

Indian Point 2

Initiating Events



Significance: Mar 30, 2002

Identified By: NRC

Item Type: FIN Finding

INAPPROPRIATE PROCEDURE FOR INOPERABLE STATION AUXILIARY TAP CHANGER

The procedure in use was inappropriate in that it did not require that the 138 kilovolt off-site power system be declared inoperable during scheduled maintenance on the station auxiliary transformer (SAT) tap changer. On February 28, 2002, for approximately 51 minutes, control room operators had placed the SAT tap changer in manual and local control in accordance with system operating procedure (SOP) 27.1.7, "Operation of Main, Station and Unit Auxiliary Transformers," section 4.8. The scheduled maintenance was not intrusive into tap changer operation, however, the licensee had not fully evaluated if the intended function could be maintained with operator compensatory actions to restore the tap changer to automatic. The limiting condition for operation in technical specification 3.7.B.3 for a loss of the 138 kilovolt power system is 24 hours, which was not exceeded during this scheduled maintenance activity. The issue had a credible impact on safety. Inappropriate control of the SAT tap changer impacts the initiating event cornerstone in that a loss of off-site power is more likely following a reactor trip. This issue was determined to be of very low safety significance (Green) using phase one of the SDP because no reactor trip occurred during the inspection period and no mitigating systems were directly impacted by the maintenance on the SAT tap changer.

Inspection Report# : [2002002\(pdf\)](#)

Significance: N/A Mar 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES FOR SW VALVE LOCKING DEVICES

A personnel error was identified. One example of the cross cutting issue in human performance was the failure to properly maintain locking devices on five service water test stop valves. The failure to maintain locking devices on service water valves per the operating procedures was a violation of Technical Specification 6.8.1.a. This is a non-cited violation.

Inspection Report# : [2002002\(pdf\)](#)



Significance: Mar 30, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS FOR REPEAT FAILURE OF SWN-7

The manual operator on service water (SW) valve SWN-7 failed on March 9 during operations to swap essential SW headers. SWN-7 is the isolation valve for the service water supply to turbine building loads. The inoperable valve could have resulted in insufficient service water flow for the emergency diesel generators and other safety systems had there been a demand for those safety systems. The operator on SWN-7 failed 6 other times since 1995. Following the early failures, an engineering evaluation determined that the design margin for the gear box in the manual operator was marginally adequate. Engineering work request 12110-99 was issued to replace the gear set on SWN-7 and similar valves with high strength materials. The engineering request was canceled in July 1999 and no action was taken. This issue had very low safety significance since the specific failure on March 9 and corrective actions occurred within the limiting condition for operation for the service water system, and no operating or stand-by mitigating equipment supported by service water was called to perform its intended function. The failure to take adequate corrective action for repeat failures of service water valve SWN-7 was a violation of 10 CFR 50, Appendix B, Criterion XVI. This is being treated as a Non-cited violation.

Inspection Report# : [2002002\(pdf\)](#)

Significance: N/A Mar 30, 2002

Identified By: Licensee

Item Type: NCV NonCited Violation

10 CFR 50 APPENDIX B, CRITERION III, "DESIGN CONTROL"

10 CFR 50 Appendix B, Criterion III requires in part, that measures be established for the identification and control of design interfaces and for coordination among participating design organizations. The licensee did not ensure that the pressurizer level instrument drift evaluations were consistently bounded by the assumed instrument uncertainty within the safety analysis for a postulated Loss of Normal Feedwater event and a Loss of Offsite power event. The licensee documented this issue in condition report 2002000313.

Inspection Report# : [2002002\(pdf\)](#)

G

Dec 29, 2001

Significance:

Identified By: Licensee

Item Type: NCV NonCited Violation

OPERATOR FAILURE TO PLACE MODE SWITCH TO AUTO RESULTING IN DILUTION OF THE RCS BY AN ADDITIONAL SIX GALLONS

While making a routine RCS dilution on December 17, 2001, an operator error resulted in an inadvertent dilution of 6 additional gallons of primary water (a total of 42 gallons was added versus the 36 gallons planned). The error occurred because the operator failed to place the Mode switch to AUTO per Step 4.3.16(4) of SOP 3.2 when securing the CVCS from the Dilution mode. The failure to follow procedures was contrary to Technical Specification 6.8.1.a. The inadvertent RCS dilution was classified as a reactivity management event. In accordance with the NRC Manual Chapters 0609, "Significance Determination Process," and 0610*, "Power Reactor Inspection Reports," this issue was determined to be more than minor because an inadvertent dilution of the RCS, if left uncorrected, could become a more significant safety concern. When evaluated in accordance with the SDP Phase 1, the issue was considered to be of very low safety significance since there was no actual challenge to reactor safety or the status of mitigating safety systems. The licensee identified this procedure violation (reference condition report 200112470). This failure to adhere to a procedure is being treated as a non-cited violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25388) (NCV 50-247/01-11-01).

Inspection Report# : [2001011\(pdf\)](#)

G

Dec 29, 2001

Significance:

Identified By: NRC

Item Type: FIN Finding

REACTOR TRIP AND PLANT RESPONSE

On December 26, 2001, the reactor was automatically shutdown in response to a trip of the main turbine. The plant trip was caused by the failure of a non-safety related protection relay following a disturbance in the 345 KV electrical system that resulted in a partial load reject of the main generator output. The plant response was complicated by the de-energization of 6.9 KV buses 1 through 4, resulting in the shutdown of all four reactor coolant pumps, the de-energization of two of four 480 volt safeguard buses (safety buses 2A and 3A), and a loss of some of the operating condensate and circulating water pumps. The trip response was further complicated by equipment problems that resulted in the loss of the main condenser. For the fault that occurred in the 345 KV electrical system, the plant electrical response was as expected in accordance with the plant design. The licensee post trip evaluation demonstrated that turbine and reactor limits were not exceeded. The operators responded properly to the trip and the equipment performance problems. In accordance with NRC Manual Chapters 0609, "Significance Determination Process," and 0610*, "Power Reactor Inspection Reports," this issue was determined to be more than minor because a reactor trip is a transient initiator and the plant transient with electrical complications could be a significant safety concern if the lost safety equipment was not readily recovered. When evaluated in accordance with the SDP Phase 1, the issue was considered to be of very low safety significance since there was no impact on the plant safety barriers and the impact on mitigating safety equipment availability was minimal.

Inspection Report# : [2001011\(pdf\)](#)

G

Oct 05, 2001

Significance:

Identified By: NRC

Item Type: NCV NonCited Violation

Several Examples of Failure to Follow Calorimetric Procedure

The operators' failure to follow calorimetric and operating procedures resulted in an overpower condition on August 17, 2001, and was a violation of Technical Specification 6.8.1. The overpower condition impacted the reactor safety cornerstone since it could have caused a reactor trip if not corrected by the operators. This event had very low safety significance, since the overpower condition was minor, existed for a small amount of time, and resulted in no loss of function or availability of mitigation equipment. The violation of Technical Specification 6.8.1.a was treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368)

Inspection Report# : [2001009\(pdf\)](#)

G

Oct 05, 2001

Significance:

Identified By: NRC

Item Type: NCV NonCited Violation

Poor Reactivity Management Caused Violation of Power Limit

The operators' failure to adequately monitor plant conditions resulted in an overpower condition on August 17, 2001, and a violation of the License Condition 2.C.(1) thermal power limit. The overpower condition impacted the reactor safety cornerstone since it could have caused a reactor trip if not corrected by the operators. This event had very low safety significance, since the overpower condition was minor, existed for a small amount of time, and resulted in no loss of function or availability of mitigation equipment. The violation of License Condition 2.C.(1) was treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368)

Inspection Report# : [2001009\(pdf\)](#)

Significance: N/A Oct 05, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Actions Contrary to Criterion XVI

The licensee corrective actions in response to past reactivity management and plant events were ineffective in precluding recurrent problems in log keeping, procedural adherence, and post-evolution debriefs. These deficiencies contributed to the August 17, 2001 overpower condition and the subsequent, untimely management review. This is a recurrent example of an issue in problem identification and resolution. The failure to correct conditions adverse to quality is considered a violation of 10 CFR 50 Appendix B, Criterion XVI. This violation is being treated as a Non-Cited violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2001009\(pdf\)](#)

Significance:  Jul 01, 2001

Identified By: NRC

Item Type: VIO Violation

Deficiencies in the overall direction and execution of the 1997 SG inservice examination

Event date was changed so that this item would show up during the ROP year 2002. The original date was July 20, 2000. The overall direction and execution of the 1997 SG inservice examinations were deficient in several respects. Despite opportunities, Con Edison did not identify and correct a significant condition adverse to quality involving the presence of primary water stress corrosion cracking (PWSCC) flaws in row 2 steam generator (SG) tubes in the small radius, low-row U-bend apex area. Con Edison did not adequately account for conditions which adversely affected the detectability of, and increased the susceptibility to, tube flaws. Specifically during the 1997 SG Eddy Current Test (ECT) and secondary side visual examination. As a result, tubes with PWSCC flaws in their small radius U-bends were left in service following the 1997 inspection, until the failure of these tubes occurred on February 15, 2000, while the reactor was at 100-percent power. This preliminary finding was characterized as Red, an issue of high safety significance, in inspection report 05000247/2000-010, dated August 31, 2000. Final assessment of the inspection finding using the SDP was characterized as Red and provided to the licensee in a letter dated November 20, 2000, subsequent to a regulatory conference that was held on September 26, 2000. The NRC determined that the licensee's failure to identify and adjust or modify the inspection methods and analysis to account for significant conditions that affected the quality of the 1997 steam generator inspection was a violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions. In a letter dated January 19, 2001, the licensee denied that the violation occurred and contended that the 1997 steam generator tube inservice examination was conducted in accordance with industry guidelines and requirements applicable at the time. The licensee also provided several affidavits prepared by individuals with experience in steam generator inspection and eddy current testing, attesting licensee performance to be acceptable. Additional NRC review of the licensee's response and bases for denial of the violation did not alter the NRC's conclusion that the violation existed. NRC follow-up to this issue will focus on the licensee's corrective action program effectiveness.

Inspection Report# : [2000010\(pdf\)](#)

Inspection Report# : [2000011\(pdf\)](#)

Significance:  May 11, 2002

Identified By: Self Disclosing

Item Type: FIN Finding

REDUCTION OF PLANT POWER BY CONTROL ROOM OPERATORS DUE TO CONDENSATE PUMP MOTOR FAILURES

On April 20, 2002, and on May 8, 2002, the control room operators reduced plant power due to condensate pump motor failures. A lack of a predictive maintenance program and an improperly set oil level indication system were the causes for two separate condensate motor failures. The events are more than minor since both events increased the likelihood of an initiating event. Operator response was necessary to ensure an automatic reactor trip did not occur due to a low steam generator level. The performance issues were of very low safety significance since there was no impact to normally available mitigating equipment.

Inspection Report# : [2002003\(pdf\)](#)

Significance: N/A Nov 18, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

NRC identified that the licensee did not sample all Senior Reactor Operators on emergency plan implementation

The facility did not design their annual operating test such that all Senior Reactor Operator licensees were "at risk" of being evaluated on implementation of the emergency plan. The safety significance of this finding is low because emergency plan knowledge was tested on the written examination and sampled in the Year 2000 operational examinations after this inspection. This is a non-cited violation of 10CFR55.59(a)(2).

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

Higher failure rate on the year 2000 requalification examinations

The facility has experienced a high failure rate on the Year 2000 requalification examinations. This is attributable in part to an upgrade in examination difficulty. The significance of this issue is low; however, a high failure rate may indicate poor training and inadequate competence level. This did not appear to be the case because the facility had increased the difficulty level of the written examinations for their Year 2000 exams and exams administered in 1998 were adequate.

Inspection Report# : [2000013\(pdf\)](#)



Significance: May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to maintain RCS cooldown rate within required TS limits

During the initial plant cooldown following a tube leak in the steam generator, the Technical Specification cooldown limit for the reactor coolant system was exceeded. The evaluation of the excessive cooldown determined that there was no adverse impact on the reactor coolant system components and, therefore, is considered a very low risk significant issue. This non-cited violation resulted from the operation crew's deficient monitoring of plant parameters and high pressure steam dump system deficiencies.

Inspection Report# : [2000007\(pdf\)](#)



Significance: May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to validate and verify an EOP change

Deficiencies in emergency operating procedures delayed necessary plant cooldown actions by the operators. The non-cited violation was determined to be an issue of very low risk significance, because the cooldown delay did not result in a measurable increase in the release of activity during the steam generator failure event.

Inspection Report# : [2000007\(pdf\)](#)



Significance: May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Procedure inadequacies

Deficiencies in standard operating procedures delayed necessary plant cooldown actions by the operators. The non-cited violation was determined to be an issue of very low risk significance, because the cooldown delay did not result in any appreciable increase in the release of activity during the steam generator failure event.

Inspection Report# : [2000007\(pdf\)](#)

Mitigating Systems



Significance: Feb 09, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DESIGN CONTROL IN TFC FOR NITROGEN BACKUP SYSTEM

The inspector identified that a temporary facility change (TFC) for the backup auxiliary feedwater system (AFW) nitrogen supply was deficient because component specifications critical to the design were not identified in the design package. This issue was considered more than minor because of the potential for an improper component substitution to impact operability of a risk significant system. However, this issue was determined to be of very low safety significance using phase one of the SDP because the modification was adequate as installed. The failure to include design specifications in the TFC was a violation of Criterion III, Design Control. This is being treated as a Non-cited violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: Feb 09, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW TAGGING PROCEDURE RESULTS IN INOPERABLE EDG

An operator error during a tagout verification rendered the 21 emergency diesel generator (EDG) inoperable. This occurred when the 23 EDG was inoperable for planned maintenance. The tagout error was considered more than minor since it could reasonably be viewed as a precursor to a station blackout event and impacted mitigating systems cornerstone. The issue was determined to be of very low safety significance using phase two of the SDP because the exposure time was of very short duration (approximately five minutes), and the error was self-revealing so that operator action could be credited for timely restoration of the safety function. The failure to properly verify the tagout was a violation of TS 6.8.1.a. This is being treated as a Non-cited violation.

Inspection Report# : [2001014\(pdf\)](#)

Significance: N/A Dec 17, 2001

Identified By: NRC

Item Type: FIN Finding

Failures during simulator exams - 2001 Licensee Operator Requalification Program

The results of the 2001 Licensee Operator Requalification (LOR) Program showed a high number of crew and individual failures during the simulator exams. The licensee's preliminary investigation found the exam failures were caused by inadequate corrective actions and insufficient implementation of corrective actions for licensed operator knowledge and performance weaknesses identified during previous year LOR exams. The licensee determined the presently observed performance deficiencies were previously identified but not adequately corrected, aspects of which contributed to degraded performance in two plant reactivity management events and configuration control events in 2001. The inspector noted a root cause of the LOR program results (inadequate corrective actions) was also evident in recent plant events and NRC findings. This was an example of a cross cutting issue regarding human performance and problem resolution. Inspection Report 50-247/01-13 provides additional details regarding licensed operator requalification weaknesses.

Inspection Report# : [2001010\(pdf\)](#)



Significance: G Dec 17, 2001

Identified By: NRC

Item Type: FIN Finding

Problems with the auxiliary feedwater system during plant shutdown for mid-cycle maintenance outage

During the plant shutdown for a mid-cycle maintenance outage on October 27, 2001, the operators experienced several problems with the auxiliary feedwater (AFW) system, which caused them to declare two motor driven pumps inoperable. Even though the auxiliary feedwater pumps were subsequently found to have been able to perform their intended safety function, the equipment operating deficiencies had a credible impact on the availability of the auxiliary feedwater system. The issue was evaluated in phase 1 of the SDP and was found to have very low safety significance.

Inspection Report# : [2001010\(pdf\)](#)



Significance: G Dec 17, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Control M&TE per Appendix B, Criterion XII

Entergy identified that measuring and test equipment (M&TE) were out of specification, and that condition reports were not consistently initiated to evaluate the impact of the out of specification M&TE on surveillance tests. Entergy's engineering assessment concluded that the systems impacted by out of specification M&TE were operable. This issue was evaluated in phase 1 of the Significance Determination Process (SDP) and was found to have very low safety significance. A Quality Assurance Audit had previously recognized an inconsistent approach in the control of M&TE. Although a Business Plan performance improvement initiative exists for this area, progress was insufficient to prevent the observed problems. Contrary to 10 CFR 50 Appendix B criterion XII, the licensee had failed to assure that measuring and test equipment used in activities affecting quality were properly calibrated and adjusted to maintain accuracy within limits. This violation is being treated as a Non-Cited Violation (NCV) consistent with Section VI.A. of the NRC Enforcement Policy.

Inspection Report# : [2001010\(pdf\)](#)



Significance: G Dec 17, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Control Maintenance per Appendix B, Criterion V

The maintenance instructions used to repair the 21 AFW pump on July 16, 2001, were not adequate to pack the pump in accordance with a maintenance standard and vendor instructions. This resulted in poor packing performance and resulted in operators declaring the 21 AFW inoperable during the October 27 shutdown. Further, in 1998 the licensee identified the need to provide instructions on packing pumps to workers, but did not provide adequate information in the maintenance procedures. This issue had a credible impact on safety since a properly packed gland is necessary to ensure reliable AFW pump operation. However, since the maintenance errors did not result in packing failure and a subsequent evaluation concluded the 21 AFW pump could perform its safety function, this issue was determined to have very low safety significance in accordance with a SDP Phase 1 assessment. The failure to provide adequate maintenance instructions for work on safety related equipment was an example of a

condition contrary to 10 CFR 50 Appendix B, Criterion V. This violation is being treated as a Non-Cited Violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy.

Inspection Report# : [2001010\(pdf\)](#)

Significance: N/A Dec 17, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Issue Condition Report and Implement Corrective Action as Required by 10 CFR 50, Appendix B, Criterion XVI

The licensee's corrective actions in response to several equipment problems were ineffective. Repetitive failures of safety injection (SI) system relief valve, SI-855, and the low pressure steam dump valves were not prevented. Appropriate analyses were not performed to fully understand the causes for the past failures. In addition, items related to these equipment problems were not entered in the corrective action program for resolution. This is a recurrent example of deficiencies in problem identification and resolution. The failure to correct conditions adverse to quality is considered a Severity Level IV violation of 10 CFR 50, Appendix B, Criterion XVI. This violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy.

Inspection Report# : [2001010\(pdf\)](#)

Significance:  Nov 05, 2001

Identified By: NRC

Item Type: FIN Finding

PROPOSED YELLOW FINDING DUE TO HIGH CREW FAILURE RATE DURING THE 2001 ANNUAL REQUALIFICATION SIMULATOR EXAMINATIONS

This supplemental inspection was performed by the NRC to assess the licensee's evaluation associated with crew high failure rate (four of seven crews failed) during facility-administered annual licensed operator requalification examinations conducted last fall. The finding was previously characterized as having substantial safety significance (Yellow) in NRC Inspection Report 50-247/01-13. The inspectors noted that the licensee's evaluation identified a fundamental underlying weakness: The station has yet to overcome cultural weaknesses that include an unwillingness to confront poor performance, an over reliance on procedures to change behavior, and compartmentalization. More specifically, the licensee identified three root causes: 1) Operations training had not focused on the basic building blocks that ensure a healthy program; 2) The station had not maintained a core of career oriented, plant knowledgeable instructors and operators; and 3) Operations department involvement with Operations Training had often been ineffective. The inspectors concluded that the methodology and level of detail of the licensee's root cause evaluation were reasonable. The licensee implemented a number of corrective actions to address the identified causes. The corrective actions are described in the station's Training Improvement Plan. The more significant corrective actions included initiatives that aimed to 1) improve the quality of training and training materials; 2) increase the number of instructors who have Unit 2 plant experience; and 3) provide additional management support and oversight of training. The inspectors determined that the corrective actions are appropriately focused on the identified causes. These actions were appropriately prioritized, and either complete or scheduled for completion. Notably, the licensee took strong immediate corrective actions following the requalification examination failures to provide extensive retraining to each shift, and continue to provide this high intensity training. The inspectors independently assessed the extent of the underlying conditions that led to the Yellow finding and found that performance issues had also existed in other Operations Training programs, such as initial licensed operator and non-licensed operator training programs. These problems existed for at least three years, both prior to and following the steam generator tube failure event in 2001. Although licensee audits and assessments had identified most of the performance problems prior to the crew high failure rate, they did not identify long-term operator performance as a concern. The inspectors concluded that the licensee's extent of condition review appropriately bounded the underlying conditions that led to the Yellow finding as evidenced by the fact that the licensee had also identified the duration and extent of the problems, and the failure to recognize the long standing issues.

Inspection Report# : [2001013\(pdf\)](#)

Inspection Report# : [2002004\(pdf\)](#)

Inspection Report# : [2002009\(pdf\)](#)

Significance: N/A Oct 05, 2001

Identified By: NRC

Item Type: URI Unresolved item

Reporting Safety System Functional Failures in PI Data

Licensee event report 05000247/2000-006 documented that both source range instrument channel trip setpoints were outside the design basis due to the failure to account for postulated worst case ambient temperatures in the control room. Entergy did not classify this event as a safety system functional failure because the source range high flux trip is not credited in the UFSAR Chapter 14 accident analysis. The source range nuclear instruments are required to be operable per the technical specifications. NUREG-1022, Section 3.2.7, states that a failure of any component listed in the technical specification to perform a safety function, including shutdown of the reactor, is considered reportable under in 10 CFR 50.73(a)(2)(v). Further, if reported under this criteria, the failure would then meet the definition of a safety system functional failure. This item is considered unresolved pending further review by the NRC (UNR 05000247/01-09-01).

Inspection Report# : [2001009\(pdf\)](#)

Significance:  Aug 18, 2001

Identified By: NRC

Item Type: FIN Finding

Initial licensee operability evaluation was incomplete-Failure to consider the impact on net positive suction head for the 22 boric acid transfer pump

An initial licensee operability evaluation was incomplete in that it failed to consider the impact on net positive suction head (NPSH) for the 22 boric acid transfer pump when the boric acid tank temperature reached 209 degrees Fahrenheit. This issue was evaluated in the Significance Determination Process and found to have very low safety significance.

Inspection Report# : [2001008\(pdf\)](#)**Significance:** Aug 18, 2001

Identified By: NRC

Item Type: FIN Finding

Poor communications resulted in the untimely recognition of a degraded main turbine trip function

Poor communications between plant operations staff and off-site electrical distribution personnel resulted in the untimely recognition of a degraded main turbine trip function that provided redundant protection from a fault in the offsite 345 kV system. Specifically, circuit troubleshooting in July 2001 identified a 345 kV pilot wire protection trip that was degraded since January 3, 2001. The licensee also identified poor quality drawings for offsite protection equipment and poor configuration control (a spare 125 volt DC breaker was open instead of closed as required). Although the drawings and configuration control were not maintained by Indian Point Unit 2 personnel, they did impact the function of the electrical system as described in the UFSAR section 8.1.1 and 14.1.6.2. This issue was evaluated in the Significance Determination Process and found to have very low safety significance.

Inspection Report# : [2001008\(pdf\)](#)**Significance:** Aug 18, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to consider risk pursuant to 10 CFR 50.65(a)(4)

The licensee failed to fully consider ongoing plant risk with an inoperable main turbine direct trip function between July 21 and August 7, 2001. This issue had a credible impact on safety because of the lack of automatic 6.9 kV bus transfer from the unit auxiliary transformer to the station auxiliary transformer following a postulated 345 kV system fault. On July 22, 2001, the 23 emergency diesel generator was removed from service for planned maintenance. This activity qualitatively would have increased plant risk given a transient on the 345 kV system and short-term unavailability of offsite power to safeguards buses 2A and 3A with no emergency power to safeguards bus 6A during the planned maintenance. Operator actions would be necessary to restore power to two of four safeguards buses. Qualitative assessments were not performed until the inspector discussed this observation with the licensee on August 7, 2001. Additionally, risk associated with the inoperable trip should have been incorporated into maintenance restrictions on certain safety equipment. This issue was evaluated in the Significance Determination Process and found to have very low safety significance. The failure to consider plant risk for an inoperable main turbine direct trip from a 345 kV fault is contrary to 10 CFR 50.65(a)(4). This violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368)

Inspection Report# : [2001008\(pdf\)](#)**Significance:** N/A Aug 18, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to initiate Condition Report pursuant to 10 CFR 50 Appendix B, Criterion XVI

The licensee did not identify a condition adverse to quality evident in the repeated failures of a post-maintenance test (PMT) associated with the 23 emergency diesel generator (EDG). Following governor oil replacement in July 2001, the PMT was to perform the monthly surveillance PT-M21C, "Emergency Diesel Generator 23 Load Test." The procedure requires the EDG to be loaded to the 30 minute rating of 2300 kilowatts (kW). During the PMT, the 23 EDG could not achieve 2,300 kW, but was loaded to 2250 kW on July 25 and 2275 kW on July 26, 2001. The inability to reach desired loading was related to reaching terminal voltage limits when the EDG was tested with the generator operated in parallel with the offsite electrical grid. The licensee concluded that the inability to reach the desired load was an artifact of the test methodology and that the EDG would be able to reach the desired load under isochronous (loss of offsite power) conditions. Thus, the operability determination demonstrated the EDG could reach full load. Although EDG operability questions were addressed by this operability determination, the inspector was concerned with lack of progress in addressing this issue on previous occasions since six condition reports in the last three years documented EDGs not obtaining the desired loading due to offsite grid conditions (CR 199810268, 200003415, 200003494, 200003541, 200004426, 200004462). Previous corrective actions were not effective at resolving this testing deficiency. The failure to initiate a condition report for a condition adverse to quality (failure of a PMT for the EDG) is considered a violation of 10 CFR 50 Appendix B, criterion XVI. This violation is being treated as a Non-Cited violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25388).

Inspection Report# : [2001008\(pdf\)](#)**Significance:** N/A Jul 07, 2001

Identified By: NRC

Item Type: FIN Finding

ASSESSMENT OF WORK ON THE STATION AUXILIARY TRANSFORMER (SAT) TAP CHANGER

Con Edison's assessment of the work on the station auxiliary transformer (SAT) tap changer indicated the maintenance had high risk significance due to the potential for a plant transient and electrical system perturbations. Weaknesses were noted in the initial work planning when the tap changer maintenance was attempted on June 7. During the pre-job brief, control room operators identified problems in implementing contingency actions and requested additional contingency planning. Con Edison subsequently refined the risk assessment, implemented planning details, and completed the tap changer maintenance on the on June 19, 2001 with a daily risk factor comparable to the baseline value. The failure to initially manage plant risk during the maintenance activity was a contributor to an adverse trend in problem identification and resolution.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Jul 07, 2001

Identified By: NRC

Item Type: FIN Finding

FAILURE TO ADEQUATELY CONTROL TAGGING ACTIVITIES

While Gas Turbine GT1 was out of service for repairs, Con Edison applied a tagging order to de-energize electrical equipment prior to asbestos abatement. The tagging order caused the inadvertent loss of IP1 DC control power which impacted the ability to electrically operate 13.8 KV breakers that supply alternate safe shutdown power to IP2 safety systems. The over current protection intended to protect the safe shutdown equipment from a fault was unavailable for about 6 hours. The adequacy of IP1 electrical drawings and staff knowledge of available drawing resources were a factor in the tagging problem. Con Edison identified other inadequacies in IP1 electrical drawings and equipment labeling during the period which impacted tagging activities. The failure to adequately control tagging activities was a contributor to an adverse performance trend in human performance.

Inspection Report# : [2001006\(pdf\)](#)



Significance: G Jul 07, 2001

Identified By: NRC

Item Type: FIN Finding

GAS TURBINE 2 FOUND TO BE INOPERABLE DURING ROUTINE MONTHLY TESTING

Gas Turbine 2 was found to be inoperable during routine monthly testing on May 28, 2001. GT-2 remained out of service for eight days as Con Edison continued to identify and investigate several support system problems. The problems and degraded material conditions were long-standing and were present despite the recent extended maintenance outage to overhaul GT-2. The untimely resolution of long-standing degraded conditions was a contributor to an adverse performance trend in problem identification and resolution.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Jul 07, 2001

Identified By: NRC

Item Type: FIN Finding

SEVERAL EVENTS THAT WERE INDICATIVE OF AN ADVERSE TREND IN HUMAN PERFORMANCE

Several other events during the period were indicative of an adverse trend in human performance, including operator performance following the June 5 fire system leak into the utility tunnel; the conduct of a reactor protection system test with an unqualified technician; inadequate preparation resulting in an unnecessary 100 mRem radiation exposure; and, work on the wrong emergency battery light. In response, Con Edison reset the "event free clock" and conducted a station stand down on June 14 - 15, 2001 to review human performance issues.

Inspection Report# : [2001006\(pdf\)](#)



Significance: G Jul 07, 2001

Identified By: Self Disclosing

Item Type: FIN Finding

Failure of a fire water header.

During a test of the fire water system on June 5, 2001, the 12 inch fire water header failed, which resulted in a leak of 231,000 gallons of city water into the Utility Tunnel. The automatic and manual fire suppression system was inoperable for approximately 1 hour and 15 minutes, which impacted 14 fire zones that contained alternate safe shutdown equipment. The licensee restored the main fire header back to a fully functional status on June 10, 2001. The fire header failed because of inadequate alignment and torque setting of the Victaulic couplings when the header was modified in November 2000. This issue was evaluated in the Significance Determination Process and found to have very low safety significance.

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A Jul 07, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FIRE PROTECTION DESIGN BASIS COMBUSTIBLE LOADING

The inspector identified during a review of the fire hazards analysis that each fire zone throughout the plant did not have a

retrievable basis for their combustible loading. The failure to provide a design basis for combustible loading was contrary to TS 6.8.1.a and License Condition 2.K. This violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2001006\(pdf\)](#)

Significance: N/A May 19, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN ADEQUATE RECORDS OF REQUALIFICATION ATTENDANCE

Con Edison did not have attendance records for an average of 30% of the licensed operator training classes for the years 1998-2000. This issue has minimal safety significance because the facility was able to provide examination/evaluation records of program participation. Con Edison verified operator attendance through written and simulator evaluation records. Corrective actions were addressed in Condition Report 200008293. The failure to have complete records of licensed operator training was contrary to the 10 CFR 55.59(c)(5) and the record retention requirements of Technical Specification 6.19.2.g. This item is being treated as a non-cited violation.

Inspection Report# : [2001004\(pdf\)](#)

Significance: N/A May 19, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO COMPLETE POST MAINTENANCE TESTING

Con Edison identified that corrective actions were not effective to correct a violation related to the completion of post-maintenance testing (PMTs). There were no operability or safety issues related to the outstanding PMTs for safety related equipment that had been returned to service. This matter was a repetitive, licensee-identified violation of TS 6.8.1 having minimal safety significance for the failure to have documented assessment of the outstanding PMTs. This item is being treated as a non-cited violation.

Inspection Report# : [2001004\(pdf\)](#)

Significance:  May 19, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TAKE ADEQUATE CORRECTIVE ACTIONS TO ADDRESS THE EFFECT OF AMBIENT TEMPERATURE ON THE SETPOINT OF MAIN STEAM CODE SAFETY VALVES

The NRC identified that Indian Point Unit 2 failed to take adequate corrective actions to address the effect of ambient temperature on the setpoint of main steam code safety valves, in response to a prior NRC violation, related to pressurizer code safety valve setpoint testing. Because there was no indication that an actual loss of safety function occurred, the Significance Determination Process screened this condition as one of very low safety significance. This violation of Criterion XVI, "Corrective Action," of 10 CFR Part 50, Appendix B, has been entered in Con Ed's corrective action system and is being treated as a non-cited violation.

Inspection Report# : [2001004\(pdf\)](#)

Significance:  May 19, 2001

Identified By: NRC

Item Type: FIN Finding

MAINTENANCE RISK ASSESSMENT AND EMERGENT WORK

Gas turbine #1 (GT-1) failed during a test on May 3, 2000. Con Edison identified degradation in the turbine and compressor sections, and noted significant cracking in the first stage stationary blades. A preliminary assessment concluded the degradation was significant and questioned whether GT-1 could have operated for its design basis mission time. The plant risk associated with all three gas turbines potentially inoperable for a 24 hour period in March 2001 was reviewed using the Significance Determination Process and had a very low safety significance. GT-1 remained out of service pending disassembly, inspection, repair assessment, and a formal operability assessment.

Inspection Report# : [2001004\(pdf\)](#)

Significance:  May 19, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ENSURE MAIN STEAM CODE SAFETY TESTING WAS ADEQUATE WHILE USING A LIFT ASSIST DEVICE

The NRC identified that Indian Point Unit 2 (IP2) failed to establish measures to ensure that main steam code safety testing requirements were implemented, while making use of a lift assist device. Because there was no indication that an actual loss of safety function occurred, the Significance Determination Process screened this condition as one of very low safety significance. This violation of IP2 technical specification 4.2.1, Inservice Testing, has been entered in Con Ed's corrective action system and is being treated as a non-cited violation.

Inspection Report# : [2001004\(pdf\)](#)

**Significance:** Apr 13, 2001

Identified By: NRC

Item Type: URI Unresolved item

Adequacy of Hemyc Cable Wrap Fire Barrier Qualification Test and Evaluation

Based on the review of test reports CTP-1026 and CTP-1077, the team determined that the results of the engineering test alone were inconclusive for qualifying the fire barrier system as a one hour rated fire barrier. The team noted that ConEd had only credited the Hemyc fire barrier on the 23 ABFP for 30 minutes, however, due to identified test discrepancies, the 30 minute rating was also inconclusive. This issue is unresolved pending further NRC review to determine whether the qualification tests of the Hemyc fire barrier wrap systems are acceptable.

Inspection Report# : [2000004\(pdf\)](#)**Significance:** Apr 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to have adequate length of fire hose staged for manual fire fighting in the central control room

The team determined that the 100 feet long fire hoses on the primary and secondary hose reels for central control room (CCR) were too short to reach all areas of the CCR. ConEd took immediate corrective action to stage additional hose lengths near the primary hose station for the CCR, and documented the deficiency in the corrective action program. The failure to be able to reach all areas of the CCR with 100 feet length fire hose is a violation of the Fire Protection Program Plan, which is incorporated into the operating license, by reference, in License Condition 2.K. The significance determination process characterized this condition as being of very low risk significance because the control room is continuously manned, and most fires would be detected and extinguished at the incipient stage using portable extinguishers. This violation of the operating license is being treated as a Non-Cited Violation (NCV 050000247/2000-004-02), consistent with Section VI.A. of the Enforcement Policy.

Inspection Report# : [2000004\(pdf\)](#)**Significance:** Apr 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to provide adequate isolation of circuits from the central control room

The team found that the remote control switches, and their associated wiring, in Unit 1 control panel board located in the CCR of several 13.8 kV light and power breakers (SB1-2, SB1-3, SB1-T, SB2-2 and GT-1) of Alternate Safe Shutdown System (ASSS) power supply were not capable of being isolated from central control room circuit wiring, an area for which the system is credited. This is contrary to section III G.3 of Appendix R. In the event of a fire in the control room, the control of these breakers could be adversely affected and the alternate safe shutdown power relied upon could become unavailable. No procedural steps exist to recover these breaker functions. ConEd entered this deficiency into the corrective action program on April 13, 2001, to address this issue. The team determined that this issue was of very low risk significance (Green). This violation of 10 CFR 50, Appendix R, section III.G.3 requirement, not providing adequate isolation of circuits from the central control room, is being treated as a non-cited violation (NCV 050000247/2000-004-03), consistent with Section VI.A. of Enforcement Policy.

Inspection Report# : [2000004\(pdf\)](#)**Significance:** N/A Apr 13, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

Inadequate Document Control for RPS Wire Lists

10 CFR 50, Appendix B, Criterion VI, "Document Control," requires measures to be established to control the issuance of documents, such as instruction and drawings, including changes thereto. Con Edison did not adequately control the issuance of the RPS wire lists (controlled documents) in that the errors referenced in CR 200008415 (annunciator circuits incorrectly listed in reactor trip listing, incorrect relay numbers and incorrect relay locations) were not corrected. In addition, the RPS wire lists had not been properly updated to incorporate the wiring changes for the P-10 relay contacts in 1982, and the relay replacement/modification in December 2000. The corrective actions for this violation were already in Con Edison's corrective action program. This is a non-cited violation.

Inspection Report# : [2001005\(pdf\)](#)**Significance:** Mar 31, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for EDG Maintenance

During preventive maintenance on the 22 emergency diesel generator (EDG) in March 2001 per ICPM 1780, a technician identified an incorrect configuration on the fuel oil primary filter differential pressure switch for all three emergency diesel generators.

Procedure ICPM 1780 did not provide sufficient guidance to detect the configuration problem when the same calibration was performed in 1998 and 1999. This issue did not result in a loss of diesel generator function and had very low safety significance. The failure to provide adequate procedures for EDG maintenance was a Non-Cited Violation of Technical Specification 6.8.1.a. NCV 2001-003-01

Inspection Report# : [2001003\(pdf\)](#)



Significance: Mar 31, 2001

Identified By: NRC

Item Type: FIN Finding

Failed to complete a timely evaluation per AOI 10.1.4 to identify that a blown fuse had de-energized the power supply

The operators identified a failed status light on the train "A" blackout without safety injection logic circuit, but failed to complete a timely evaluation per AOI 10.1.4 to identify that a blown fuse had de-energized the power supply. This resulted in the untimely detection of a loss of redundancy in the engineered safety features logic. Since the failure did not result in a loss of safety function and the plant was operated within the Technical Specification Table 3.5-3 limiting condition of operation, this issue had very low safety significance. Other performance issues noted included incomplete information provided in the shift turnover brief, the lack of clear guidance in the procedures used to diagnose circuit problems, and the lack of clear directions in the technical specifications on implementing the limiting condition for operation.

Inspection Report# : [2001003\(pdf\)](#)

Inspection Report# : [2001009\(pdf\)](#)



Significance: Mar 31, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Tagging Controls - CST Inventory Loss

The failure to control tagged equipment resulted in a diversion of approximately 20,000 gallons of inventory from the condensate storage tank, which is the inventory source for the secondary heat removal system. Operations Administrative Directive (OAD)-36 requires that workers inform the control room if operation of a component with a caution tag is desired. Contrary to OAD-36, security personnel inadvertently manipulated a temporary breaker that was caution tagged without informing the operations crew. The event did not result in a loss of safety function and the TS limiting condition of operation for the condensate storage tank was not exceeded. This issue had very low safety significance. This violation is being treated as a Non-Cited violation of Technical Specification 6.8.1.a. This is an example of a configuration control problem.

Inspection Report# : [2001003\(pdf\)](#)



Significance: Mar 31, 2001

Identified By: NRC

Item Type: FIN Finding

GT-3 found inoperable while GT-2 was out of service for corrective maintenance and EDG 22 were out of service for planned maintenance

During an extended outage on gas turbine 2 (GT-2) for corrective maintenance and a planned outage on EDG 22 for preventive maintenance, GT-3 became inoperable due to loss of air pressure, as indicated by an alarm and lock-out from pressure switch PS-11. The low pressure lock-out occurred when workers used the GT-3 air system to run air-operated tools for the work on GT-2, and could not be cleared initially when the air service was returned to normal. Followup investigations determined that PS-11 was functioning properly, but the pressure lock-out needed to be reset manually, and that requirement was neither known by the operators nor covered in the procedure. Although GT-1 remained operable to satisfy the TS 3.7.C.1 requirements, the loss of GT-3 caused the plant daily risk factor to increase from 2.01 to 5.44 for about 23 hours. This issue had very low safety significance.

Inspection Report# : [2001003\(pdf\)](#)



Significance: Mar 31, 2001

Identified By: NRC

Item Type: FIN Finding

Inadequate corrective actions - 22 ABFWP oil loss

The 22 auxiliary boiler feedwater pump (ABFWP) became inoperable when workers accidentally opened a drain valve which caused the loss of oil in the outboard bearing. While actions were taken to identify the adverse condition, assess the pump condition and restore it to an operable status in a timely manner, the followup corrective actions did not address actions to prevent recurrence until questioned by the NRC. The event did not result in the loss of the secondary cooling system safety function and the 22 ABFWP was inoperable less than the TS allowed outage time. Therefore, the specific issue had very low safety significance. However, the inoperability of this risk-significant pump is of concern. For example, an NCV was issued in NRC Inspection 05000247/2000-12 for the failure to implement corrective actions to prevent recurrence for the inadvertent operation of the 22 ABFWP overspeed trip device. NCV 2001-003-03

Inspection Report# : [2001003\(pdf\)](#)

Significance: N/A Feb 17, 2001

Identified By: NRC

Item Type: FIN Finding

Findings of a number of human performance issues

The inspection findings this period, and other issues documented in the corrective action process, indicated a number of human performance issues, some of which had significance relative to personnel safety, plant operation or plant equipment. NRC concerns with the number and significance of human performance errors were discussed with the Plant Manager in a meeting on February 16, 2001. The licensee described actions and plans to address this issue.

Inspection Report# : [2000015\(pdf\)](#)



Significance: Feb 17, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to follow operating procedures

On January 2, 2001, with the unit at 6.5% full power, a main turbine trip signal was generated by a high level in the 21 steam generator. The high steam generator level tripped the main boiler feed pump and actuated the auxiliary feedwater system. Three operator or crew performance problems were identified and consisted of the following: the failure to adequately control steam generator level; operator control of rod insertion without a complete understanding of reactor conditions; and, operator communication errors, which resulted in an unnecessary plant cooldown and the simultaneous insertion of reactivity by two means. The issue was evaluated using the NRC's significance determination process as having low safety and risk significance. The failure to operate the reactor in accordance with procedures for reactivity management and controlling reactor temperature was a non-cited violation of Technical Specification 6.8.1.a.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A Feb 17, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to make timely notifications

Review of the January 2 event to evaluate performance and procedure adherence was hampered by poor log-keeping practices, untimely and undocumented operator interview information, and poor plant data retrievability. The initial management response to the event was incomplete and allowed power escalation to continue with incomplete short term actions outstanding. The initial licensee reviews did not identify the procedure adherence and reactivity control issues. Subsequent review by the event review team identified that startup pressures potentially impacted operating activities. Followup actions to address this concern were appropriate.

Inspection Report# : [2000015\(pdf\)](#)

Significance: N/A Feb 17, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to follow log keeping procedures

The failure to implement procedure requirements for log keeping was a non-cited violation of Technical Specification 6.8.1.a. The log keeping violation was considered more than minor because corrective actions from August 31, 1999, and February 15, 2000, events were not completely effective. The failure to make timely notification to the NRC of an actuation of the auxiliary feedwater system was a non-cited violation of 10 CFR 50.72(b)(2).

Inspection Report# : [2000015\(pdf\)](#)



Significance: Feb 17, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to follow surveillance procedures

With the plant operating at 100% full power on February 14, 2001, power was lost to 480 volt Bus 3A during a test of safety bus undervoltage relays. The event was caused by technician error in failing to follow the test procedure. This issue had low safety significance because the loss of safety Bus 3A was of short duration and the remaining multi-train systems were available. The failure to follow procedures was a non-cited violation of Technical Specification 6.8.1.a.

Inspection Report# : [2000015\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Gas Turbine Performance

Corrective actions were not taken to resolve reliability and availability performance issues with the alternate AC power sources, gas turbines (GTs) - 1, -2 and -3. The GTs had not been meeting the licensee developed maintenance rule reliability and availability performance goals since 1995. The team did an independent calculation of the change in core damage probability associated with the unavailability of GT-2 for an estimated repair length of 60 days and determined the risk increase to be within the very low safety significance band ($<1E-6$). This issue was of very low safety significance because the Technical Specifications relative to GT availability were met. This failure to effectively implement corrective actions to ensure that the established maintenance rule goals would be met is being treated as a non-cited violation of 10 CFR 50.65 (a)(1).

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

10 CFR 50 Appendix B, Criteria XVI, Corrective Action

The licensee failed to identify and correct the cause of repetitive failures of the service water strainers and motor operated service water isolation valve SWN-7. These items were determined to be of very low safety significance because the strainer failures did not have more than a minimal impact on system operability and the valve failures were identified when the valve was out of service for maintenance.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to initiate condition reports - service water strainer blowdown flow rates

The licensee failed to initiate condition reports for three failures to meet the acceptance criteria for service water strainer blowdown flow rates during the performance of procedure PT-93 on July 13, 2000. This issue was determined to be of very low safety significance because the operability of the system was not affected.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

EDG Building Ventilation System

The design temperature ratings of electrical components in the emergency diesel generator (EDG) building, including ventilation fan thermal overloads, cabling, and control power transfer switches had not been verified. These issues were of very low significance because the as-found thermal overload settings would not have resulted in the loss of ventilation at the maximum building temperatures, the effects of elevated temperature on the cabling voltage drop calculation would have been negligible, and information obtained from the vendor indicated that the control power transfer switch circuitry would have remained functional at the elevated temperature.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

EDG Manual Load Control

The results of the EDG loading calculation had not been transmitted to the operations department for inclusion into appropriate operating and test procedures. These issues were of very low safety significance since the ability of the EDGs to provide emergency power was not affected and the procedure issues would not have impacted safe operation of the affected systems.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water Header Pressure Analyses

The ability of the service water system to supply adequate flow to all safety-related components based on existing service water low header pressure alarm setpoint and the control room log limits was not supported by engineering calculations. The licensee performed a preliminary analysis and determined that the alarm setpoint of 53 psig was adequate to ensure adequate flows.

However, if pressure decreased to the control room log limit of 48 psig the system would not have had sufficient capacity to supply adequate flow to all components. The licensee increased the control room log limit to 58 psig, giving a 5 psig margin to the 53 psig low pressure alarm design limit. This issue was of very low safety significance because there was no indication that the service water system had been operated below a header pressure of 53 psig.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water Strainer Pit Flooding

Controls were not in place to prevent damage to components in the service water strainer room given an external flood caused by high river water level and a concurrent internal flood due to a potential single failure of a service water pump vacuum breaker valve. The licensee implemented a temporary procedure change to address this issue. This issue was of very low safety significance because it involved the relatively low probability of an internal flooding event coupled with the low probability of an external flooding event.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Fuel Oil Transfer Procedure

Abnormal Operating Instruction (AOI) 27.3.1., "Emergency Fuel Oil Transfer Using the Trailer," Rev. 0, did not provide adequate instructions for filling the trailer. This issue was of very low safety significance because the use of this procedure has never been required and would require minor changes to resolve the discrepancies.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Temporary Procedure Change Process

Appendum VI to SAO 100, "Indian Point Station Procedure Policy," Rev. 3, which describes the process for implementing temporary procedure changes (TPCs), was not followed when alarm response procedure ARP AS-1 (Accident Assessment Panel 1; windows 5-4 and 6-4) was changed with TPC 00-0853, This TPC was implemented because a temporary modification disabled the associated alarm inputs; however, the alarm inputs had already been disabled and the change was not required for immediate operation of the plant. This issue was of very low safety significance because the use of a TPC did not have any actual detrimental affect on plant operations.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Oil Pads in EDG Instrumentation Cabinet

Leaving two oil absorbent pads inside the EDG 21 instrumentation cabinet following repairs to a leak did not comply with SAO-701, "Control of Combustibles and Transient Fire Load," Rev. 8. This issue was of very low safety significance because it did not represent a fire impairment nor a degradation of a fire protection feature or defense in depth issue.

Inspection Report# : [2001002\(pdf\)](#)



Significance: Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Systems not Operated As Designed

Design bases information was not translated into electrical systems testing and operating procedures acceptance criteria or operating limits. This issue was of very low safety significance because none of the test results or operating data reviews identified instances where equipment was operating outside of its design limits. This failure to include appropriate acceptance in the procedures and drawings to ensure activities have been satisfactorily accomplished is being treated as a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

Inspection Report# : [2001002\(pdf\)](#)

**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Control of Setpoints for Delta - Temperature Annunciation

The reactor coolant loop Delta-Temperature alarm was received during power ascension as a result of having an incorrect setpoint value in calibration procedure. This issue was determined to be of very low safety significance since the instrument does not have any automatic protective function, only an alarm function.

Inspection Report# : [2001002\(pdf\)](#)**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Service Water Strainer Pit Drain Check Valve

The plant testing program did not include a verification that the safety-related service water strainer room drain line check valve, MD-500, could open to prevent internal strainer pit flooding. The licensee demonstrated operability by manually cycling the valve from the full open to full closed position and observing that the valve opened with minimal effort and that there was no restriction in movement. This failure to test a valve by periodically exercising it to its safety function position is being treated as a non-cited violation of 10 CFR 50.55a, "Codes and Standards," paragraph (f), "Inservice Testing Requirements."

Inspection Report# : [2001002\(pdf\)](#)**Significance:** Jan 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to translate the design basis into procedures

The licensee did not have a formal process for implementing changes to the plant licensing basis, and certain limits and provisions of two technical specification amendments were not adequately incorporated into plant operating procedures. As a result, there was the potential to have exceeded the technical specification analytical limits on safety injection accumulator pressure, and post-accident radiological doses to control room operators could have exceeded analyzed limits. The conditions had a potential impact on safety in that fuel peak cladding temperature and control room habitability could have been adversely affected. If left uncorrected, inadequate implementation of license amendments could result in a more significant safety concern. The conditions were evaluated using the NRC's significance determination process as having very low safety significance because no actual loss of safety function occurred. This violation of the design control requirements of 10 CFR 50, Appendix B, Criterion III was treated as a non-cited violation.

Inspection Report# : [2000014\(pdf\)](#)**Significance:** Jan 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to establish measures for control of design interfaces

The licensee does not have formal procedures to control the verification, validation, and supply of input data and assumptions to the NSSS vendor, and administrative controls were not adequate to ensure that accident analysis input assumptions were not invalidated by plant modifications. As a result, discrepancies existed between the values assumed in certain accident analyses and actual plant conditions and procedure limits. The discrepancies had potential adverse impact on post-accident fuel peak cladding temperature and containment peak pressure. If left uncorrected, the lack of formal control of design inputs could become a more significant safety concern. The specific conditions caused by the lack of formal design controls were evaluated using the NRC's significance determination process as having very low safety significance because of the limited actual consequences of the input discrepancies on the accident analysis conclusions, and no loss of safety function occurred. This violation of the design interface control requirements of 10 CFR 50, Appendix B, Criterion III was treated as a non-cited violation.

Inspection Report# : [2000014\(pdf\)](#)**Significance: N/A** Jan 13, 2001

Identified By: NRC

Item Type: URI Unresolved item

Evaluation of RWST Design

The team noted that a formal calculation is pending for the deliverable volume from the RWST that accounts for level instrument uncertainties. The NRC raised questions on the available tank vent area; seismic adequacy of overflow line, and criteria for securing containment spray pumps. These issues would not impact system operability. An open item will track the completion of these evaluations and NRC review.

Inspection Report# : [2000014\(pdf\)](#)

**Significance:** Jan 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to take corrective actions for freeze protection

Corrective actions were ineffective to prevent recurrence of material condition concerns with the freeze protection for the refueling water storage tank (RWST), primary water storage tank (PWST) and condensate storage tank (CST) level switches. Over the last three years several condition reports associated with the material condition of the freeze protection for these level switches had been generated, some of which were associated with actual failures of the switches. Although in each case corrective actions were taken to address the specific failure, no corrective actions were taken to prevent recurrence of problems with the freeze protection of these level instruments. This issue had a very low safety significance because it did not result in the actual loss of a safety function. The failure to take corrective actions to preclude repetition is being treated as a non-cited violation of 10CFR50, Appendix B, Criterion XVI, "Corrective Action."

Inspection Report# : [2000014\(pdf\)](#)**Significance:** N/A Jan 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to correct inadequate design interfaces

No Color - The NRC identified that the lack of formal design interface controls that are required by Criterion III of 10 CFR 50, Appendix B, and the licensee's Quality Assurance Program Description had been identified previously by the licensee's Quality Assurance organization and the NRC. Failure to promptly correct this condition adverse to quality resulted in multiple discrepancies between design inputs used in accident analyses and actual plant conditions and procedures. The matter had a potential impact on safety due to the potential effects on safety margins, which left uncorrected could become a more significant safety concern. This issue had a very low safety significance because the design discrepancies involved did not result in the actual loss of safety function. This violation of the corrective action requirements of 10 CFR 50, Appendix B, Criterion XVI was treated as a non-cited violation consistent with Section VI.1.A of the Enforcement Policy due to the very low safety significance of the specific design discrepancies involved.

Inspection Report# : [2000014\(pdf\)](#)**Significance:** Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

23 Auxiliary feedwater pump failed to start during a surveillance due to an electrical problem with the DB-50 supply breaker

The 23 auxiliary feedwater pump failed to start during a surveillance due to an electrical problem with the DB-50 supply breaker. The specific failure had low safety significance because the breaker that failed was installed during the present outage. Corrective actions considered the extent of condition for other DB-50 breakers. This appears to be a missed opportunity for the corrective action and preventive maintenance programs to have identified high contact resistance in the breaker closing circuit prior to a demand failure of a safety related component

Inspection Report# : [2000013\(pdf\)](#)**Significance:** Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

Following replacement of Battery Bank 22, the battery failed a modified performance test

Following replacement of Battery Bank 22, the battery failed a modified performance test when the capacity dropped below 90% (89.7%) prior to the end of the 4 hour test interval. The battery was installed while the plant was shutdown. The battery was considered functional because the capacity was greater than the design basis requirement to provide essential loads for two hours. However, the 22 Battery failed a capacity test on three previous tests during the present outage. Con Edison reported this matter to the NRC per 10 CFR Part 21 by letter dated November 16, 2000, based on a potential defect in the manufacture of the cell plate material. Batteries 21, 23 and 24 have operated and tested satisfactorily. Con Edison continued to evaluate the battery performance and prepare an operability determination

Inspection Report# : [2000013\(pdf\)](#)**Significance:** Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

Maintenance Risk Assessments and Emergency Work Control

Con Edison implemented Modification FPX-00-12449-F to address degraded relay conditions and eliminate a potential for multiple relay failures. The reactor protection system (RPS) was not required to be operable since the work was done while the reactor was

in cold shutdown. Although the relays had remained functional, the replacement was deemed appropriate to assure the debris from degraded coils would not prevent proper relay operation. The inspector verified that the combination of work controls and post-work testing would provide assurance that the RPS would be operable for subsequent plant operations.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

Steam generator replacement project

The activities of the IP2 steam generator replacement project (SGRP), including transport and storage of steam generators, the eddy current inspection of tubes in the replacement steam generators, in-progress radiography of welds, provision for reinstallation of components removed as part of the SGRP and control of work package closeout were noted to be well planned and conducted. Radiation surveys for interim storage of the old steam generators showed measured radiation levels to be below regulatory limits.

Inspection Report# : [2000013\(pdf\)](#)

Significance: N/A Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

The NRC evaluated Con Edison's actions to review plant systems prior to restart

The NRC evaluated Con Edison's actions to review plant systems prior to restart. No operability issues were identified during system walkdowns and status reviews. Most deficiencies were identified by Con Ed; one exception was a problem with a safety injection system pipe support. The NRC noted mixed quality with some walkdowns because system engineer preparation appeared inconsistent and some knowledge weaknesses were noted. Some improvements and procedure changes were made, and some systems were reviewed again. Management review of system health presentations met the intent of the administrative procedures. The initial reviews did not appear to be particularly probing of the conclusions on system health; improvements were noted in later presentations. NRC review of system health continued at the conclusion of the inspection.

Inspection Report# : [2000013\(pdf\)](#)

Significance:  Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

Thermal Sleeve

Con Edison completed action to evaluate a degraded thermal sleeve in the #23 cold leg pipe of the reactor coolant system (RCS) and retrieved loose pieces. The licensee had previously evaluated the thermal sleeves using radiography earlier in the 2000 refueling outage and incorrectly concluded that #23 was intact. The findings this period revealed that the radiographs had been incorrectly interpreted. Con Edison completed a foreign object search and retrieval (FOSAR) after the lower internals were removed and recovered the remnants of the #23 thermal sleeve. Con Edison determined that IP2 can safely operate without a thermal sleeve and with any remaining piece(s) in the RCS

Inspection Report# : [2000013\(pdf\)](#)

Significance:  Nov 18, 2000

Identified By: NRC

Item Type: FIN Finding

Utility Tunnel - Unit 2 support services

Con Edison completed a risk significance evaluation of the components in the Utility Tunnel. The evaluation consisted of a functionality assessment of the mechanical and electrical components in the tunnel that were degraded due to inadequate supports and pipes corroded from ground water ingress into the tunnel. Portions of the fire protection header were replaced this period to address areas of severe wall loss. Long term corrective actions remained in progress to conduct additional engineering walkdowns to identify abandoned services that should be removed as a modification, and finalize long term repairs and upgrades.

Inspection Report# : [2000013\(pdf\)](#)

Significance:  Sep 30, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate fire fighting strategy instruction existed to align fire suppression water to containment

An inadequate fire fighting instruction existed to align fire suppression water to the containment. The deficiency impacted the efforts to suppress the fire inside containment on September 3, 2000. This issue had very low risk significance because safe shutdown equipment was not impacted by the fire. A violation of license condition 2.K is being treated as a non-cited violation

Inspection Report# : [2000011\(pdf\)](#)

**Significance:** Jul 01, 2000

Identified By: NRC

Item Type: FIN Finding

Damaged Service Water Pump and Motor Control Center 21 Power Cables

Con Edison identified damage to the power cables for motor control center (MCC) 21, service water pumps (SWPs) 25 and 26, and feeds for other non-essential intake loads. The cables were damaged when a duct bank routing cables to MCC-21 settled at the intake structure. The SWPs remained functional up to the time the condition was discovered and were removed from service while repairs were completed. The other four service water pumps were not affected. The licensee's preliminary evaluation of the condition included a root cause evaluation and provided the bases for a conclusion that the service pumps remained operable under assumed seismic conditions. Civil repairs and modifications were completed, and the affected MCC-21 and service water pump cables were replaced. The condition occurred due to a combination of stresses applied to the duct bank when the original cables were installed, and inadequate support for the duct bank at the intake foundation. The licensee planned to continue investigations of the soils in the intake area. The licensee entered this issue in the corrective action program as Condition Reports 200003630 and 200004004. The risk associated with the degradation of the service water pump cables was reviewed by the regional senior Reactor Analyst. This condition would be a very low risk condition (GREEN). This is based on the fact that the cables had not failed and the safety function would likely have been performed.

Inspection Report# : [2000008\(pdf\)](#)**Significance:** May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to properly document and accept the bases for the OD

The final calculation for the charging pump seal water tank, which provided the long term basis for operability, was not approved, accepted or entered into the Con Ed Calculation Indexing Program contrary to procedure requirements. This issue was determined to have very low risk significance since the equipment operability was not impacted. Deficient control, review and approval of these calculations and of the associated operability determination are collectively considered a violation of 10 CFR 50, App. B, Criterion V and is being treated as an NCV.

Inspection Report# : [2000007\(pdf\)](#)**Significance:** May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to properly identify and evaluate the full scope of the modification in the SE

The safety evaluation for a modification to the chemical volume and control system power supply did not completely define the scope of work. The safety evaluation incorrectly stated that the associated modification did not add any new wires or cables. The failure to assess the full scope of the modification in the safety evaluation was determined to be a non-cited violation. Failure to include and evaluate the new cables in the safety evaluation was determined to have very low risk significance because it did not change the overall conclusions reached in the safety evaluation regarding an unreviewed safety question, and did not adversely impact the plant design modification.

Inspection Report# : [2000007\(pdf\)](#)**Significance:** May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to correct deficiencies associated with the steam generator nitrogen 16 monitors

Con Edison did not take timely corrective actions for the steam generator leak monitoring recorder deficiency. The failure to take adequate corrective actions was determined to be a non-cited violation and was an issue of very low risk significance in that there was a minimal impact on the operators' ability to determine the magnitude of the steam generator tube leak.

Inspection Report# : [2000007\(pdf\)](#)**Significance:** May 20, 2000

Identified By: NRC

Item Type: FIN Finding

The licensee identified a degradation in the boraflex panels in the spent fuel storage racks

The licensee identified a degradation in the boraflex panels in the spent fuel storage racks, which resulted in a plant condition outside the design basis. Con Edison monitored degradation in boraflex panels in spent fuel pool racks using surveillance coupons, pool chemical analyses and analytical simulations using a computer program. On April 6, 2000, the results of boron-10 areal density

measurements showed that thinning had occurred and gaps up to 7 inches had formed in the boraflex panels. Conservative criticality analyses assuming worst case gap size and geometry showed that the design requirement established in the technical specifications could not be met. Technical specification (TS) 5.4.2.B requires that the storage racks be designed such that the effective multiplication factor (Keff) is less than 0.95 without soluble boron in the pool water. The NRC Safety Evaluation for License Amendment No. 158 described the use of administrative controls such as fuel assembly relocation to compensate for boraflex degradation. Con Edison used additional controls on soluble poison concentration and spent fuel loading patterns to assure the Keff requirements were satisfied. This issue was considered to have a very low risk significance (Green) using the Significance Determination Process (SDP) phase 3 evaluation, because the storage rack Keff remained below 0.95 during past periods when a checkerboard pattern was not used but soluble boron concentration was at least 1500 ppm.

Inspection Report# : [2000005\(pdf\)](#)



Significance: May 20, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Design Control of Manipulator Crane

The licensee failed to maintain adequate control of the manipulator crane control circuits. The circuit wiring was not in accordance with controlled drawings. A jumper bypassed a safety feature in the manipulator crane control circuit. With the jumper installed, the manipulator crane gripper could have been released prior to the fuel assembly being fully lowered into the core. The manipulator crane load cell interlock was not affected. The circuit would have prevented the operator from releasing the gripper under load and dropping a fuel assembly. The event was reviewed with the regional Senior Reactor Analyst (SRA), who evaluated the safety significance as very low (Green) based on the fact that the load cell remained operable and the procedural requirement for the operator to verify the location of the fuel assembly prior to releasing the gripper. The failure to maintain adequate design controls was determined to be a non-cited violation of 10 CFR 50, Appendix B, Criterion III. This inadequate control did not have an actual impact on safety.

Inspection Report# : [2000005\(pdf\)](#)

Barrier Integrity



Significance: Feb 09, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

POSTULATED CONTAINMENT LEAKAGE IN EXCESS OF TS 3.6 LIMITS

The licensee identified a minor leak in the service water piping while the plant was in cold shutdown for a maintenance outage. The leak was repaired prior to startup, and an extent of condition review identified no other defects in service water piping. The licensee determined that the leak most probably initiated during the shutdown period; however, for significance determination the licensee postulated that the defect existed during plant operation prior to the outage in order to conservatively estimate containment leakage during design basis events. This issue was determined to be more than minor because the defect in the service water piping created a potential leakage path from containment. However, the issue was considered to be of very low safety significance using phase two of the SDP because the service water leak did not affect the function of safety equipment, and the containment leakage potential was significantly less than that which would result in a large early release. The failure to maintain containment integrity was a violation of TS 3.6. This is being treated as a Non-cited violation.

Inspection Report# : [2001014\(pdf\)](#)



Significance: Dec 29, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

MULTIPLE FAILURES TO ADHERE TO TS FIGURE 3.1.4-2 DUE TO INADEQUATE PROCEDURES IN THE YEAR 2000

Entergy determined that the plant operated in violation of the RCS overpressure protection requirement of TS Figure 3.1.A-2 on four separate time periods in the year 2000 with a total exposure of approximately 49 hours. The cause was the failure to account for instrument errors in operating procedures used for controlling plant conditions in accordance with TS Figure 3.1.A-2. This issue was evaluated in the SDP process (Manual Chapter 0609 Appendix G) for a violation of the low temperature overpressure protection technical specifications. During the times when the facility operated outside TS Figure 3.1.A-2, all appropriate administrative controls to limit the potential for unwarranted heat-up or mass addition to the reactor coolant system were implemented by operators. The consequence of this error potentially reduced the required operator response time for a postulated overpressure events as previously approved in the plant licensing basis. No reactor coolant system overpressure condition existed during these times and the 10 CFR 50 Appendix G limits were not exceeded. However, the multiple failures to adhere to TS Figure 3.1.A-2 due to inadequate procedures is considered a violation of TS 3.1.A.4 and TS 6.8.1.a. These violations are treated as a Non-cited violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368). A TS Amendment was submitted and

was under review at the end of the inspection.

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A Oct 05, 2001

Identified By: NRC

Item Type: FIN Finding

Identification of an Error in the Reactor Coolant System Activity Performance Indicator Data

The inspector identified an error in the reactor coolant system (RCS) activity performance indicator (PI) data reported for the second quarter of 2001. Transcription errors and ineffective review contributed to the errant PI data. The errors had minimal significance since the PI remained within the green band. However, previous inspection findings identified errors in reporting Indian Point 2 PI data (reference NRC Inspections 05000247/00-01 and 00-11). This issue has more than minor significance because the failure to accurately report PI data potentially could impact the ability of the NRC to perform its regulatory function. The licensee entered this issue in the corrective action program as Condition Report 200109517.

Inspection Report# : [2001009\(pdf\)](#)

Significance:  May 11, 2002

Identified By: Licensee

Item Type: FIN Finding

UNTIMELY OPERATOR EVALUATION FOR CONTAINMENT ISOLATION VALVE 869B

On April 11, 2002, operators did not complete a timely operability evaluation for containment isolation valve 869B after the disconnect switch operating handle on motor control center (MCC)26BB broke while applying an equipment tagout. At the time, the operators neither verified that the disconnect would operate nor completed an adequate evaluation regarding the ability to close valve 869B to perform its containment isolation function. An operability evaluation was completed about six hours later by a different operating crew and the operators then entered a four-hour limiting condition for operation and isolated the containment penetration per the technical specifications 3.6.A.3.a.2.b. The untimely operability evaluation increased the unavailability time for the containment spray system. The inoperable containment isolation valve issue was more than minor because it impacts the containment barrier. This issue had very low safety significance since the containment isolation valve was repaired and restored to an operable status prior to exceeding technical specification 3.6.A.3.a.2.d. This issue was an example of untimely operator implementation of technical specification requirements in response to degraded safety equipment.

Inspection Report# : [2002003\(pdf\)](#)

Significance:  Jul 20, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to use a qualified steam generator eddy current inspection technique for U-bend areas during the 1997 outage

During the 1997 refueling outage the U-bend mid-range Plus Point ECT probe, used for SG tube inspection, was not properly set up to the correct calibration standard. Specification NPE-72217 required the use of an Electric Power Research Institute (EPRI)-qualified technique. The probe was not set up with the calibration standard or with the phase rotation specified on the EPRI qualified technique #96511, dated May 1996. This issue did not have a substantial impact on the ability to detect PWSCC flaws. This issue involved matters with very low risk significance, because it did not directly affect the ability to detect tube flaws and as such, did not affect the reactor coolant system integrity. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion IX, Special Processes.

Inspection Report# : [2000010\(pdf\)](#)

Significance: N/A Jul 20, 2000

Identified By: NRC

Item Type: FIN Finding

Steam Generator program ineffective corrective actions during 1997 outage

The team concluded that Con Edison's root cause analysis for the SGTF, dated April 14, 2000, did not identify and address significant SG inspection program performance issues as they related to the failure of tube R2C5 in SG 24 on February 15, 2000. While the root cause analysis attributed the SGTF to a flaw that was obscured by ECP signal noise, it did not identify or address deficiencies in the processes and practices during the 1997 SG inspection.

Inspection Report# : [2000010\(pdf\)](#)

Emergency Preparedness

Significance:  Jun 25, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to conduct a bi-weekly silent test as specified in the licensee's emergency plan

A non-cited violation of 10 CFR 50.54(q) was identified. Licensees are to maintain and follow their emergency plan. The NRC determined that the licensee did not conduct a bi-weekly silent test within the required periodicity as specified in Section 6.6 of the emergency plan during December 2000. This was considered to be more than minor because of a delay in identifying and repairing sirens that would have been utilized to notify portions of the public in the event of a radiological emergency. However, there have been no significant problems with the sirens, the test results are in the green band for the siren testing performance indicator, and route alerting was available to compensate for any inoperable sirens. Under the significance determination process, the finding was considered to be of very low safety significance.

Inspection Report# : [2001007\(pdf\)](#)**Significance: N/A** May 11, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF 10 CFR 50.54(q) FOR ACCOUNTABILITY

On March 6, 2002, the licensee implemented changes to the accountability process that decreased the effectiveness of the Emergency Plan (E-Plan). The finding was considered more than minor because, if left uncorrected, it would become a more significant safety concern. Changing commitments in the E-Plan without prior approval impacts the NRC's ability to perform its regulatory function and potentially creates an ineffective response to a radiological emergency. The consequences of this change were minimal because it did not preclude the function of accountability from being performed, albeit delayed. The licensee has implemented the corrective actions and has since met the timeliness goal. This change which decreased the effectiveness of the Plan is being treated as a non-cited violation consistent with Section VI.A of the Enforcement Policy, issued May 1, 2000.

Inspection Report# : [2002003\(pdf\)](#)**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Preparedness Response Data System

The team found that the Emergency Response Data System (ERDS) was found inoperable during an exercise in November 2000 and again during a test conducted in the 1st quarter 2001. The NRC conducted an ERDS test during this inspection and found both the system and its backup to be operable. This issue was determined to be of very low safety significance because the licensee retained capability to communicate via the telephone system. The failure to correct a deficiency identified during a drill/exercise is being treated as a non-cited violation of 10 CFR 50.47(b)(14).

Inspection Report# : [2001002\(pdf\)](#)**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Operations Facility Inventory Records

The licensee could not locate Emergency Operations Facility inventory records for the third quarter 2000 nor verify those inventories were actually conducted and a review of available quarterly inventory records identified cases where the records were not properly filled out. This issue was determined to be of very low safety significance because notwithstanding the discrepancies which were identified, the licensee had sufficient resources in the facilities to properly respond to an event. The failure to properly maintain emergency facilities and equipment is being treated as a non-cited violation of 10 CFR 50.47(b)(8) and the licensee's E-Plan, Section 8.3 which states quarterly inventories will be conducted.

Inspection Report# : [2001002\(pdf\)](#)**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to conduct and/or document performance of quarterly communications links

The licensee was not able to produce the 3rd quarter records for the operational check of the emergency communications links between facilities and could not verify that the tests had been conducted. This issue was determined to be of very low safety significance because the licensee had installed spare operable telephone lines. The failure to conduct and/or document the performance of quarterly communications tests is being treated as a non-cited violation of 10 CFR 50.54(q) and Section 8.1.3 of the licensee's E-Plan.

Inspection Report# : [2001002\(pdf\)](#)

**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Emergency Response Organization Performance

The team found that ten individuals assigned to the offsite and onsite monitoring teams had let their respirator qualifications lapse. This issue was determined to be of very low safety significance because there were sufficient responders with respiratory qualifications to fill the positions. The failure to maintain qualifications necessary to maintain proficiency as an emergency responder is being treated as a non-cited violation of 10 CFR 50.54(q) and Section 8.1.2 of the licensee's E-Plan.

Inspection Report# : [2001002\(pdf\)](#)**Significance:** Feb 09, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to establish an effective emergency response training program

The licensee continued to identify exercise deficiencies that are repetitive performance issues and are reflective of past performances, particularly in the area of plant assessment and the dissemination of the information to the general public. The team determined that the training program was not fully effective in preventing recurrence of repetitive exercise issues to ensure consistent emergency response organization performance. This issue was determined to be of very low safety significance because these performance issues did not deal with the risk significant planning standards (classifications, notifications, PARs). The failure to establish an effective training program to train employees and exercising, by periodic drills to ensure that employees maintain the proficiency of their specific emergency response duties, is being treated as a non-cited violation of 10 CFR Part 50.54(q) and Appendix E.IV.F.2.g.

Inspection Report# : [2001002\(pdf\)](#)**Significance:** Jun 02, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to correct ERO notification problems identified

The NRC identified the failure to correct ERO notification deficiencies found as a result of drills or exercises as early as November 1999. Problems with the notification process still existed as demonstrated during the event of February 15, 2000, and as late as June 1, 2000, as evidenced by equipment reliability problems and inconsistent activation by assigned personnel. This finding was treated as a non-cited violation of 10 CFR 50.47(b)(14) consistent with Section VI.A of the NRC Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2000006\(pdf\)](#)**Significance:** Jun 02, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to conduct off-hours exercise within six year period

The licensee identified that they had not conducted an off-hours exercise at the required frequency. E-Plan Section 8.1.3, Drills and Exercises, commits the licensee to conduct an off-hours exercise once every six years. Prior to the February 15, 2000, event, the last off-hours exercise was conducted in 1993 and thus exceeded the six year periodicity. This finding was treated as a non-cited violation of 10 CFR 50.54(q) consistent with Section VI.A of the NRC Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2000006\(pdf\)](#)**Significance:** Jun 02, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to activate ERDS within one hour of an Alert

During the February 15, 2000, event the licensee's failure to activate the Emergency Response Data System (ERDS) within one hour of an Alert was contrary to 10 CFR 50.72(a)(4). The ERDS was not made operable until approximately seven and one-half hours after the Alert declaration due to a problem with the telephone lines. This finding was treated as a non-cited violation of 10 CFR 50.72(a)(4) consistent with Section VI.A of the NRC Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2000006\(pdf\)](#)

G

Significance: Jun 02, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Decrease in the effectiveness of the emergency plan

The NRC identified a decrease in the effectiveness of the E-Plan because descriptions of some onsite ERO positions and the training program had been removed from the E-Plan. This finding was treated as a non-cited violation of 10 CFR 50.54(q) consistent with Section VI.A of the NRC Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2000006\(pdf\)](#)

G

Significance: Jun 02, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate emergency plan content

The NRC identified that there was an inadequate description in the E-Plan of the joint news center (JNC) facilities and staff responsibilities and of the siren testing equipment used to verify siren operability. This finding was treated as a non-cited violation of 10 CFR 50 Appendix E requirements consistent with Section VI.A of the NRC Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2000006\(pdf\)](#)

G

Significance: Jun 02, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to staff ENS line during event in a timely manner

The licensee failed to establish a continuous communication line as requested by NRC. 10 CFR 50.72(c)(3) requires that during emergencies licensees maintain an open, continuous communication channel with the NRC Operations Center upon request by the NRC. The finding was treated as a non-cited violation of 50.72(c)(3) consistent with Section VI.A of the NRC Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2000006\(pdf\)](#)

Occupational Radiation Safety

Significance: N/A Nov 18, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Violation of Technical Specification 6.12.1

Violations of very low significance which were identified by the licensee have been reviewed by the inspector. Corrective actions taken or planned by the licensee appear reasonable. These violations are listed in Section 4OA7 of this report

Inspection Report# : [2000013\(pdf\)](#)

Public Radiation Safety

Physical Protection

Significance: N/A Jan 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to control safeguards information

The following finding of very low significance was identified by IP2 and is a violation of NRC requirements which meet Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as Non-Cited Violations (NCVs). NCV 05000247/2000-14-08 10CFR 73.21(a), Requirements for the protection of safeguards information requires, in part, "Each licensee....shall ensure that Safeguards Information is protected against unauthorized disclosure." In September, 2000, the improper handling of Safeguards

documents was identified; as described in the licensee corrective action program, Reference Condition report 200007569.
Inspection Report# : [2000014\(pdf\)](#)

Significance: N/A Jan 13, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to conduct adequate FFD testing

The following finding of very low significance was identified by IP2 and is a violation of NRC requirements which meet Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as Non-Cited Violations (NCVs). NCV 05000247/2000-14-09 10CFR 26 Appendix A, Failure to Implement Requirements for FFD Testing. QA Annual Audit 00-04-D of the Fitness for Duty (FFD) Program identified that samples sent to the offsite lab for analysis were not tested to the correct criteria. Followup actions were appropriate. Reference Condition Report 200009066.

Inspection Report# : [2000014\(pdf\)](#)

Miscellaneous

Significance: N/A Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM EFFECTIVE CORRECTIVE ACTIONS ASSOCIATED WITH OVERPRESSURE PROTECTION SYSTEM

The licensee's corrective actions in response to condition report 200004598 were untimely and ineffective to preclude the violation of TS figure 3.1.A-2. Condition report 200004598 initiated on June 16, 2000 identified that instrument uncertainty as stated in the TS basis was not incorporated in either the engineering analyses for the TS curves associated with heatup, cooldown and power operated relief valve setpoints, or the instrumentation for the power operated relief valve setpoints. The licensee failed to also consider the implication on the TS curves when overpressure protection system (OPS) is not considered operable and no reactor coolant system vent space exists. The corrective actions in response to this CR failed to preclude plant operations in violation of TS figure 3.1.A-2 on July 2, August 3, and November 30, 2000. This violation of 10 CFR 50 Appendix B, Criterion XVI had low actual safety significance because no consequence to the reactor coolant system pressure boundary occurred. This violation is being treated as a Non-cited violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368).

Inspection Report# : [2001011\(pdf\)](#)

Significance: N/A May 11, 2002

Identified By: Licensee

Item Type: NCV NonCited Violation

VIOLATION OF TECHNICAL SPECIFICATION 6.8.1.a - IMPROPER PROCEDURE USAGE

On April 20, 2002, during a trip of one of the three condensate pumps, control room operators took incorrect action based on an abnormal operating instruction (AOI 21.1.1 step 5.6.4, by using a suction pressure number from this step that did not apply which resulted in their taking operator actions resulting in an unnecessary power transient. A May 8, 2002 condensate pump trip exemplified that this transient (a rapid down power) was not necessary to restore feedwater pump suction. The issue was more than minor since operator improper procedure usage is considered a precursor to a more significant event. Operator knowledge and skill performance issues have been captured in a number of individual NRC findings in past reports. Examples include operator re-qualification simulator test failures in September 2001 (reference NRC report 50-247/2001-013), and an overpower condition in August 2001 (reference NRC report 50-247/2001-09). The operator performance issues associated with the condensate pump trip were documented in the corrective action system as CRs 2000204180 and 200204183. Improper AOI 21.1.1 procedure usage was a violation of Technical Specification 6.8.1.a. This is being treated as a non-cited violation.

Inspection Report# : [2002003\(pdf\)](#)



Significance: Sep 30, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

During implementation of a plant modification, workers failed to perform a work area walkdown, pre-job brief, and review of removal drawings

The licensee issued a modification to reroute the nitrogen piping to the reactor coolant drain tank. During implementation of the modification, workers failed to review drawings, perform a work area walkdown, and conduct a pre-job brief. The workers failed to locate the correct pipe and cut the nitrogen supply line to the safety injection accumulators and the power operated relief valves. This issue had very low safety significance because the safety injection accumulators and the power operated relief valves were not required to be operable at the time. The failure to implement maintenance procedures pursuant to technical specification 6.8.1 is being treated as a non-cited violation.

Inspection Report# : [2000011\(pdf\)](#)



Significance: Sep 30, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

A minor fire inside containment occurred due to a failure to properly evaluate and control transient combustibles during a grinding evolution

A minor fire inside containment occurred on September 3, 2000, when sparks from a grinding evolution landed on a combustible foreign material exclusion (FME) tarp during work controlled under work permit 1060, "Install Reactor Cavity Decking." The fire occurred due to the failure to properly evaluate and control transient combustibles. This issue had very low safety significance because the location of the fire did not impact safe shutdown equipment. The failure to control transient combustibles in accordance with station administrative orders is being treated as a non-cited violation of license condition 2.K.

Inspection Report# : [2000011\(pdf\)](#)

Significance: N/A May 26, 2000

Identified By: NRC

Item Type: FIN Finding

Operations and Engineering support areas, corrective actions to resolve known problems were untimely and incomplete.

In the operations and engineering support areas, corrective actions to resolve known problems were untimely or incomplete. While the problems were of very low risk significance, some of these procedure and equipment problems caused unnecessary challenges to the operators and delays in achieving cold shutdown after the event. These problems included difficult procedural guidance for aligning pressurizer spray flow, non-functional steam generator leak monitoring (N-16) recorder, high pressure steam dump system deficiencies, and the lack of gas turbine Nos. 2 and 3 remote start capability.

Inspection Report# : [2000007\(pdf\)](#)



Significance: May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to properly initiate CRs and initiate appropriate corrective actions

Con Edison did not properly disposition or enter some conditions adverse to quality into their corrective action program as required by procedure. A selected review of the Communications to Staff (CTS) database, a database of procedure enhancement recommendations, determined that one CTS item was not adequately resolved and two additional CTS items met the threshold for initiating a condition report (CR) for which a CR was not initiated. This non-cited violation is associated with the failure to initiate condition reports as required by Con Edison's procedures. The issue was determined to be of very low risk significance, because the most notable problem was related to a delay in reducing plant pressure, and did not result in any appreciable increase in the release of activity during the steam generator tube failure event.

Inspection Report# : [2000007\(pdf\)](#)

Significance: N/A May 26, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

Faulure to follow procedures and enter the required data into the control room log

The control room operators did not enter significant plant items, such as event declaration and implementation of the emergency plan, in the control room logs, as required by Con Edison procedures. This procedure violation was a problem that was also noted for the August 31, 1999 loss of bus event. The failure to enter significant items into the control room logs was determined to be a non-cited violation. Although this issue does not affect any of the seven cornerstones, it was considered important because prior corrective actions were not effective.

Inspection Report# : [2000007\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: NRC

Item Type: FIN Finding

Conclusions for Maintenance and Surveillance

Maintenance activities were satisfactorily completed. The conduct of surveillance tests during the period was acceptable. Maintenance and test activities were not consistently performed in accordance with expectations and administrative controls. The initial evaluations in preparation for a turbine load test did not completely consider shutdown risk.

Inspection Report# : [2000003\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: Licensee

Item Type: FIN Finding

Container Liner Degradation

The containment liner became corroded due to prolonged contact with borated water in areas where moisture barriers were degraded. Con Edison actions continued to investigate and repair liner degradation, and to assure that margins to design limits were maintained.

Inspection Report# : [2000003\(pdf\)](#)

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: Self Disclosing

Item Type: FIN Finding

Steam Generator Examinations

Steam generator eddy current testing and analysis was conducted. The eddy current test results revealed defects which resulted in a Classification of C-3 per Technical Specification 4.13. More detailed review of steam generator inspection results is under the purview of the NRC Office of Nuclear Reactor Regulation.

Inspection Report# : [2000003\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: NRC

Item Type: FIN Finding

Nuclear Facilities Safety Committee

Plant management presentations to the Nuclear Facilities Safety Committee were incomplete. However, the committee members appeared well prepared and provided good discussions on the February 15 steam generator tube leak event.

Inspection Report# : [2000003\(pdf\)](#)

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\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: Self Disclosing

Item Type: FIN Finding

Review of Response to Loss of Power and Air Supply to Steam Generator Nozzle Dams

The operators promptly responded to the loss of power to the steam generator nozzle dams. The nozzle dam normal air supply was lost; however, no loss of reactor coolant system inventory occurred, and no monitoring existed for the nozzle dams for approximately one hour. Con Edison failed to control and integrate several temporary facility changes for the nozzle dam support systems.

Inadequate coordination between operators and workers resulted in a near miss for a significant injury

Inspection Report# : [2000003\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PROCEDURES ON CORE DIFFERENTIAL TEMPERATURE

The operators failed to control RCS differential temperature within limits during RHR system operation. The failure to follow SOP 4.2.1 was a non-cited violation of NRC requirements. Licensee actions continued at the end of the inspection period to evaluate the impact on the baffle-former and baffle-barrel bolts in the reactor vessel internals, and to resolve this matter prior to plant restart.

Inspection Report# : [2000003\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MEET APPENDIX R FOR OIL COLLECTION SYSTEM

The failure to collect leakage from the vent pipe and the lower oil reservoir drain connections on three RCP motors is considered a violation of 10 CFR 50 Appendix R, Section III. This Severity Level IV violation is being treated as a Non-Cited Violation. A long-standing deficiency in the oil collection system went uncorrected.

Inspection Report# : [2000003\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: NRC

Item Type: AV Apparent Violation

FAILURE TO MEET IVSWS LICENSING BASIS

Con Edison did not recognize a long-standing difference between the design and licensing basis for the isolation valve seal water system. Despite several past events and a design basis verification program which highlighted IVSWS performance issues, Con Edison failed to correct a basic design deficiency and assure that the licensing basis was met. Operability evaluations were less than adequate and corrective actions were narrow and untimely. The failure to assure regulatory requirements were correctly translated into specifications, drawings and procedures was an apparent violation.

Inspection Report# : [2000003\(pdf\)](#)

Significance: TBD Apr 01, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE MAINTENANCE INSTRUCTIONS FOR FIRE DAMPERS

lack of maintenance installation instructions contributed to the failure of cable spreading room fire dampers to fully close. The faulty dampers caused the suppression system to be degraded for approximately 3 months. The failure to maintain provisions of the NRC-approved fire protection plan as described in the UFSAR and approved NRC Safety Evaluation Report is a Non-Cited Violation.

Inspection Report# : [2000003\(pdf\)](#)

Last modified : July 22, 2002