Indian Point 2
1Q/2004 Plant Inspection Findings

Initiating Events

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)*

Significance: G May 15, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
IMPROPER EMERGENT WORK PACKAGE INSTRUCTIONS FOR 22 STEAM GENERATOR LEVEL BISTABLE REPLACEMENT
On February 7, 2003, a self-revealing finding involved inadequate emergent work instructions that resulted in an electrical short during replacement of the 22 steam generator low level bistable. The electrical short caused a breaker trip on circuit 10 of instrument bus 21and the resultant loss of electrical power to the pressurizer level and reactor coolant system pressure control channels (failed low). The inadequate work instructions is considered a non-cited violation of 10 CFR 50 Appendix B, Criterion V, since the instructions did not account for consideration of performing this replacement with the circuit de-energized or the proximity to other reactor protection system relays.

The performance issue is more than minor since the operators were required to take action to restore reactor coolant system pressure and pressurizer level to preclude a reactor trip. The finding involves the initiating events cornerstone in that it increased the likelihood of upset in plant stability and it involves human error during the planning of an emergent work activity. This finding is considered to be of very low safety significance in that in accordance with NRC Manual Chapter 0609, Appendix A, the finding did not contribute to the likelihood of a secondary or primary LOCA initiator and it did not contribute to either a reactor trip or mitigation system unavailability.
Inspection Report# : 2003003*(pdf)*

Mitigating Systems

Significance: G 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: G 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: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
A Green NCV 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: G 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: G 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)*

Significance: G 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: G 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)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: FIN Finding
INADEQUATE OPERABILITY EVALUATION FOR THE 13.8 KV SYSTEM
The inspector identified that the licensee's operability evaluation during a 13.8 KV system reduced voltage test was inadequate. The operability evaluation did not evaluate accident load carrying capability as defined in the technical specification basis and it did not address communications and protocols between the distribution company and the licensee to restore from the test in a timely manner. NRC Manual Chapter 9900 states that when a system's capability is degraded to a point where it cannot perform with reasonable assurance of reliability, the system should be judged inoperable.

The finding was more than minor because it impacted the attribute of the mitigating system cornerstone objective. Specifically, the cornerstone objective is to ensure that the 13.8 KV system is capable of performing its safety function during a postulated loss of normal power event without undesirable consequences. This finding was determined to be of low safety significance because it did not result in the actual loss of

the offsite power supply safety function.
Inspection Report# : 2003007*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Ineffective corrective actions associated with an unauthorized modification to the No. 22 component cooling water pump.
The inspector identified a non-cited violation of 10 CFR 50 Appendix B, Criterion XVI. The licensee did not evaluate and take effective corrective actions associated with a material substitution for the 22 component cooling water pump inboard bearing oil level indication system. The bearing oil level indication system contributed to the failure of the #22 CCW pump on December 5, 2002.

This finding is greater than minor since it is associated with the design control attribute of the mitigating systems cornerstone and affected the cornerstone objective. The inspectors conducted a Phase 1 SDP screening and determined that the failure to take effective corrective action on #22 CCW pump was of a very low safety significance since the redundant train components were operable and unaffected by this unauthorized modification.
Inspection Report# : 2003007*(pdf)*

Significance: G May 15, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
INEFFECTIVE CORRECTIVE ACTIONS ASSOCIATED WITH THE 23 EDG LOAD SWINGS BETWEEN MAY 2000 AND FEBRUARY 2003
The inspectors identified that ineffective corrective actions resulted in repetitive surveillance test failures of the 23 emergency diesel generator between December 2001 and February 2003. This finding is considered a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI. The finding is more than minor because the surveillance test failures impacted the availability of one train of emergency AC power source. This finding was of very low risk significance because the repetitive failures did not result in an actual loss of function for the emergency AC power.
Inspection Report# : 2003003*(pdf)*

Significance: G May 15, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
POST-WORK TEST INADEQUAATE FOR 22 BORIC ACID TRANSFER PUMP BORIC ACID FILTER STOP VALVE
A self-revealing event was identified on February 26, 2003, when operators observed no boric acid flow to the reactor vessel via the No. 22 boric acid transfer pump (BATP). It was determined that during preventative maintenance activities in March 2001, the post-work test on the No. 22 BATP outlet valve to the boric acid filter stop was inadequate to identify that the valve finger plate was installed upside down. This finding is considered a non-cited violation of 10 CFR 50 Appendix B, Criterion V. This event is considered more than minor because the improperly installed valve plate affected the availability of one train of emergency boration. This is considered to be of very low risk significance in accordance with NRC MC 0609 Appendix A, since the emergency boration function was not lost due to this performance issue.
Inspection Report# : 2003003*(pdf)*

Significance: W Jul 19, 2002
Identified By: NRC
Item Type: VIO Violation
VIOLATION OF THE APPROVED FIRE PROTECTION PROGRAM/THREE-HOUR RATED WALL CONSTRUCTED TO SEPARATE THE CONTROL BUILDING FROM THE TURBINE BUILDING
WHITE - The team identified a violation of License Condition 2.K of Facility Operating License DPR-26. License Condition 2.K requires that Entergy implement and maintain in effect all provisions of the NRC approved fire protection program, which states that a three-hour rated wall will be constructed to separate the control building from the turbine building. In 1978, to meet the three-hour rating, the wall was to have been built in accordance with the design specification Underwriters Laboratories (UL) U902. Contrary to the above, in February 2002, the wall was found not to be constructed in accordance with UL U902.

The combined effect of the identified deficiencies was that, as of February 2002, passages existed through both the outer brick and inner portions of the wall. If a significant amount of smoke and gasses were to penetrate the wall, this could result in the CCR becoming uninhabitable, causing the operators to resort to using the Alternate Safe Shutdown System. These conditions did not represent a three-hour fire barrier. The NRC risk assessment, using Phase 2 of the NRC Fire SDP described in MC 0609, Appendix F, considered the wall a moderately degraded fire barrier having low to moderate safety significance (White). Until repairs could be completed, Entergy established a compensatory fire watch in accordance with the IP2 fire protection program.

Entergy actions in identifying original construction deficiencies in the CCR west inner wall in February 2002 were commendable. However,

the corrective actions taken were not fully effective in restoring the wall to its three-hour rated design configuration. Additionally, the initial extent of condition was not sufficient to identify other degraded fire barrier walls.

[Final Significance Determination and Notice of Violation docketed in NRC letter, dated November 8, 2002. Entergy response to NOV dated December 9, 2002]
Inspection Report# : 2002010*(pdf)*
Inspection Report# : 2004003*(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 12, 2003
Identified By: NRC
Item Type: FIN Finding
Inadequate corrective actions for repetitive 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)*

Significance: G Dec 12, 2003
Identified By: NRC
Item Type: FIN Finding
Failure to implement appropriate corrective actions for degraded 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 perofrmance 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)*

Significance: G 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)*

Significance: G 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)*

Occupational Radiation Safety

Public Radiation Safety

Significance: G May 15, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO COMPLY WITH PACKAGING PROCEDURES
A self-revealing non-cited violation of 10 CFR 71.12 was identified for failure to comply with shipping cask package procedures. On February 6, 2003, a CNS 8-120 B cask was received from the Indian Point Energy Center at a consolidation facility in South Carolina with a bolt missing on the primary lid's pressure test port in violation of the cask use and maintenance procedures. This finding was more than minor in that it was associated with the Public Radiation Safety Cornerstone's attribute of procedures for transportation packages. The finding affected the associated cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials contained in an NRC-approved Type B package released into the public domain. The finding was determined to be of very low safety significance in that the finding did not involve exceeding transportation radiation limits, there was no breach of the package during transit, and the issue was a Certificate of Compliance maintenance/use performance deficiency.
Inspection Report# : 2003003*(pdf)*

Physical Protection

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.
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 wa generally adequate, but the inspectors identified two Green findings related to the failure to implement effective corrective acitons 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)*

Significance: TBD Apr 01, 2000
Identified By: Licensee
Item Type: FIN Finding
Contamination in Storm Drains
Con Edison staff appropriately responded to the discovery of trace amounts of contamination in the Unit 1 storm drains and took proper actions to resolve the condition and to investigate the cause. The material was not associated with the Unit 2 steam generator event or any recent plant activities, and there was no radiological dose consequence due to the contamination.
Inspection Report# : 2000003*(pdf)*
Inspection Report# : 2001010*(pdf)*

Significance: TBD Apr 01, 2000
Identified By: NRC
Item Type: FIN Finding
Steam Generator Tube Leak Root Cause Evaluation
Con Edison completed the investigation of the plant response to the February 15, 2000 steam generator tube leak. Corrective actions to address the causes of weaknesses in the plant response to the event were in progress at the end of the inspection period and NRC review will be the subject of an AIT follow-up team inspection. The results of the root cause investigation for the steam generator tube failure were not reviewed and are being provided by Con Edison to the NRC Office of Nuclear Reactor Regulation for review.
Inspection Report# : 2000003*(pdf)*

Last modified : May 05, 2004