

## Indian Point 2

### 2Q/2004 Plant Inspection Findings

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## Initiating Events

**Significance:** G Mar 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

#### **NON-CITED VIOLATION OF TS 5.4.1.d FOR THE FAILURE TO PERFORM A TRANSIENT COMBUSTIBLE EVALUATION FOR 330 GALLONS OF OIL TEMPORARILY STORED IN FIRE ZONE 6A**

The inspector identified a non-cited violation of Technical Specification (TS) 5.4.1.d. that requires, in part, that written procedures shall be implemented for the Fire Protection Program. The inspector determined that no transient combustible evaluation (TCE) was completed for approximately 330 gallons of lubricating oil stored in fire zone 6A, "Waste Drumming and Storage Station," contrary to Procedure ENN-DC-161, "Transient Combustible Program," step 5.2.3.

This finding is greater than minor because it represented a condition similar to example 4.k in Appendix E, IMC 0612, in that the as-found condition involved transient combustible material loading in excess of the Fire Hazard Analysis limit. The finding is of very low safety significance because it did not increase the likelihood of a fire, no credible fire scenario was identified due to the type of storage containers used, there were no intervening combustibles, and no credible fire ignition source was present.

Inspection Report# : [2004002\(pdf\)](#)

**Significance:** G Nov 07, 2003

Identified By: NRC

Item Type: FIN Finding

#### **FAILURE TO TAKE APPROPRIATE AND TIMELY CORRECTIVE ACTIONS TO ADDRESS THE REPEATED GRID-RELATED REACTOR TRIPS OF UNIT 2**

This team-identified finding involves inadequate corrective actions for repeat Unit 2 reactor scrams attributed to grid-related faults and associated protective relaying failures. The lack of thorough evaluations and corrective actions on the part of Entergy, in cooperation with the responsible Transmission and Distribution Operator for the local area electrical grid, have resulted in an increased frequency of plant transients and consequential challenges to Unit 2 safety related systems and licensed operators.

This finding is greater than minor because it affects the Initiating Events Cornerstone and represents an increased likelihood of an event that challenges critical safety functions and operator response. Using the Indian Point Unit 2 Significance Determination Process Phase 2 "Transient with Power Conversion System Available" worksheet, this finding was determined to be of very low safety significance.

Inspection Report# : [2003013\(pdf\)](#)

**Significance:** G Nov 07, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **TS 6.8.1 VIOLATION - FAILURE TO ADHERE TO EMERGENCY OPERATING PROCEDURE ES-0.1, CONTINUOUS ACTION STEP 1.0 ON AUGUST 3, 2003**

The team identified a violation involving the failure of an operating crew to adhere to a continuous action step of Emergency Operating Procedure ES-0.1, "Reactor Trip Response," resulting in an avoidable plant transient. Specifically, in response to the reactor trip and partial loss of offsite power (LOOP) event on August 3, 2003, the Unit 2 operating crew did not correctly implement continuous action step 1 of ES-0.1, which led to the cycling of the pressurizer power-operated relief valves (PORVs) ten times, complicating reactor coolant system (RCS) pressure control.

This finding is greater than minor because it affected the Initiating Events Cornerstone and could reasonably be viewed as a precursor to a more significant event, in that, the failure to implement established procedures could place the reactor outside its design envelope and, for this particular event, the repeated cycling of the PORVs could have resulted in a loss of coolant event had a PORV stuck open. This finding is of very low safety significance because all mitigation systems were available during the event and was treated as a non-cited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy.

Inspection Report# : [2003013\(pdf\)](#)

## Mitigating Systems

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**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: 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 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\(pdf\)](#)

**G**  
**Significance:** Mar 31, 2004  
**Identified By:** NRC  
**Item Type:** FIN Finding

**A VERY LOW RISK SIGNIFICANT FINDING INVOLVING THE FAILURE TO TAKE APPROPRIATE CORRECTIVE ACTIONS TO ENSURE THE RELIABILITY AND AVAILABILITY OF GAS TURBINE NO. 1**

A finding was identified involving untimely corrective actions which contributed to increased unavailability of Gas Turbine 1 (GT-1) which is considered a mitigating system. Specifically, GT-1 was not available for approximately 116 hours due to the failure and subsequent replacement of the starting diesel battery charger.

This finding was determined to be greater than minor since it was associated with the equipment performance attribute of the mitigating systems cornerstone and affected the cornerstone objective of ensuring system reliability and availability of systems that are used to prevent undesirable consequences due to initiating events. GT-1 is credited as an alternate AC power source for both station blackout and Appendix R fire scenarios. This finding was considered of very low safety significance because there was no actual loss of safety function for this mitigating system, since GT-3 was available while GT-1 was inoperable. This issue did not screen as potentially risk significant due to seismic, fire, flooding, or severe weather initiating events.

Inspection Report# : [2004002\(pdf\)](#)

**G**  
**Significance:** Mar 31, 2004  
**Identified By:** NRC  
**Item Type:** FIN Finding

**A VERY LOW RISK SIGNIFICANT FINDING INVOLVING THE IMPROPER CONTROL OF AN OUT-GOING 345 KV FEEDER BREAKER DURING A FEEDER OUTAGE**

The inspector identified that the control room operators placed the 345KV ring bus in a configuration that would challenge the availability of mitigating systems in the event of an off-site electrical transient. Specifically, in the event that a 345KV feeder fault caused a loss-of-load plant trip, two of the four 480 volt safety buses would require operator action to restore.

This finding is greater than minor since it is associated with the configuration control attribute of the mitigating systems cornerstone and that it impacted the cornerstone objective of ensuring the availability of mitigating systems. With the ring bus aligned with both output breakers shut and one feeder out of service, a subsequent fault on the remaining feeder would have resulted in a plant trip with the fast transfer blocked. This would de-energize vital busses 2A and 3A causing a loss of power to one of two motor-driven auxiliary feed pumps, one of three safety injection pumps, two of five containment fan cooler units, one of two residual heat removal pumps and two of six service water pumps. Manual operator action would then be required to restore this equipment. This finding is considered of very low safety significance because it did not result in an actual loss of safety function of any mitigating systems. This issue did not screen as potentially risk significant due to seismic, fire, flooding, or severe weather initiating events.

Inspection Report# : [2004002\(pdf\)](#)

**G**  
**Significance:** Mar 31, 2004  
**Identified By:** NRC  
**Item Type:** NCV NonCited Violation

**NON-CITED VIOLATION OF 10 CFR 50, APPENDIX B, CRITERION III "DESIGN CONTROL" FOR THE FAILURE TO IMPLEMENT APPROPRIATE DESIGN CONTROLS FOR A MODIFICATION MADE TO THE OTDT CONTROLLER**

The inspector identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control." A component was modified during the replacement of a safety-related controller in the over-temperature delta-temperature (OTDT) circuitry of the reactor protection system without a formal modification package.

This finding was determined to be greater than minor since it was associated with the design control attribute of the mitigating systems cornerstone and affected the cornerstone objective of ensuring reactor protection system reliability. Specifically, the failure to use a derated resistor to modify the circuit card had an adverse impact on the reliability of the OTDT controller. This finding is considered of very low safety significance since it did not result in the actual loss of safety function of a system. This issue did not impact fire, flooding, seismic, or severe weather initiating events.

Inspection Report# : [2004002\(pdf\)](#)

**G**  
**Significance:** Jan 30, 2004  
**Identified By:** NRC  
**Item Type:** FIN Finding

**FAILURE TO CONDUCT SIMULATOR TESTING IN ACCORDANCE WITH ANSI/ANS 3.5-1985**

The inspectors identified that simulator performance testing did not meet the standards as specified in ANSI/ANS 3.5-1985 in that: (1) "best estimate" data for the simulator testing was not used; (2) all required key parameters during the simulator test were not recorded; and (3) simulator differences identified during testing were not documented and justified.

This finding is more than minor because it affects the human performance (human error) attribute of the mitigating systems cornerstone. More

specifically, improperly conducted simulator testing resulted, in part, in not identifying replication issues for steam generator pressure and cold leg temperature. The finding is of very low safety significance (Green) because the discrepancy did not have an adverse impact on operator actions such that safety related equipment was made inoperable during normal operations or in response to a plant transient.

Inspection Report# : [2004004\(pdf\)](#)

**Significance:**  Jan 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE OF THE SIMULATOR TO DEMONSTRATE EXPECTED PLANT RESPONSE TO TRANSIENT CONDITIONS**

The inspectors identified a non-cited violation of 10 CFR 55.46(c)(1), involving the failure of the simulator to correctly replicate key parameters such as steam generator pressure and cold leg temperature (Tcold) during a loss of all reactor coolant pumps. Additionally, the plant decay heat load was not correctly modeled which contributed to inappropriate operator actions during the August 3, 2003, plant trip.

This finding is more than minor because it affected the human performance (human error) attribute of the mitigating systems cornerstone. Not correctly replicating the plant's response on the simulator provides the potential for negative operator training. The finding is of very low safety significance (Green) because the discrepancy did not have an adverse impact on operator actions such that safety related equipment was made inoperable during normal operations or in response to a plant transient.

Inspection Report# : [2004004\(pdf\)](#)

**Significance:**  Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**A Green Non-cited violation was identified for failure to take appropriate corrective actions for Gas Turbine 1**

An NCV of 10 CFR 50.65 (a)(1) was identified when Entergy failed to take appropriate corrective actions when the #1 Gas Turbine (GT1) exceeded its maintenance rule (a)(1) reliability monitoring goal. This finding was greater than minor because it affected the reliability of GT1 which is used to mitigate the consequences of a station blackout. This issue was evaluated using the significance determination process and determined to be of very low significance (Green) since the redundant train was always available to perform the GT safety functions.

Inspection Report# : [2003012\(pdf\)](#)

**Significance:**  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**NCV OF 10 CFR 50, APP B. A DESIGN CHANGE PACKAGE DID NOT ACCURATELY REFLECT ACTUAL PLANT CONDITIONS AND RESULTED IN AN UNINTENDED PLANT TRANSIENT**

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, involving the design change package (DCP-200105716-I) to replace a pressurizer level recorder which did not contain accurate design details. As a consequence, during installation of the design change an unintended plant transient challenged operators.

This finding is greater than minor based upon NRC Manual Chapter 0612, Appendix E, example 4.b. This finding is of very low safety significance. The finding did contribute to the likelihood of a reactor trip; however, it did not impact the availability of mitigation equipment, increase the likelihood of a primary or secondary system LOCA, or increase the likelihood of an internal fire or flood.

Inspection Report# : [2003011\(pdf\)](#)

**Significance:**  Sep 27, 2003

Identified By: NRC

Item Type: FIN Finding

**THE PERFORMANCE FINDING INVOLVED INADEQUATE SHORT TERM CORRECTIVE ACTIONS ASSOCIATED WITH FIRE LEAKS ON A FIRE HEADER IN THE UNIT 1 TURBINE BUILDING**

The inspectors identified a finding involving inadequate corrective actions associated with multiple leaks on a six-inch fire header in the Unit 1 turbine building. On September 10, 2003, an 80 gallon per minute fire header leak occurred that operators isolated by depressurizing the entire fire water suppression system at Unit 2 for approximately three hours. This leak occurred approximately one foot from a similar through-wall leak which occurred on July 16, 2003.

This performance issue is considered more than minor based on example 4.f. in MC 0612 Appendix E. The performance finding involves the Mitigating Systems Cornerstone objective of fire suppression system availability to respond to fires. The finding is very low risk significance based upon the results from the fire protection risk significance screening methodology (FPRSSM). The finding impacts both manual suppression capability and automatic suppression capability.

Inspection Report# : [2003011\(pdf\)](#)

**Significance:**  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**NCV OF 10 CFR 50, APP B, CRITERION V. THE PROCEDURAL STEPS FOR THE INSTALLATION OF A FLEXIBLE COUPLING WERE NOT ADEQUATE TO VERIFY THAT THE COMPONENT WAS PROPERLY INSTALLED.**

The inspector identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V. In November 2002, a maintenance work instruction to install a 21 emergency diesel generator (EDG) service water supply flexible coupling did not include critical installation steps per the vendor manual. This resulted in a significant service water leak from the expansion joint on August 14, 2003.

This finding is greater than minor since if left uncorrected, it could be a more significant safety concern as this type of flexible coupling is used on all three EDGs. The inspectors determined that the expansion joint leakage was of a very low safety significance since it did not adversely impact service water cooling to the emergency diesel generator or the overall service water system cooling capability, did not impact equipment and functions associated with internal flooding in the diesel generator room, and did not result in a loss of service water or emergency power safety function that contributed to internal flooding initiated events.

Inspection Report# : [2003011\(pdf\)](#)**G****Significance:** Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**EQUIPMENT TAGOUT TO RESTORE THE 22 SEAL INJECTION FILTER WERE INADEQUATE TO MAINTAIN PROPER CONFIGURATION CONTROL OF THE SYSTEM**

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, involving an incomplete procedure for restoring to service the 22 seal injection filter from maintenance. The consequence was an approximate 70 gallon per minute chemical volume and control system leak through an open vent valve which lasted for approximately two minutes before operators identified and shut the vent valve.

This finding is more than minor since it adversely impacted the Mitigating System Cornerstone objective of safety system capability and availability with respect to the attributes of configuration control and procedural quality. The inadequate restoration procedure resulted in a significant chemical and volume control system leak (the capacity of one coolant charging pump) that degraded normal charging flow and emergency boration capability for a short period of time. The finding is of very low safety significance since it did not result in a loss of emergency boration safety function.

Inspection Report# : [2003011\(pdf\)](#)

## Barrier Integrity

## Emergency Preparedness

**G****Significance:** Dec 12, 2003

Identified By: NRC

Item Type: FIN Finding

**Failure to evaluate the degraded condition of the Technical Support Center batteries**

The inspectors identified a findings of very low safety significance (Green) regarding the licensee's failure to implement appropriate corrective actions for degraded TSC batteries. The performance deficiency associated with this findings was the failure to take timely and effective corrective actions for the degraded TSC batteries. The degraded batteries adversely impacted the Non-Risk Significant Planning Standard, as described in 10 CFR 50.47(b)(8), which requires adequate facilities and equipment be maintained to support emergency response. This finding was more than minor significance because the batteries were allowed to remain in a degraded stated in excess of twenty-four hours without adequate measures to ensure that their TSC support function would be maintained. The finding is of very low safety significance, because the subsequent analysis indicated that the battery banks remained functional in this condition.

Inspection Report# : [2004003\(pdf\)](#)**G****Significance:** Dec 12, 2003

Identified By: NRC

Item Type: FIN Finding

**Failure to identify and address causes fo repetitive surveillance test failures of the plant vent noble gas effluent monitor.**

The team identified a finding of very low safety significance (Green) regarding the licensee's inadequate corrective actions for repetitive failures of a TS required surveillance of the plant vent noble gas effluent monitor. Since July 2002, the monitor has failed the surveillance test five of the six times performed. The performance deficiency associated with this findings was inadequate corrective actions for repetitive failures of a TS required surveillance. This finding is more than minor significance because the R-27 radiation monitor was removed from service for periods in excess of twenty-four hours as a result of inadequate corrective actions. The finding was evaluated using the EP SDP, and was screened to be of very low safety significance, because there were alternate monitoring methods available in the event of an accident.

Inspection Report# : [2004003\(pdf\)](#)

**G****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# : [2003013\(pdf\)](#)**G****Significance:** Nov 07, 2003

Identified By: NRC

Item Type: FIN Finding

**FAILURE OF THE UNIT 2 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 2 TSC back-up diesel generator to function on August 14, 2003. The conditions which caused the diesel generator to fail to function involved electrical loading of the diesel generator in excess of its design capacity. This condition was initially identified in February 2000 and not resolved in a timely manner.

This finding is considered more than minor because a significant amount of TSC/OSC emergency response equipment, necessary to implement the Emergency Plan, was either de-energized by the Entergy staff because of the loss of sufficient air conditioning to ensure emergency response equipment would not be damaged due to overheating, or was without AC power because the diesel was non-functional. 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.

Inspection Report# : [2003013\(pdf\)](#)

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## Occupational Radiation Safety

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## Public Radiation Safety

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## Physical Protection

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

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## Miscellaneous

**Significance:** N/A Dec 12, 2003

Identified By: NRC

Item Type: FIN Finding

**The licensee's Corrective Action Program, used for identifying, tracking, prioritizing, and resolving deficiencies, was appropriately implemented in most cases.**

Problem Identification & Resolution Team Inspection Summary: The inspection team determined that the licensee was generally effective at identifying problems and entering them into the corrective action program, evaluating and prioritizing issues, and implementing appropriate corrective actions.

However, the inspectors identified some minor equipment problems that had not been identified in the corrective action program. The evaluation of problems was generally adequate, but the inspectors identified two Green findings related to the failure to implement effective corrective actions for degraded emergency preparedness equipment. These findings were determined not to involve violations of NRC requirements, however, they represented additional examples of the substantive cross-cutting issue in the problem identification and resolution area that was identified during the previous assessments. Based on interviews conducted during the inspection, station personnel felt free to identify safety issues and enter them into the

corrective action program.

Inspection Report# : [2004003\(pdf\)](#)

Last modified : September 08, 2004