

Indian Point 2

1Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2004

Identified By: Self Disclosing

Item Type: FIN Finding

INADEQUATE CORRECTIVE ACTIONS ASSOCIATED WITH STATOR WATER COOLING PRESSURE SWITCH

The inspector identified a self-revealing Green finding involving poor causal analysis associated with the main generator stator water cooling (SWC) system. The ineffective causal analysis was associated with the settings of the generator protection trip pressure switch (63-P79). The finding resulted in an automatic reactor trip due to a low inlet pressure condition on the main generator SWC system.

The finding is more than minor since it impacts the Initiating Event cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions, and is associated with the equipment performance attribute. Specifically, the finding affects the likelihood of a reactor trip and challenges the critical safety function of auxiliary feedwater (AFW) initiation. The finding is of very low risk significance (Green) since it does not contribute to both the likelihood of a reactor trip and the likelihood of mitigation equipment functions being unavailable. The finding is associated with the cross-cutting area of problem identification and resolution (PI&R) based on the ineffective causal analysis for previously identified deficiencies affecting the SWC system.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

IMPROPER INSTALLATION OF REACTOR COOLANT SYSTEM LOOP FLOW TUBING RESULTING IN REACTOR COOLANT SYSTEM LEAKAGE

The inspector identified a self-revealing Green non-cited violation of 10 CFR 50 Appendix B, Criterion V "Instructions, Procedures and Drawings." Maintenance personnel did not verify that the length of tubing between the RACK 20 bulkhead connection and the existing 21 Reactor Coolant Loop Flow (FT-416) Hi side impulse tubing was sufficient for a proper Swagelok connection pursuant to procedure IP-SMM-MA-108.

The finding is more than minor since it impacts the Initiating Event cornerstone objective of limiting the likelihood of those events that upset plant stability and challenges critical safety functions, and is associated with the procedural quality attribute. Specifically, the finding affects the likelihood of a reactor coolant system (RCS) leak that upsets plant stability and challenges critical safety functions. This finding is of very low risk significance (Green) since worst case degradation would not result in exceeding the technical specification (TS) limit for identified leakage (10 gpm) and it does not affect the mitigation system's safety functions.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW RCS DRAINDOWN PROCEDURE DUE TO INAPPROPRIATE APPROACH

The inspector identified a self-revealing Green non-cited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings" associated with a reactor vessel water level control issue during the drain down for the reactor vessel head re-installation on November 11, 2004. Specifically, an inappropriate level reduction rate existed by procedure, such that when communications to field operational personnel were temporarily lost and manual valve manipulations to reduce the rate were delayed, a two foot lower reactor vessel water level resulted.

This finding is more than minor, because it potentially affects the Initiating Events cornerstone objective of limiting the likelihood of events that challenge critical safety functions during shutdown, and is associated with the procedural quality attribute. This finding is considered to be of very low safety significance (Green), because residual heat removal (RHR) shutdown cooling remained operable and gravity re-flood of the reactor without operator action would have limited the consequences of any potential loss of shutdown cooling.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: FIN Finding

INADEQUATE CAUSAL ANALYSIS FOR 22 FEEDWATER REGULATING VALVE

The inspectors identified a finding involving ineffective causal analysis for feedwater flow perturbations that led to a manual reactor trip on September 1, 2004. Ineffective causal analysis between September 1 - 5, resulted in two power escalation attempts without successfully identifying the direct cause of the feedwater flow perturbations. The effectiveness of Entergy's causal analysis was affected by informal troubleshooting and a variety of corrected equipment problems that did not support the underlying direct cause of the feedwater flow problem.

This finding is more than minor since if left uncorrected the finding would become a more significant safety concern. Specifically, if the effectiveness of Entergy's approach to causal analysis were not addressed, recurring plant transients and safety system challenges would result in a more significant safety concern. This finding affects the Initiating Event cornerstone since the two subsequent power changes did increase the likelihood of a reactor trip due to challenging reactor protection system (RPS) set points on steam generator level. The issue is considered to be of very low safety significance since the finding did not impact mitigation equipment availability or function. This issue was placed in Entergy's corrective action program (CAP) as CR-IP2-2004-04291. This finding is considered relevant to problem identification and resolution (PI&R) since it relates to Entergy's effectiveness in resolving problems.

Inspection Report# : [2004008\(pdf\)](#)

G

Significance: Sep 30, 2004

Identified By: Self Disclosing

Item Type: FIN Finding

FAILURE TO PROMPTLY IDENTIFY DEGRADED CONDITIONS ASSOCIATED WITH THE 23 FEEDWATER REGULATING VALVE

A self-revealing Green finding related to the failure to promptly identify a degraded condition between September 2 - September 24 associated with the 23 feedwater regulating valve (FWRV) solenoid SOV-E. The failure to promptly identify and correct deficiencies associated with SOV-E resulted in a manual reactor trip on September 24, 2004. Entergy's actions were ineffective in that feedwater (FW) piping walkdowns following several feedwater transients failed to identify degradation of the solenoids' L-shaped conduit bracket. Furthermore, on September 20, 2004, when degradation of the L-shaped bracket for SOV-E was identified, it was not entered in Entergy's CAP. Subsequently, the degraded L-shaped bracket for SOV-E led to a manual reactor trip on September 24.

This finding was greater than minor since it adversely affected the Initiating Events cornerstone objective of limiting the likelihood of those events that upset plant stability (manual reactor trip) and challenge critical safety functions (initiation of auxiliary feedwater due to a partial loss of main FW flow) during power operations. The finding was associated with the cornerstone attribute of equipment performance since the solenoid valve for the 23 FWRV impacted the reliability of an FW isolation signal. The finding is of very low safety significance because the failure of the FW isolation solenoid contributed to the likelihood of a reactor trip; however, it did not affect the likelihood that other mitigation systems would not be available. On September 24, 2004, this issue was placed in Entergy's CAP as CR-IP2-2004-04522. This finding is considered relevant to PI&R since it relates to Entergy's effectiveness in identifying problems.

Inspection Report# : [2004008\(pdf\)](#)

Mitigating Systems

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO IMPLEMENT ADEQUATE PROCEDURES FOR EMERGENCY CORE COOLING SYSTEMS OPERATIONS

The inspector identified a Green non-cited violation of TS 5.4.1 associated with Entergy's failure to properly implement procedure 2-COL 10.0, "Locked Safeguards Valves." Residual heat removal recirculation valve AC-1863 was left in the shut position during the restart from IP2 refueling outage No. 16 (2RF16). The valve was not locked open in accordance with 2-COL 10.0 prior to entering Mode 4 due to the sequence of procedures performed at the end of the refueling outage.

The finding is more than minor because it is associated with the Mitigating Systems cornerstone attribute of configuration control and adversely affects the capability of systems that respond to initiating events to prevent undesirable consequences. The finding involves the unavailability of a design feature described in the Final Safety Analysis Report (FSAR) that would ensure the capability to continue high-head recirculation after a loss of coolant accident (LOCA) in the event of certain system failures. This finding is of very low safety significance (Green), because the normal flow paths for establishing flow to the safety injection (SI) pump suction during high-head recirculation remained available for the duration of the period that valve AC-1863 was shut. This finding is associated with the cross-cutting area of human performance, in that, operators did not adequately assess a change in the sequence of procedures performed during the refueling outage.

Inspection Report# : [2004012\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

INADEQUATE MAINTENANCE PROCEDURE RESULTING IN ALL EDG'S BEING DECLARED INOPERABLE DUE TO DEFEATING SBO LOGIC

The inspector identified a self-revealing Green non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings." A maintenance procedure for trip checks associated with the 345KV electrical feeder was inadequate since it did not provide appropriate directions for the test set-up. As a result, technicians unintentionally reset the main generator lock-out relays by using test stabs which defeated the station blackout (SBO) relays associated with the emergency diesel generators (EDGs) starting logic.

The finding is more than minor since it affects the procedure quality attribute of the Mitigating Systems cornerstone and impacts the cornerstone objective of ensuring availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance (Green) due to low exposure time, credit for manual actions in the abnormal operating procedures (AOPs) to restore power to the safety-related 480 volt buses and start the required loads to stabilize plant conditions, and the availability of other mitigating equipment (ie. steam driven AFW pump and gas turbines 1 and 2).

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

INADEQUATE PREVENTATIVE MAINTENANCE PROCEDURE IMPLEMENTATION RESULTING IN A LOSS OF SAFEGUARDS BUS 6A

The inspector identified a self-revealing Green, non-cited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The finding involved improper maintenance on a 480 volt cross-tie breaker (52/3AT6A). Maintenance personnel did not install the main line contactors for breaker (52/3AT6A) consistent with maintenance procedure BRK-P-003-A, "Westinghouse Model DB-75 Breaker - Preventative Maintenance."

The finding is greater than minor since it affects the Mitigating Systems cornerstone objective of ensuring the availability of the RHR system and to prevent undesirable consequences such as core damage due to lack of core cooling during plant shutdown. The performance finding affects the Mitigating Systems cornerstone attribute of procedural quality (breaker preventative maintenance (PM) procedure). This finding is considered to be of very low safety significance since it did not degrade Entergy's ability to terminate a leak path or add reactor coolant inventory when needed, or degrade Entergy's ability to recover RHR once it is was lost. This finding is associated with the cross-cutting area of human performance, in that maintenance personnel did not implement a 480 volt breaker PM procedure correctly.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

MULTIPLE DEFICIENCIES IN SURVEILLANCE PROCEDURES ASSOCIATED WITH ITS CONVERSION

The inspectors identified a Green non-cited violation of 10 CFR 50 Appendix B, Criterion VI, "Document Control." Inadequate document control resulted in multiple surveillance procedures not meeting the criteria of the Improved Technical Specifications (ITS) surveillance requirements (SRs) or the applicable ITS basis document.

The finding is more than minor since, if left uncorrected, it would become a more significant safety concern potentially impacting multiple SRs of safety-related equipment and equipment important to safety. The performance finding affects the Mitigating Systems cornerstone attribute of procedural quality. This finding is considered to be of very low risk significance (Green) since it had not resulted in a loss of safety function or in any inoperable equipment.

Inspection Report# : [2004012\(pdf\)](#)

Significance:  Jul 20, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement appropriate and timely corrective actions for known deficiencies in the control program(s) and installation of safety related electrical cables and raceways.

Green. The team identified three examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for Entergy's failure to promptly identify and take actions to address conditions adverse to quality concerning one example of resolution of Data Verification Transfer Report (DVTR) Items/Operability Assessments; and two examples of configuration control of electrical raceways and cables.

Inspection Report# : [2004009\(pdf\)](#)

Significance:  Jul 20, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement appropriate design controls for electrical cable and raceway installations.

Green. The team identified three examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, for Entergy's failure to implement appropriate design controls for the installation of safety related electrical cables and raceways.

Inspection Report# : [2004009\(pdf\)](#)

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Significance: Jul 20, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to properly control cable separation program documents.

Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVII, Quality Assurance Records, for Entergy's failure to properly control the cable separation program documents. These documents include some reports never being reviewed, approved, and signed off as well as documents used in part for design specifications and DBD work not entered into the document control program to ensure retrieveability.

Inspection Report# : [2004009\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: FIN Finding

Failure to implement adequate corrective actions for low voltage conditions on the 13.8 kV system.

The inspectors identified a finding due to ineffective and untimely corrective actions associated with the 13.8 KV system during reduced voltage conditions.

This finding was determined to be greater than minor since it impacts the mitigating systems cornerstone objective of ensuring system reliability and capability. This finding was associated with the procedure quality attribute of that cornerstone. This finding was of very low safety significance since there was no loss of the normal offsite power supplies and the 13.8 KV system was not providing power to any safety-related loads during the degraded condition.

Inspection Report# : [2004006\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement appropriate design controls during modifications to the recirculation sump.

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, for Entergy's failure to translate the emergency core cooling system (ECCS) design basis into recirculation sump modification instructions. Specifically, Entergy added penetration cover plates and alignment collars around several small pipes that penetrated the sump deck plating, and the annular gap between the collars and pipes exceeded the sump screen size.

This finding is more than minor because it potentially affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of ECCS to respond to initiating events (loss-of-coolant accidents) (LOCAs) to prevent undesirable conditions. This finding is considered to be of very low safety significance, because ECCS remained operable and there was no loss of safety function.

Inspection Report# : [2004006\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to identify and correct a recirculation sump screen bypass path.

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, for Entergy's failure to promptly identify and take actions to address a condition adverse to quality. Specifically, Entergy did not promptly identify and correct a recirculation sump bypass path and containment debris that had the potential to adversely impact ECCS during containment recirculation.

This finding is more than minor because it potentially affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of ECCS to respond to initiating events (LOCAs) to prevent undesirable conditions. This finding is considered to be of very low safety significance, because ECCS remained operable and there was no loss of safety function.

Inspection Report# : [2004006\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to identify a condition adverse to quality which could impact EDG reliability.

The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, for Entergy's failure to promptly identify and take actions to address a condition adverse to quality concerning emergency diesel generator (EDG) heat exchanger (HX) fouling.

This finding was more than minor because it potentially affected the mitigating systems cornerstone objective of ensuring equipment availability and reliability of the EDG HXs to perform their intended safety function. This finding was associated with the equipment performance attribute of the mitigating systems cornerstone. However, this finding was determined to have very low safety significance (Green) using the SDP Phase 1 screening worksheet for mitigating systems because the EDG HXs remained operable and capable of performing their intended safety function.

Inspection Report# : [2004006\(pdf\)](#)

G

Significance: Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement a Technical Specification Surveillance Requirement

The inspector identified a non-cited violation of Technical Specification Surveillance Requirement SR 3.3.1.1. that requires, in part, that a channel check be performed every 12 hours on the feedwater flow instrumentation in the central control room. This requirement had not been met since the licensee implemented the Improved Technical Specifications in December of 2003.

This finding is greater than minor because it represented a condition similar to example 1.c in Appendix E, IMC 0612, in that the surveillance was not performed per Technical Specifications from December 12, 2003 through June 8, 2004. The finding is of very low safety significance because the feedwater flow instruments met the surveillance criteria when subsequently performed, and did not render the mitigating equipment inoperable.

Inspection Report# : [2004006\(pdf\)](#)

Barrier Integrity

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Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROPERLY ADDRESS A CONDITION ADVERSE TO QUALITY INVOLVING LEAKAGE FROM A CANOPY SEAL WELD ONTO THE REACTOR VESSEL HEAD IN NOVEMBER 2002

The inspectors identified a non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for Entergy's failure to properly address a condition adverse to quality involving leakage from a canopy seal weld in November 2002. The ineffective corrective actions for this conoseal leak led to boron accumulation on the reactor vessel head (RVH).

The finding is considered to be more than minor since, if left uncorrected, it could have led to a more significant problem. Specifically, the boric acid, if re-wetted, could have led to accelerated corrosion of the RVH. The finding is of very low significance since the RVH integrity was not affected by this problem. The finding is associated with the cross-cutting area of PI&R related to the ineffective corrective actions for the conoseal leak.

Inspection Report# : [2004012\(pdf\)](#)

G

Significance: Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE ADEQUATE INSPECTION CRITERIA AND GUIDANCE TO EVALUATORS PRIOR TO THE INSPECTION OF THE REACTOR VESSEL LOWER HEAD PENETRATION NOZZLES

The inspectors identified a non-cited violation of 10 CFR 50 Appendix B, Criterion IX, "Control of Special Processes," for Entergy's failure to provide adequate inspection criteria and guidance to evaluators prior to the inspection of the reactor vessel lower head penetration nozzles. In particular, Entergy personnel performed visual inspections of the reactor vessel bottom mounted instrumentation annulus area without adequate procedural guidance to define potential problems or indications.

This finding is considered to be more than minor since inspection program deficiencies could allow a degraded component to remain inservice undetected. Specifically, the failure to develop adequate inspection guidance could result in a failure to detect a degraded lower RVH penetration boundary. The finding is of very low significance since the lower RVH integrity was not affected.

Inspection Report# : [2004012\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : June 17, 2005