

Indian Point 3

4Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Nov 07, 2003

Identified By: NRC

Item Type: FIN Finding

POOR WORKMANSHIP, IMPROPERLY PERFORMED CORRECTIVE MAINTENANCE, AND INADEQUATE CONTRACTOR OVERSIGHT CONTRIBUTED TO THE FAILURE OF 345 KV BREAKER NO. 3 ON TWO SEPARATE OCCASIONS

Poor maintenance work practices (failure to follow vendor manual instructions) and insufficient contractor oversight (monitoring, quality verification, and knowledge of work activity) contributed to this self-revealing finding involving the failure of the 345 kV circuit breaker No. 3 on November 15, 2002 and June 22, 2003.

This finding is greater than minor because it is associated with improperly performed maintenance which directly impacted the Initiating Events Cornerstone. The June 22, 2003, breaker failure resulted in the Unplanned Scrams in 7000 Critical Hours Performance Indicator exceeding the Green to White threshold. This finding is of very low safety significance because, even though both breaker failures resulted in reactor trips, the inadequately performed maintenance did not contribute to the likelihood of LOCA initiator; did not contribute to the combination of both a reactor trip and the unavailability of accident mitigation equipment; and did not increase the likelihood of a fire or flood.

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

MAIN TURBINE FIRE AND NOTICE OF UNUSUAL EVENT (NUE)

On April 29, 2003, a self-revealing Green finding was identified involving poor maintenance practices and inadequate work controls during main turbine bearing inspections which contributed to the improper reinstallation of the No. 2 bearing casing and an oil leak which caused a fire. Operators initiated a manual turbine and reactor trip and declared an Unusual Event based upon the duration of the fire.

This finding was greater than minor since it was associated with the protection against external factors (fire) and the human performance attributes that affect the Initiating Events cornerstone objective; and since maintenance work control inadequacies resulted in a perturbation in plant stability by causing a reactor trip. The finding is of very low safety significance (Green) as determined using the SDP Phase 1 worksheet. Specifically, the event did not increase the likelihood of a primary or secondary system loss of coolant accident initiator, did not contribute to a loss of mitigation equipment functions, and did not increase the likelihood of an internal/external flood.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Mar 29, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

SELF-REVEALING GREEN FINDING INVOLVING REACTOR TRIP DUE TO POOR MAINTENANCE.

A self-revealing finding was identified due to inadequate work controls and procedures that did not properly restore circulating water pump motor electric cables following a previous repair. This resulted in a manual reactor trip after the cables failed when the plant was at full power. This finding is greater than minor because it affected the objective of the Initiating Events Cornerstone in that work controls and procedure inadequacies resulted in a perturbation in plant stability that caused a reactor trip. The finding is of very low safety significance because, although it caused a reactor trip, it did not increase the likelihood of a primary or secondary system loss of coolant accident (LOCA) initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood.

Inspection Report# : [2003002\(pdf\)](#)

Mitigating Systems

Significance:  Oct 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

A Green NCV was identified for a failure to implement appropriate design controls for the field modification of plant components and systems.

The licensee failed to implement design controls during the field modification of safety-related equipment. The modification occurred when scaffolding was mechanically anchored to EDG and RHR pipe supports, and a CS pump pedestal, without prior engineering evaluation or approval. This finding is greater than minor because it was similar to Example 4.a. of Appendix E to IMC 0612, in that the licensee routinely failed to perform engineering evaluations of scaffolds attached to safety-related equipment. The finding is of very low safety significance (Green) because no equipment was rendered inoperable due to the attached scaffolding, and the scaffolding would not have caused the loss of any safety function following a seismic event.

Inspection Report# : [2003009\(pdf\)](#)

Significance:  Sep 27, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

LACK OF PERFORMANCE AND CONDITION MONITORING OF THE NITROGEN BACKUP TO THE INSTRUMENT AIR SYSTEM

This self-revealing finding involved the failure of Entergy to ensure that nitrogen regulating valve IA-PCV-1276, which is a back-up to the instrument air supplying the auxiliary feedwater regulating valves, is capable of performing its design function. On August 14, 2003, the lack of nitrogen pressure back-up to the instrument air system caused the auxiliary feedwater regulating valves to fail open and resulted in a challenge to plant operators to maintain proper steam generator levels.

This finding is greater than minor because it affected the Mitigating Systems Cornerstone objective of equipment availability and reliability, in that the failure of the auxiliary feedwater regulating valves to the fully opened position removed one of the means of run-out protection to the motor driven auxiliary feedwater pumps. This finding is of very low safety significance since the auxiliary feedwater pumps were still capable of performing their design function

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

UNTIMELY CORRECTIVE ACTION TO RESOLVE A SOLID GROUND CONDITION IN THE 33 125vdc SYSTEM DURING A PLANT STARTUP

The inspector identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," involving the failure of Entergy to promptly diagnose and correct an electrical ground on the 33 125 VDC system.

The finding is greater than minor because it affects the objective of the Mitigating Systems Cornerstone to ensure the reliability and capability of critical safety equipment (125 VDC station battery and emergency diesel generator) performance, in that an unevaluated locked-in ground can potentially impact equipment functionality. The finding is of very low safety significance since the 33 125 VDC system and affected 31 emergency diesel generator were capable of performing their design functions.

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TAKE REQUIRED TECHNICAL SPECIFICATION ACTIONS FOLLOWING A FAILED SURVEILLANCE ON THE 31 STATION BATTERY

The inspectors identified a non-cited violation of 10CFR50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," involving the failure of Entergy to adhere to a quarterly surveillance procedure on August 4, 2003, and initiate actions required by Technical Specification (TS) 3.8.6 for the inoperable 31 station battery due to a low individual cell (No. 26) voltage.

This finding is greater than minor because subsequent evaluation determined that the safety-related 31 station battery was adversely affected, and if left uncorrected, this condition could have resulted in a more significant safety concern (i.e., cell reversal) and loss of battery function. The safety significance of this finding is very low because of the low probability that the single degraded cell would have resulted in a cell reversal and placed an additional load on the battery that would have been sufficient to reduce overall battery capacity below its design basis loading specification.

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

LOSS OF PRIMARY SPENT FUEL POOL COOLING

A self-revealing finding occurred involving a configuration control error which resulted in the inadvertant loss of primary spent fuel pool cooling for approximately 15 minutes.

This finding is greater than minor since it is associated with the Configuration Control and Human Performance attributes that affect the Mitigating System cornerstone objective. This finding is of very low safety significance since the loss of normal cooling was of short duration, there was no appreciable increase in spent fuel pool temperature, and the back-up spent fuel pool cooling system was in service at the time..

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

OPERATION OF THE 32 SI PUMP AT ZERO FLOW FOR LONGER THAN THE MANUFACTURER'S LIMIT TO PREVENT DAMAGE

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, involving inadequate configuration controls that led to the unintended operation of the 32 Safety Injection (SI) pump with zero flow for greater than the maximum time limit established by the pump manufacturer.

This finding is greater than minor because it is associated with the Human Performance and Configuration Control attributes that effect the Mitigating System cornerstone objective; and since the operators did not properly implement configuration controls required by the procedures that govern SI pump operation. The finding is of low safety significance since pump damage did not occur as a result of this human performance error. This issue is being treated as a non-cited violation.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DEDICATION OF COMMERCIALY PROCURED EQUIPMENT FOR THE REPLACEMENT OF A VALVE ACTUATOR IN THE EMERGENCY DIESEL GENERATOR FUEL SUPPLY SYSTEM, WHICH IS A SAFETY-RELATED APPLICATION

The inspectors identified a Green Non-cited Violation (NCV) of 10 CFR 50, Appendix B, Criterion III. This violation is related to an inadequate dedication of commercially procured equipment for a safety-related application in that a non-Appendix B certified vendor was inappropriately used to confirm a "like-for-like" replacement of a valve actuator in the emergency diesel generator fuel supply system. Also, the licensee's technical evaluation and dedication package did not specify all of the appropriate critical characteristics to certify the replacement was like-for-like. This resulted in additional engineering analysis for the adequacy of commercially procured material to safety-related service. This finding is greater than minor because the technical evaluation and dedication package lacked sufficient detail to ensure the reliability and availability of mitigating equipment, and affected the availability objective of the Mitigating Systems Cornerstone. The finding is of very low safety significance because the actuator was eventually shown to be acceptable for service in its intended application.

Inspection Report# : [2003002\(pdf\)](#)

Significance:  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

A TEMPORARY ALTERATION OF THE FUEL STORAGE BUILDING VENTILATION SYSTEM WAS IMPLEMENTED WITHOUT CONSIDERATION OF THE EFFECT ON AIR FLOW WITHIN THE VENTILATION SYSTEM.

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, in that a temporary alteration of the fuel storage building ventilation system was implemented without consideration of the effect on air flow within the ventilation system. The effect of removing the system's charcoal bed dampers resulted in use of the charcoal beds that was not accounted for, and required additional system testing to analyze the air flow. Also, the system operating procedure and work order used to install and remove the dampers lacked sufficient detail for a temporary alteration and had to be revised. This finding is more than minor because changes to the plant without a complete analysis of the

effects upon a safety system affected the Mitigating Systems Cornerstone objective of equipment reliability. The alteration of the dampers reduced the reliability of the ventilation system, resulted in the unaccounted use of the charcoal beds, and caused a lapse in the required tests for iodine removal efficiency. These tests were not performed as required by the Technical Specifications (TS) every 720 hours for approximately one year between January 2002 and January 2003. The finding is of very low safety significance because subsequent laboratory tests performed in January 2003 confirmed that the iodine removal efficiency did not fall below the TS required minimum of 90%.

Inspection Report# : [2003002\(pdf\)](#)

Barrier Integrity



Significance: Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

LOSS OF REACTOR COOLANT SYSTEM INVENTORY DURING FUEL TRANSFER DUE TO INADEQUATE PROCEDURE IMPLEMENTATION TO INSTALL A STEAM GENERATOR BOWL DRAIN PLUG

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, involving an inadequate procedure and poor maintenance practices which contributed to the ejection of a barrier plug in a steam generator nozzle. The consequence of these inadequacies was the draining of approximately 5000 gallons of reactor coolant system inventory due to the containment sump.

This finding is greater than minor since it is associated with the procedure quality attribute of the barrier integrity cornerstone objective. The failure to perform an adequate verification that the bowl drain plug was properly installed was of a very low safety significance since RCS inventory control was maintained and there was no rise in RCS temperature. Accordingly, this issue is treated as a non-cited violation.

Inspection Report# : [2003006\(pdf\)](#)

Emergency Preparedness



Significance: Nov 07, 2003

Identified By: NRC

Item Type: FIN Finding

FAILURE OF THE UNIT 3 TSC DIESEL ON AUGUST 14, 2003 - FAILURE TO IMPLEMENT NON-RISK SIGNIFICANT PLANNING STANDARD PROGRAM ELEMENT

This team-identified finding involves the failure of the Unit 3 Technical Support Center back-up diesel generators to function on August 14, 2003. The conditions which caused the diesel generators to fail to function were previously identified by Entergy on April 18, 2003, as a result of a failed periodic load test and inadequate retest. This condition was not resolved in a timely manner.

This finding is considered more than minor because a significant amount of the Unit 3 TSC/OSC emergency response equipment was without AC power because the diesel was non-functional. On August 14, Entergy elected to de-energized all of the remaining emergency response equipment and plant information computer systems. The Unit 3

TSC/OSC functions were all transferred to the Unit 2 TSC/OSC under one site Technical Support Center Manager. This finding is of very low safety significance because key members of the Unit 3 ERO were able to implement established compensatory measures to effectively perform their emergency response functions from the Unit 2 TSC/OSC.

Inspection Report# : [2003010\(pdf\)](#)

Significance:  Nov 07, 2003

Identified By: NRC

Item Type: FIN Finding

FAILURE OF THE EOF UPSs ON AUGUST 14, 2003 - FAILURE TO IMPLEMENT NON-RISK SIGNIFICANT PLANNING STANDARD PROGRAM ELEMENT

This team-identified finding involves the August 14, 2003, loss of off-site power event which revealed that Entergy did not have a preventive maintenance program in place to ensure the continued functionality of the numerous un-interruptible power supplies in the Emergency Operations Facility (EOF) which provide back-up power to emergency response equipment.

This finding is considered greater than minor because a significant amount of the Unit 2 and Unit 3 emergency response organization communications equipment was non-functional on August 14 until off-site power was restored. However, this finding is of very low safety significance because key members of the ERO were able to implement established compensatory measures to effectively perform their emergency response functions from the EOF, TSC/OSC, and Unit 2 and 3 central control rooms, using back-up telephone communications.

Inspection Report# : [2003010\(pdf\)](#)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

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