

Indian Point 3

3Q/2011 Plant Inspection Findings

Initiating Events

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Significance: 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, "Instructions, 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, "Inspection 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)-IP3-2011-01546. 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 personnel did not follow procedures as written.

Inspection Report# : [2011002 \(pdf\)](#)

Mitigating Systems

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Significance: 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)-IP3-2011-03798.

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 (IMC) 0612 Appendix E, "Examples of Minor Issues." 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)

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Significance: 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 XVI, "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). Specifically, Entergy personnel did not take timely and appropriate corrective actions for 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 Inspection Manual Chapter (IMC) 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)

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Significance: 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)

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Significance: 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 III.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 Issue Summary (RIS) 2006-10, "Regulatory Expectations with Appendix R Paragraph III.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 III.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 Identification 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 IV, 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 identified the 31 battery charger (BC) had low and non-adjustable float voltage during the weekly battery inspection surveillance. That 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 functional failure 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, "Inaccurate 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 IV 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 \(pdf\)](#)

G

Significance: 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 XI, '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-IP3-2011-00232. 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 - Initial 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-to-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 \(pdf\)](#)

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Significance: 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 XVI, "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 personnel did 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-IP3-2011-00018. 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 residual water 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 Identification 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)

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Significance: 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 \(pdf\)](#)

G

Significance: 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 \(pdf\)](#)

G

Significance: 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 III, 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 external factors (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 \(pdf\)](#)

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

Last modified : January 04, 2012