Indian Point 3
4Q/2011 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Entergy Personnel Did Not Evaluate and Monitor a Terminal Barrier Boric Acid Leak
The inspectors identified a NCV of 10 CFR 50, Appendix B, Criterion V, "lnstructions, Procedures, and Drawings," of very low safety significance (Green) because Entergy personnel did not adequately implement Boric Acid Control procedures. Specifically, Entergy personnel did not fully implement procedure EN-DC-319, "lnspection and Evaluation of Boric Acid Leaks" and Engineering Report IP-RPT-07-00093, "Boric Acid Corrosion Control Program," and conduct boric acid evaluations or implement adequate monitoring actions for an identified leak from the lower thermal barrier flange joint (a bolted connection with a gasket) associated with the 32 RCP between 2005 and 2Q11. This issue was entered into the Entergy corrective action program as condition report (CR)-lP3-2011-01546. Corrective actions included performing the required evaluation in 2011 (3R16) and implementing leak monitoring actions for the next operating cycle.

The inspectors determined the finding was more than minor because the finding is associated with the Equipment Performance attribute 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 shutdown as well as at power operations. Additionally, the inspectors determined that more than minor example 4.a of IMC 0612, Appendix E was similar because Entergy personnel had not performed engineering evaluations on this boric acid leak from 2005 - 2011. The inspectors completed Attachment 0609.04, Phase 1- Initial Screening and Characterization of Findings and screened the finding in accordance with Table 4a. The inspectors concluded that, assuming the worst case degradation of the leakage condition, this condition would not result in exceeding the Technical Specification (TS) limit for identified leakage and that the finding would not be likely to affect other mitigation systems which could result in a loss of safety function. Therefore, the inspectors determined this finding was of very low safety significance.

The inspectors determined this finding had a cross-cutting in the area of Human Performance associated with the Work Practice attribute because Entergy personneldid not follow procedures as written.
Inspection Report# : 2011002 *(pdf)*

Mitigating Systems

Significance: G Aug 05, 2011
Identified By: NRC
Item Type: FIN Finding
Procedural Requirements of Engineering Change Process Not Implemented
The inspectors identified a finding of very low safety significance (Green) because

Entergy personnel did not adequately implement the procedural requirements of EN-DC-115, "Engineering Change Process," during the installation of a modification to the 33 instrument air desiccant dryer. Specifically, Entergy staff incorrectly replaced fuses in the motor control center (MCC] which powers the dryer with smaller capacity fuses, rather than replacing existing control power fuses in the dryer control panel with fuses of increased capacity, as intended by the design change. As a result, the fuses in the MCC performed their intended function and burned out, deenergizing the dryer, and leading to excessive unavailability of the dryer and high humidity air in the instrument air header. Entergy staff entered this issue into their corrective action process as condition report (CR)-lP3-2011-03798.

The inspectors determined the finding was more than minor because the finding was similar to the "more than minor if" statement associated with example 5.b of Inspection Manual Chapter (lMC) 0612 Appendix E, "Examples of Minor lssues." Additionally, the finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the unavailability of the 33 instrument air dryer caused moist air in the instrument air header which in turn led to high humidity and low pressure alarms on the 33 instrument air header. The inspectors evaluated the finding using IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," and determined the finding was of very low safety significance because the finding was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to external initiating events. This finding had a cross-cutting aspect in the area of Human Performance, associated with the Work Control attribute. Specifically, Entergy personnel did not adequately coordinate the planning and implementation of the engineering change process, which involved several site departments, and resulted in incorrectly installed fuses and multiple missed opportunities to both prevent and identify the error.
Inspection Report# : 2011010 *(pdf)*

Significance: G Aug 05, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Corrective Action for Degraded EDG SW Piping
The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVl, "Corrective Action," for Entergy's failure to take adequate corrective actions for a condition adverse to quality involving service water (SW) pipes to the emergency diesel generators (EDGs). Speciiically, Entergy personnel did not take timely and appropriate corrective actions ior carbon steel pipe wall thinning on the common SW supply lines to the EDGs. Entergy staff entered this issue into their corrective action process as condition report (CR)-IP3-2011003831. Entergy's short-term corrective actions included a structural engineering inspection, an operability evaluation, redirecting the source of continual wetting, and reprioritizing the SW piping refurbishment work order. Subsequent to this inspection, Entergy personnel performed ultrasonic testing of the affected area on one of the pipes that They concluded was most affected and confirmed that the pipe remained operable.

The finding was more than minor because it left uncorrected the performance deficiency had the potential to lead to a more significant safety concern. Specifically, the continuing wetting and associated external corrosion of the pipe without appropriate monitoring could adversely impact the structural integrity of one or both EDG SW supply headers. The inspectors evaluated the finding in accordance with lnspection Manual Chapter (lMC) 0609, Attachment 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," and determined the finding was of very low safety significance (Green) because it 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. This finding had a

cross-cutting aspect in the area of Problem Identification and Resolution, associated with the Corrective Action Program attribute. Specifically, Entergy personnel did not take timely corrective actions to address SW carbon steel pipe wall thinning due to external corrosion and periodically monitor the pipe for further degradation, commensurate with the safety significance of the pipe.
Inspection Report# : 2011010 *(pdf)*

Significance: G Jun 30, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure and Procedural Compliance for 33 Inverter Overhaul
The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” because Entergy did not assure that the overhaul of the 33 inverter was prescribed by an appropriate procedure and that the overhaul was performed in accordance with the procedure, which resulted in restoring the safety-related inverter to service without completing the necessary post-maintenance testing. Specifically, during March 2011, an overhaul of the 33 inverter was performed with an inadequate procedure and a portion of the post-maintenance testing was not performed. This issue was entered into Entergy’s corrective action program (CAP) as condition reports CR-IP3-2011-03148 and CR-IP3-03432.

This finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and adversely affects the objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors determined this finding was of very low safety significance (Green) because the finding was not related to a design or qualification deficiency, did not represent a loss of system safety function, and the finding did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

The finding has a cross-cutting aspect in the area of Human Performance associated with the Work Practices attribute, because Entergy personnel did not ensure that supervisory and management oversight of work activities was adequate. Specifically, the work order for the overhaul of the 33 inverter was issued with inadequate guidance; the work was, in part, performed without using procedures; and a portion of the post-maintenance testing was not performed, as required.

Inspection Report# : 2011003 *(pdf)*

Significance: G May 27, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inappropriate Interim Compensatory Measure for Service Water Strainer Backwash Function
The team identified a Green, Non-Cited Violation (NCV) of Indian Point Nuclear Generating Unit 3 Operating License Condition 2.H, in that Entergy did not establish an appropriate interim compensatory measure for several fire areas where 10 CFR 50 Appendix R paragraph lll.G.2 fire protection deficiencies associated with the fire protection of service water (SW) strainer motors and backwash valves existed. Specifically, Entergy in response to Regulatory lssue Summary (RlS) 2006-10, "Regulatory Expectations with Appendix R Paragraph lll.G.2 Operator Manual Actions," dated June 30, 2006, identified on September 5, 2006, that operator manual actions (OMAs) were being utilized in several fire areas instead of the fire protection options specified in paragraph lll.G.2 and without an exemption from the NRC staff. For fire areas that potentially impacted the electrical circuits to the SW strainers, Entergy continued to maintain the OMA to manually backwash SW strainers as an interim compensatory measure while seeking NRC staff approval through the exemption process. The team identified that the interim compensatory measure was inappropriate because it was too complex and beyond the limited scope of an OMA to achieve and maintain postfire hot shutdown. Entergy entered the Unit 3 SW strainer OMA issue into

its corrective action program for long term resolution as condition report CR-IP3-2011-02951 and promptly established an hourly fire watch in fire areas where SW strainer circuits may be affected.

This finding is more than minor because it is associated with the External Factors attribute (fire) of the Mitigating Systems Cornerstone and adversely affected its objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the reliability of SW was not ensured for fire scenarios that damage circuits to the SW strainer motor or backwash valve. The team evaluated this issue using Phase 1 of IMC 0609, Appendix F, Fire Protection Significance Determination Process (SDP), and determined that the issue screened to Green because a low degradation factor was assigned. The team assigned a low degradation factor because although the manual actions were beyond the scope of an OMA and Entergy did not appropriately evaluate feasibility, the team determined several hours would likely exist to complete the action before strainer differential pressure (d/p) challenged SW flow to the emergency diesel generators and the OMA would be successful to maintain adequate SW flow.

The team determined that this finding has a cross-cutting aspect in the area of Problem ldentification and Resolution associated with the attribute of the corrective action program because Entergy personnel did not thoroughly evaluate necessary considerations associated with the Unit 3 SW strainer OMA. Specifically, Entergy walked down all OMAs on May 20, 2011, to evaluate feasibility but did not identify issues related to incomplete pre-staged tools, an OMA procedure with steps associated with normal maintenance conditions that would delay implementation, and control room annunciator circuits that may be affected by the fire.
Inspection Report# : 2011008 *(pdf)*

Significance: SL-IV Mar 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Submit an LER for a Condition Prohibited by TS Associated with 31 Battery Charger Inoperability
The inspectors identified a Severity Level lV, NCV of 10 CFR 50.73(a)(2)(iXB), because Entergy personnel did not provide a written Licensee Event Report (LER) to the NRC within 60 days of identifying a condition which was prohibited by plant Technical Specifications (TS) 3.8.4, "DC Sources - Operating."

On October 13,2010, Entergy personnel identifled the 31 battery charger (BC) had low and non-adjustable float voltage during the weekly battery inspection surveillance. That the same day, the 31 static inverter unexpectedly and automatically transferred to its alternate power source, and the installed spare battery charger was subsequently placed in service. Entergy staff completed an apparent cause evaluation (ACE) for this event on November 1,2010. In the ACE, Entergy staff documented their determination that the 31 battery charger had been incapable of performing its safety function and classified the issue as a maintenance rule functionalfailure because the 31 battery charger had failed to provide reliable output voltage. Subsequent to the inspectors' questioning, Entergy personnel performed a past operability review and determined that the 31 battery charger was inoperable and left in service for 8 hours and 27 minutes, thus exceeding the TS AOT of two hours. Based on this review, Entergy personnel concluded that the condition met the criteria for reporting under 10 CFR 50.73 (aX2XiXB) and that a 60-day report was required to have been submitted to the NRC. Entergy's completed corrective actions included the initiation of CR-fP3-2011-00092, and the performance of a past operability review. Planned corrective actions include the submittal of a licensee event report (LER) to the NRC.

This violation involved a failure to make a required report to the NRC and is considered to impact the regulatory process. Such violations are dispositioned using the traditional

enforcement process instead of the Significance Determination Process. Using the Enforcement Policy Section 6.9, "lnaccurate and Incomplete Information or Failure to Make a Required Report," example (dX8), which states "A licensee fails to make a report required by 10 CFR 50.72 or 10 CFR 50.73," the NRC determined that this violation is more than minor and categorized as a Severity Level lV violation.

Because this violation involves the traditional enforcement process with no underlying technical violation that would be considered more than minor in accordance with IMC 4612, a cross-cutting aspect is not assigned to this violation.
Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Lifting of 32 ABFP Steam Supply Relief Valve
A self-revealing NCV of very low safety significance (Green) of 10 CFR 50, Appendix B, Criterion Xl, 'Test Control,'was identified because Entergy personnel did not establish an adequate test program to assure that the 32 ABFP steam supply relief valve would perform satisfactorily. Specifically, Entergy personnel did not ensure the 'PCV-1139 Valve and Controller Replacement' modification (Minor Modification Package 97-3-320) acceptance values for the remote setpoint pressure regulating valve MS-PR-1 139-5 were incorporated into testing procedures. Entergy personnel entered this issue into their CAP as CR-lP3-2011-00232. Corrective actions include performing a higher tier apparent cause evaluation, performing an operability evaluation and reviewing applicable procedures to ensure that control of the setpoint is maintained.

The finding was more than minor because the finding is associated with the Design Control 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, as evidenced during the performance of 3-PT-1208 on January 21 , 2011 , PCV-1 139 did not maintain pressure in the normal band on startup and allowed pressure to increase to a level that allowed the steam supply relief valve, MS-52, to repeatedly lift, causing unanticipated unavailability of the 32 ABFP. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, 'Phase 1 - lnitial Screening and Characterization of Findings,'and determined it 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 initiating events.

The inspectors determined that this finding had a cross-cutting aspect in the resources program area of Human Performance because Entergy personnel did not ensure that complete, accurate and up{o-date design documentation and procedures were adequate to assure nuclear safety. Specifically, Entergy personnel did not properly incorporate into procedures the acceptance values for the remote setpoint pressure regulating valve.
Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Application of Sealant Resulted in Drain Blockage for the Turbine-Driven Auxiliary Feedwater Pump
The inspectors identified a NCV of very low safety significance (Green) of 10 CFR 50, Appendix B, Criterion XVl, "Corrective Actions," because Entergy personnel did not identify and correct a condition adverse to quality with regard to packing leakoff

reservoir drain line blockage for the 32 ABFP which likely existed for some timeframe between October 2010 and January 2011. Specifically, Entergy personneldid not identify and correct inappropriate application of sealant coupled with drain line blockage that resulted in inadequate drainage of the leakoff reservoir associated with the 32 ABFP. This condition most likely resulted in water intrusion into the pump's outboard bearing housing in January 2011. Entergy personnel entered this issue into their CAP as CR-lP3-2011-00018. Corrective actions included the performance of a higher-tier apparent cause evaluation for the oil/water mixture identified; flush, drain and refill of the affected bearing housing to remove residualwater contamination; and removal of the sealant on the pump leakoff reservoir drain to prevent recurrence.

The finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected its objective of ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the water intrusion in the bearing housing as a result of the performance issue could adversely impact the bearing cooling function of the pump. The inspectors determined the finding was of very low safety significance (Green) in accordance with Table 4a of IMC 0609, Attachment 4, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The inspectors concluded that the water intrusion in the 32 ABFP pump outboard bearing housing, while it caused unanticipated unavailability, did not result in a loss of operability or safety function of the 32 ABFP and was not risk significant with respect to external initiating events.

This finding has a cross-cutting aspect in the area of Problem ldentification and Resolution associated with the attribute of the corrective action program because Entergy personnel did not thoroughly identify and correct drain line blockage indications for the turbine-driven ABFP.
Inspection Report# : 2011002 *(pdf)*

Barrier Integrity

Significance: G Dec 01, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Implement an Approved Setpoint Change to Reactor Protection System Instruments
The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," in that Entergy did not ensure that design changes, including field changes, were subject to design control measures commensurate with those applied to the original design. Entergy implemented an instrument setpoint change, but delayed re-calibration of the in-field setpoint values and did not evaluate the adequacy of the in field actual setpoints, which were later found outside the value required by the design basis. Specifically, Entergy revised surveillance procedures for the Unit 2 reactor protection system (RPS) over-power delta-temperature (OPdT) instrument to use a setpoint value specified in the Core Operating Limits Report (COLR). However, the procedures were not required to be performed until the next regularly scheduled surveillance period. Technical Specification 3.3.1 requires the allowable values to be set as specified by the COLR. Two of the four instrument channels had in-field values outside of the required allowable value. Entergy entered this issue into their corrective action program and performed an immediate operability evaluation and determined that the OPdT instrument was capable of performing its intended functions with the current in field values.

The team determined that the failure to ensure in-service instrument setpoint values satisfied design and licensing basis requirements was a performance deficiency. This issue was more than minor because it was associated with the design control attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (e.g., fuel cladding) protect the public from radionuclide releases caused by accidents or events. The team performed a Phase 1 Significance Determination Process screening,

in accordance with NRC IMC 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined the finding was of very low safety significance (Green) because it affected only fuel barrier portion of the barrier integrity cornerstone.

The team determined that this finding had a cross-cutting aspect in the area of Human Performance, Work Practices because Entergy did not ensure adequate supervisory or management oversight of a design change.
Inspection Report# : 2011007 *(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

Last modified : March 02, 2012