparent cause evaluation within the corrective action program under condition report (CR)-IP3-2010-00541 and IP3-2009-04592.

The inspectors determined the finding is more than minor because the finding is associated with the procedure quality objective of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the inadequate procedures resulted in increased unavailability to evaluate and correct vibration and other issues between November 2009 and February 2010. The inspectors evaluated the significance of the finding using IMC 0609, Attachment 4, and determined this finding was not a design or qualification deficiency, did not result in a loss of safety function, and was not impacted by external events. Consequently, the finding is of very low safety significance.

The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance because Entergy staff did not ensure that complete, accurate and up-to-date procedures were available to perform appropriate maintenance on a safety-related AFW pump.
Inspection Report# : 2010002 *(pdf)*

Significance: G Mar 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Preconditioning of RWST Level Switch
An NRC-identified non-cited violation (NCV) of very low safety significance of 10 CFR 50, Appendix B, Criterion XI, “Test control,” was identified because Entergy technicians conducted unacceptable preconditioning by cycling the Refueling Water Storage Tank (RWST) lo-lo level alarm switch prior to recording the as-found set-point during Technical Specification Surveillance Requirement (SR) 3.5.4.5.

The finding was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of procedure quality and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, preconditioning of the RWST Lo-Lo Level Alarm switch could mask its actual as-found condition and result in an inability to verity its operability, as well as make it difficult to determine whether the switch would perform its intended safety function during an event. The inspectors evaluated the finding using IMC 0609, Attachment 4, “Initial Screening and Characterization of Findings,” and determined the finding was of very low safety significance because the finding is not a design or qualification deficiency, did not result in the loss of a safety function, and was not risk significant due to external events.

The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution because Entergy did not implement and institutionalize operating experience (OE) through changes to station processes, procedures, equipment, and training programs. Specifically, Entergy did not utilize NRC published

guidance and lessons learned from recent preconditioning incidents at Entergy sites to preclude preconditioning the RWST Lo-Lo Level Alarm Switch prior to recording the as-found switch set-point.
Inspection Report# : 2010002 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure of the Offsite Notification Procedure to Meet the Requirements of the Site Emergency Plan
An NRC-identified Green NCV of 10 CFR 50.54, “Conditions of Licenses,” paragraph (q), was identified because the Entergy emergency plan implementing procedure (EPIP) for notification of offsite officials did not meet the requirements of the IPEC Emergency Plan. This EPIP had contained a deficiency in the backup process for offsite notification since July 2006. Entergy personnel responded by documenting the deficiency in CR-IP2-2010-07563 and by initiating a procedure change to align the backup process with the Emergency Plan commitments.

This finding is more than minor because it affected the Emergency Response Organization attribute of the EP cornerstone to ensure that the Entergy personnel are capable of implementing adequate measures to protect the public health and safety in the event of a radiological emergency. Entergy procedures allowed for a back-up notification process that did not comply with the requirements of the site emergency plan: the Emergency Plan requires that the Shift Manager or his designee notify the offsite authorities of an emergency declaration, while Form EP-4 directed the delegation of this responsibility to an offsite authority itself. In accordance with Inspection Manual Chapter (IMC) 0609, Appendix B, “Emergency Preparedness Significance Determination Process,” the inspectors determined the finding to be of very low safety significance (Green). Using IMC 0609, Appendix B, Section 4.5 and Sheet 1, “Failure to Comply,” the inspectors determined that the failure to comply with an aspect of the Emergency Plan related to event notification (10 CFR 50.47(b)(5)) was a Risk Significant Planning Standard (RSPS) problem. It was not a RSPS functional failure of the IPEC event notification process, because the deficiency in the IPEC EPIP was in the backup method for offsite notification, and despite the procedural flaw offsite notifications were made in a timely and accurate manner on November 7, 2010.

The inspectors determined there was no cross-cutting aspect associated with this finding because the performance deficiency did not reflect Entergy’s current performance. Specifically, the performance deficiency, associated with a procedure change made in July 2006, occurred more than three years ago and was outside the current assessment period.
Inspection Report# : 2010005 *(pdf)*

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

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