# Peach Bottom 2

## Initiating Events

**Significance:** G Dec 29, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
**INADEQUATE GENERATOR ISO-PHASE BUS MAINTENANCE PROCEDURE RESULTS IN A UNIT 2 AUTOMATIC SHUTDOWN**
Technical Specification 5.4.1 requires written procedures be established, implemented, and maintained covering activities listed in Regulatory Guide 1.33. Regulatory Guide 1.33 includes maintenance procedures for performing preventive maintenance and inspections of plant equipment. Contrary to the above, prior to the Unit 2 automatic reactor shutdown on October 23, 2001, adequate written instructions were not established in maintenance procedure, M-C-700-227, Rev 0, "Inspection of Generator Iso-phase Bus" for inspecting, bolting and torquing of the isophase bus duct dampers in the main generator. As a result of these inadequate instructions, three threaded holes were stripped due to excessive torque, which caused the screws holding the rod side of the damper to the connection box to fall out. This allowed the damper frame to pivot on the last remaining bolt and contact the ‘A' phase bushing causing a ground fault, generator lockout, and reactor scram. The corrective actions for this violation were already in the licensee's corrective action program (Condition Report (CR)# 00079965). This is being treated as a Non-Cited Violation.
Inspection Report# : 2001010*(pdf)*

## Mitigating Systems

**Significance:** G Jun 29, 2002
Identified By: NRC
Item Type: FIN Finding
**INADEQUATE PNEUMATIC ISOLATION OF THE EMERGENCY DIESEL GENERATOR (EDG) CARDOX (CARBON DIOXIDE) SYSTEM FOLLOWING THE CARDOX INJECTION IN THE E-3 EDG BAY**
The inspectors identified a finding of very low safety significance (Green) because Exelon did not adequately isolate the pneumatic portion of the emergency diesel generator (EDG) cardox (carbon dioxide) fire suppression system following the unexpected cardox injection into the E-3 EDG room on June 2, 2002. This inadequate isolation would permit a pneumatic trip and lock-out of any one of the operable E-1, E-2 or E-4 EDGs if a spurious cardox actuation signal was generated for the respective room of that EDG. The finding was determined to be of very low safety significance because it did not result in an actual loss of safety function. The E-1, E-2 and E-4 EDGs remained operable during all troubleshooting activities and restoration of the E-3 EDG to an operable condition.
Inspection Report# : 2002004*(pdf)*

**Significance:** G Jun 21, 2002
Identified By: NRC
Item Type: NCV NonCited Violation

**TRIP PROCEDURES INCONSISTENT WITH PLANT SPECIFIC ANALYSIS**
The team identified a finding concerning an inadequate emergency operating procedure (EOP) for returning the suction of the high pressure coolant injection (HPCI) pump to the condensate storage tank (CST) to ensure the self cooled HPCI lube oil temperatures would remain within the analyzed limit. This issue was associated with the HPCI safety function during a postulated anticipated transient without scram. The issue was considered to be of very low safety significance (Green) based on a Phase 1 evaluation of the Significance Determination Process since there was no actual loss of the HPCI system, and was determined to be a non-cited violation (NCV) of the Peach Bottom Technical Specifications, Section 5.4.1.b., "Procedures."
Inspection Report# : 2002011*(pdf)*

**Significance:** G Jun 21, 2002
Identified By: NRC
Item Type: FIN Finding
**PRECONDITIONING OF HIGH-PRESSURE COOLANT INJECTIONS (HPCI), REACTOR CORE ISOLATION COOLANT (RCIC) VALVES PRIOR TO INSERVICE TESTING (IST)**
The team identified that the high-pressure coolant injection (HPC)I and Reactor Core Isolation Cooling (RCIC) surveillance procedures incorporated steps which cycled 12 HPCI system valves and 8 RCIC valves, some several times, before the ASME in-service timing test. The team determined that this practice was unrecognized equipment preconditioning which had the potential to mask the as found condition of the valves. The issue was determined to be a finding of very low safety significance (Green) based on a Phase I evaluation of the Significance Determination Process because there was no actual loss of a valve safety function.
Inspection Report# : 2002011*(pdf)*

**Significance:** G May 18, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
**INADEQUATE E-4 EMERGENCY DIESEL GENERATOR OPERABILITY DETERMINATION**
The inspectors identified a non-cited violation of very low safety significance (Green) of Technical Specification 5.4.1. Plant personnel did not perform an adequate operability determination in accordance with NOM-C-11.1 "Operability," for a degraded lube oil fitting on the E-4 emergency diesel generator (EDG) that was identified on September 20, 2001. Subsequently, during an EDG test on March 19, 2002, the degraded fitting sheared off causing lube oil to be sprayed into the EDG room and the E-4 EDG to be inoperable. The issue was determined to be of very low safety significance based on a phase 2 risk evaluation in accordance with our significance determination process. The other three emergency diesels were not affected by this failure and both offsite power sources remained operable while the diesel was inoperable.
Inspection Report# : 2002003*(pdf)*

**Significance:** G Mar 30, 2002
Identified By: NRC
Item Type: FIN Finding
**DEGRADATION OF THE 2D RHR HEAT EXCHANGER PERFORMANCE WAS NOT RECOGNIZED IN A NOVEMBER 2000 TEST AND THE TESTING INTERVAL OF THE 2B AND 2C HEAT EXCHANGERS EXCEEDED THE PLANNED FOUR YEARS.**
The inspector identified a finding of very low safety significance regarding testing of the 2B, 2C, and 2D RHR heat exchangers. Specifically degradation of the 2D RHR heat exchanger performance was not recognized in a November 2000 test and the testing interval of the 2B and 2C heat exchangers exceeded the planned four years. The finding was determined to be of very low safety significance because the finding did not represent an actual loss of safety function

because the heat exchangers were always operable.
Inspection Report# : 2002002*(pdf)*

**Significance:** G Feb 16, 2002
Identified By: Licensee
Item Type: NCV NonCited Violation
**LICENSEE DID NOT ADHERE TO A SURVEILLANCE TEST PROCEDURE**
Technical Specification 5.4.1 requires written procedures be established, implemented, and maintained covering activities listed in Regulatory Guide 1.33. Regulatory Guided 1.33 includes procedures for performing surveillance tests on plant equipment. Contrary to the above, on November 16, 2001, operators did not verify compliance with Technical Specification 3.5.1 as required by ST-I-010-100, "Residual Heat Removal (RHR) Loop Logic System Functional Test." Specifically, with the 3'A' loop of RHR inoperable for automatic the low pressure coolant injection, on three separate occasions the operators did not verify compliance with Technical Specification 3.5.1. The first occurred when the 3'B' RHR pump was also inoperable for approximately 30 minutes, the second was when the 3'D' RHR pump was also inoperable for approximately 30 minutes and the third was when the 3'A' core spray loop was also inoperable for approximately 40 minutes. Although all three occasions were contrary to the requirements of Technical Specification 3.5.1, technical specifications were not violated since no required actions were missed during the time frames in which the additional subsystems were inoperable. The licensee entered this issue into their corrective action program as CR 00083213. This is being treated as a Non-Cited Violation.
Inspection Report# : 2001015*(pdf)*

**Significance:** G Dec 29, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
**E-2 EMERGENCY DIESEL GENERATOR RENDERED INOPERABLE BY A MISPOSITIONED JACKET COOLANT EXPANSION TANK BLOCK VALVE**
The inspectors identified a Non-Cited violation of very low safety significance (Green) of Technical Specification 5.4.1, because the gravity feed block valve in the line from the diesel generator coolant expansion tank was closed, contrary to system operating procedures. The closed block valve caused the E-2 emergency diesel generator (EDG) to be inoperable. The EDG was inoperable for an unknown period of time between October 12 and October 30, 2001. This issue was determined to be of very low safety significance based on a phase 2 risk evaluation in accordance with our significance determination process. The other three EDGs and both offsite power sources remained operable during this time period. This finding also affects the Barrier Integrity cornerstone.
Inspection Report# : 2001010*(pdf)*

**Significance:** G Aug 18, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
**UNITS 2 AND 3 HIGH PRESSURE COOLANT INJECTION SUCTION FROM THE TORUS CHECK VALVES (CHK-2-23B-61 AND CHK-3-23B-61) NOT TESTED PER ASME OM CODE INSERVICE TESTING (IST) REQUIREMENTS.**
A Non-cited violation of 10 CFR 50.55a(f)(4)(ii) and Technical Specification 5.5.6, "Inservice Testing Program" was identified for failure to test the Unit 2 and Unit 3 high pressure coolant injection (HPCI) torus suction check valves for seat leakage in the reverse flow direction. Excessive leakage of these check valves could render the HPCI system inoperable during certain small-break loss of coolant accident scenarios. This issue was determined to be of very low safety significance since the respective high pressure coolant injection system remained operable and no actual loss of function occurred.

Inspection Report# : 2001006*(pdf)*

**Significance:** G Aug 18, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
**EMERGENCY DIESEL GENERATORS BEING IN A CONDITION OUTSIDE THE DESIGN BASIS FOR OPERATION.**
Peach Bottom Technical Specifications (TS) Section 3.8.1 requires all EDGs to be capable of supplying onsite Class 1E electrical power, and TS Section 3.8.1.F requires all but one EDG to be restored to operable status within two hours if two or more EDGs are inoperable. During the summer of 1999, three of the four EDGs were inoperable due to cross-flows between the jacket water coolers and the intake air coolers for a maximum of approximately 25 continuous hours. During this period the EDGs may not be able to be fully loaded to mitigate a postulated loss-of- coolant accident in conjunction with a loss-of-offsite power design basis accident. The corrective actions for this violation were already in the licensee's corrective action program (PEP report I0011529). This is being treated as a Non-Cited Violation. This issue was assessed using the Significance Determination Process, Reactor Inspection Findings for At-Power Situations. The phase 1 screening determined that a phase 2 risk evaluation was required because the diesel generators provide emergency power for equipment in both the mitigating system and barrier cornerstones. Using the Peach Bottom reactor risk-informed notebook, the inspectors determined that this issue was of very low safety significance. The reason that this issue is of very low safety significance is because of the low frequency of a loss of offsite power event coupled with the loss of one or more EDGs, the availability of the Conowingo dam station power source to operate plant safety equipment in the event the EDGs were lost, and the short duration of time during the year when the service water temperature is sufficiently high to adversely affect EDG operation. The NRC inspectors also reviewed a risk analysis performed by Exelon's PRA staff, using the Peach Bottom full scale PRA model, which also confirmed that the safety significance of this issue was very low.
Inspection Report# : 2001006*(pdf)*

**Significance:** G Aug 18, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
**PROCEDURAL INADEQUACIES WITH SO 53.7.D, "RESPONSE TO A LOSS OF #343 OFF-SITE STARTUP SOURCE" IDENTIFIED DURING THE LOSS OF ONE OFFSITE POWER SOURCE.**
Technical Specification 5.4.1 requires written procedures be established, implemented, and maintained covering activities listed in Regulatory Guide 1.33. Regulatory Guide 1.33 includes abnormal conditions such as loss of electrical power sources. In June 2001, the procedure, SO 53.7.D, "Response to a Loss of #343 Off-Site Startup Source," Revision 24 did not direct proper alignment of emergency bus breaker switches as required to maintain automatic emergency diesel generator power to all emergency buses. Therefore, equipment powered by these buses would not fulfil their safety function to mitigate the consequences of an accident. The corrective actions for this violation were already in the licensee's corrective action program (Condition Report (CR)# 00061124 ). This is being treated as a Non-Cited Violation.
Inspection Report# : 2001006*(pdf)*

**Significance:** G Nov 18, 2000
Identified By: NRC
Item Type: FIN Finding
**EMERGENCY DIESEL GENERATORS IN A DEGRADED CONDITION POTENTIALLY OUTSIDE OF THE DESIGN BASIS AND EMERGENCY SERVICE WATER SYSTEM CHECK VALVE FAILURE**
Emergency service water (ESW) system check valve 2-33-514 failed open, allowing safety-related ESW flow to be

partially diverted from emergency diesel generators (EDGs) and emergency core cooling system room coolers. The inspectors and the licensee identified that this risk important component had not been included in a preventive maintenance program. This issue caused the ESW system and the EDGs to be degraded for a period of up to two years. This finding was of very low safety significance because, although the ESW flow rate to the EDGs was below the design basis minimum value, engineering personnel determined that the EDGs would have remained available during accident conditions.
Inspection Report# : 2000012*(pdf)*

**Significance:** G Nov 18, 2000
Identified By: NRC
Item Type: FIN Finding
**MULTIPLE ISOLATIONS OF SHUTDOWN COOLING**
Unit 2 operators experienced four unplanned, unexpected isolations of shutdown cooling during refueling outage 2R13. During one time period in which there were three repetitive isolations, the reactor coolant system (RCS) temperature rose from 153 degrees to 171 degrees. The inspectors identified a corrective action performance issue, in that previous isolations of shutdown cooling had not been fully investigated and resolved. This finding was of very low safety significance because the increase in RCS temperature did not constitute a loss of control and did not require phase 2 analysis per the guidance in NRC Manual Chapter 0609, Appendix G. In all instances, operators were able to restore the shutdown cooling system promptly.
Inspection Report# : 2000012*(pdf)*

**Significance: N/A** Jun 08, 2000
Identified By: NRC
Item Type: AV Apparent Violation
**POST-FIRE SAFE SHUTDOWN CIRCUIT ANALYSES**
PECO adopted a licensing position that mechanical damage to alternative shutdown equipment resulting from fire-induced cable faults, as described in Information Notice 92-18, was outside the scope of the licensing and design bases of the facility. As a result, PECO did not evaluate the control circuits of the alternative shutdown equipment to determine if it was susceptible to this problem. Since a detailed review of the alternative shutdown capability at PBAPS was not performed as part of the scope of this inspection, the risk associated with this issue was not established. This issue is being treated as an apparent violation of Condition 2.C.4 of the operating licenses for both Unit 2 and Unit 3, which requires PECO to implement and maintain the fire protection program described in the NRC Safety Evaluation Reports. PECO has entered this issue into their corrective action program and has implemented reasonable compensatory measures pending final resolution of the issue. However, the issue of mechanical damage to safe shutdown equipment due to fire-induced cable faults is in contention between the NRC and the nuclear industry. As such, any further enforcement action will be deferred pending final resolution of this issue by the Nuclear Energy Institute and the NRC staff, in accordance with Enforcement Guidance Memorandum 98-02, Revision 2, issued February 2, 2000.
Inspection Report# : 2000003*(pdf)*

**Significance:** G Jun 08, 2000
Identified By: NRC
Item Type: AV Apparent Violation
**POST-FIRE SAFE SHUTDOWN CIRCUIT ANALYSES**
PECO's specification for performing circuit analyses of post-fire safe shutdown equipment stipulates that only one spurious actuation for each system affected by any one fire be analyzed. For the areas inspected, the team determined that PECO adequately protected against fire-induced spurious actuations. The team did not identify any additional spurious actuations which would have prevented achieving safe shutdown conditions in the post-fire operating

environment. The assumption that only a single spurious actuation need be considered for any one system for any one fire is an apparent violation of the requirements of Section III.G. and III.L. of Appendix R to 10 CFR 50. PECO entered this issue into their corrective action program and have implemented reasonable compensatory measures. However, the issue of multiple spurious actuations of equipment in a post-fire environment is in contention between the NRC and the nuclear industry. As such, any further enforcement action will be deferred pending final resolution of this issue by the Nuclear Energy Institute and the NRC staff, in accordance with Enforcement Guidance Memorandum 98-02, Revision 2, issued February 2, 2000.
Inspection Report# : 2000003*(pdf)*

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# Barrier Integrity

**Significance:** G Mar 30, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
**A NON-CITED VIOLATION OF T.S. 5.4.1 FOR AN INADEQUATE EMERGENCY OPERATING PROCEDURE WHICH DID NOT DIRECT RE-INITIATION OF DRYWELL SPRAYS AT AN APPROPRIATE PRIMARY CONTAINMENT PRESSURE.**
The inspector identified a non-cited violation of technical specification 5.4.1 for an inadequate emergency operating procedure. Emergency operating procedure T-102, "Primary Containment Control" was inadequate because the procedure did not direct the operators to re-initiate drywell sprays after drywell sprays were terminated if containment pressure again increased. The finding was of very low safety significance because there was no actual open pathway in the physical integrity or actual reduction in the atmospheric control of the reactor containment. T-102 was only used during training and was not entered for conditions requiring actual use of drywell sprays.
Inspection Report# : 2002002*(pdf)*

**Significance:** G Sep 30, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
**FAILURE TO OBTAIN PRIMARY CONTAINMENT ATMOSPHERE GRAB SAMPLES AS REQUIRED BY TS 3.4.5 WHEN THE PRIMARY CONTAINMENT ATMOSPHERIC MONITORING SYSTEM WAS INOPERABLE.**
Technical Specification (TS) Section 3.4.5 requires grab samples of the primary containment atmosphere to be analyzed once per 12 hours when the primary containment atmospheric monitoring system is inoperable. On September 15, 2001, the Unit 2 reactor operator noted that chemistry technicians had not taken the 12 hour grab samples as required by TS 3.4.5.B because the sample point was isolated. On September 15, 2001, the licensee replaced the failed relay that caused the system to become inoperable for approximately 30 hours, verified that the primary containment atmosphere was acceptable, and restored the system to an operable status. The corrective actions for this violation were already in the licensee's corrective action program (Condition Report (CR) #00075295). This is being treated as a Non-cited violation.
Inspection Report# : 2001008*(pdf)*

**Significance:** G Jun 30, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation

**Failure to Use Applicable Design Criteria from Calculations in Acceptance Limits for 'A' Standby Gas Treatment Heater Capacity Testing - Common**
10 CFR 50, Appendix B, Criterion XI, "Test Control," requires, in part, that written test procedures used to demonstrate that structures, systems, and components perform satisfactorily incorporate acceptance limits contained in applicable design documents. During surveillance testing of the 'A' Standby Gas Treatment (SBGT) system per ST-O-09A-230-2 on May 29, 2001, the test procedure did not contain applicable acceptance criteria. Specifically, heater performance testing for the 'A' SBGT system was evaluated using acceptance criteria based on a heater capacity calculation that assumed a balanced three phase circuit. This was not the configuration during this test since one element of the heater circuit was bypassed. This issue is documented in Exelon's corrective action program as PEP 10012657.
Inspection Report# : 2001005*(pdf)*

**Significance:** G Nov 18, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
**TORUS/DRYWELL VACUUM BREAKER FAILURE**
Unit 2 'H' torus to drywell vacuum breaker failed open during stroke testing. Operators shut down the unit as required by technical specifications. The inspectors identified a Non-Cited violation for an inadequate preventive maintenance procedure. This finding was of very low safety significance because, although the primary containment was rendered inoperable, the vacuum breaker was only partially open for a duration of approximately 19 hours.
Inspection Report# : 2000012*(pdf)*

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# Emergency Preparedness

**Significance: SL-III** Nov 17, 2001
Identified By: NRC
Item Type: VIO Violation
**INOPERABLE OFF-SITE SIRENS NOT IDENTIFIED DUE TO FALSIFIED MAINTENANCE AND TESTING RECORDS AND INSTALLATION OF JUMPERS THAT BYPASSED SIREN FAILURE DETECTION CIRCUITRY**
A Severity Level III - Notice of Violation, (EA-01-188) was issued in an NRC letter dated October 23, 2001. During an investigation initiated by the NRC Office of Investigations on September 27, 2000, violations of NRC requirements were identified. A. A violation of 10 CFR 50.9 was identified due to records of routine maintenance and testing performed on sirens in various locations surrounding Limerick Generating Station (LGS) and Peach Bottom Atomic Power Station (PBAPS) not being complete and accurate in all material respects. Specifically, from April/May 2000 until October 2000, two former Exelon Infrastructure Services (EIS) contractors falsified numerous "Siren Report - Routine Maintenance Checklist" records indicating that they had completed all of the routine maintenance steps, when, in fact, they had not. B. A violation of 10 CFR 50.47(b)(5) was identified when for an undetermined period of time prior to October 2000, 10 of 97 sirens surrounding PBAPS and 4 of 165 sirens surrounding LGS contained jumpers that bypassed failure detection circuitry. As a result, a false indication was provided that the sirens were working properly when, in fact, they were not. One of the former EIS contractors admitted to installing approximately ten jumper wires in LGS and PBAPS siren boxes between November 1999 and September 2000 to specifically bypass the failure detection circuitry. Installation of the jumpers compromised the ability to detect, for certain sirens, any malfunction of this sytem which is used to provide early notification to the populace surrounding PBAPS and LGS. The siren system was compromised in that the jumpers prevented detection of certain inoperable sirens, which would have delayed, or possibly precluded you from taking compensatory actions to alert certain areas of the local populace in the event of an emergency. The safety significance of the violations was low because over 95% siren coverage of the population in the vicinity of LGS and PBAPS was maintained. .

Inspection Report# : 2001009*(pdf)*

**Significance: N/A** Oct 26, 2001
Identified By: NRC
Item Type: FIN Finding
**PA/EVACUATION ALARM SYSTEM**
This supplemental inspection was performed by the NRC using inspection procedure 95001, to assess the licensee's evaluation and corrective actions associated with a violation in the emergency preparedness area for the inoperability and poor maintenance of the PA/evacuation alarm system. The finding was previously characterized as having low to moderate safety significance (White) in NRC Inspection Report 05000277/2001-011. The inspector determined that the licensee had performed a thorough evaluation, have taken immediate corrective actions and continue to address the long term corrective actions in response to this White finding. The licensee identified that when the PA/evacuation alarm system was operated for greater than 49 seconds, a power overload would occur which would trip the power supply breakers open. This resulted in the system operating on its backup power breaker for a period of two months and on two occasions the system was inoperable because the backup power breaker had tripped. In addition, during a review of the system in 2000, the licensee had found that 47% of the system had degraded. The licensee determined the cause and developed comprehensive corrective actions to address the causes and prevent recurrence. The licensee's root cause evaluation identified the contributing factors to be: (1) routine testing of the system was suspended in 1992; (2) no recognition of the importance of the audibility of the speakers in carrying out the requirements of the Emergency Plan (E-Plan); (3) less than adequate modification performed in the early 1990's due to not considering the operating loads required for the plant evacuation notifications; (4) less than adequate assessment of the impact to the emergency planning requirements when the breakers were discovered to be tripped.
Inspection Report# : 2001014*(pdf)*

**Significance: N/A** Aug 02, 2001
Identified By: NRC
Item Type: FIN Finding
**SUPPLEMENTAL INSPECTION (95001) IN RESPONSE TO WHITE PERFORMANCE INDICATOR FOR THE ALERT NOTIFICATION SYSTEM THAT OCCURRED IN THE THIRD QUARTER OF CY 2000**
This supplemental inspection (95001) was performed by the NRC to assess the licensee's evaluation associated with a White Performance Indicator (PI) for the Alert Notification System (ANS) Reliability. In the third quarter of 2000, the Peach Bottom ANS Reliablity PI was White (Green in the prior quarter). The inspector determined that the licensee had performed a thorough evaluation in response to the PI's change in color. The licensee identified that the change in the PI was due to installed jumper wires which bypassed failure detection circuitry. The licensee identified this issue, determined the cause and developed comprehensive corrective actions to address the causes and prevent recurrence. The licensee's root cause evaluation identified the contributing factors to be: (1) a lack of licensee oversight of contractor and utility personnel; (2) failure to enforce contractual requirements; (3) an over reliance on the failure detection system; and (4) inadequate self- assessment. The licensee's corrective actions to prevent recurrence included: (1) training for contractors regarding specification content and methodologies; (2) modification of contract content requirements to specify supervisory oversight; (3) development of guidelines for monitoring contracts concerning work performed independent of direct utility supervision; and (4) development of a siren program manual that will include self- assessment criteria and activities. The inspector determined that the licensee's corrective actions were appropriate and that the ANS Reliability PI had changed from White to Green for the first quarter of 2001.
Inspection Report# : 2001012*(pdf)*

**Significance:** G Aug 02, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
**INADEQUATE RESOLUTION 10 CFR 50.54(t) AUDIT FINDING RELATED TO THE INTERFACE**

**BETWEEN THE LICENSEE AND LOCAL GOVERNMENT/AGENCIES.**
The inspector determined that the 2000 EP quality assurance audit failed to evaluate and document the EP staffs' interface problems with State and local governments in accordance with 10 CFR 50.54(t) requirements even though deficiencies were identified. The finding was considered more than minor because there was a potential impact on public safety in that the offsite agencies are an integral part of the response to a radiological emergency. However, the inspector determined the licensee failed to implement a regulatory requirement which is not considered a failure to meet a planning standard as defined in Appendix B, Manual Chapter 0609. Also, there was no evidence of an actual interface problem affecting response capabilities. Therefore, this finding was determined to be of very low safety significance (Green). The inspector identified this as a non-cited violation for failing to properly document and assess offsite agency concerns as required by 10 CFR 50.54(t).
Inspection Report# : 2001012*(pdf)*

**Significance:** G Aug 02, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
**ANNUAL MEDIA TRAINING NOT CONDUCTED**
The inspector identified that the licensee had not conducted the annual media training for the year 2000 as required per Section 6.1.4 of the licensee's Emergency Response Plan (ERP). This finding was more than minor because there was a potential impact on public safety in that the information to the general public via the media needs to be disseminated accurately to avoid confusion. However, it was of very low safety significance because, during this time period, the issue was limited in scope, the licensee had conducted the 2000 training in March of 2001, and the issue is viewed as an implementation problem. The inspector identified this as a non-cited violation for the licensee failing to conduct training according to the ERP and as required per 10 CFR 50.54(q) and 10 CFR Part 50, Appendix E.IV.F.1.
Inspection Report# : 2001012*(pdf)*

**Significance:** G Aug 02, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
**ANNUAL RADIOLOGICAL MONITORING TRAINING NOT CONDUCTED**
The inspector identified that the licensee had not conducted the annual radiological monitoring drill for the year 2000 which would include the actual collection and analyses of environmental samples as described in the Emergency Response Plan (ERP) Section 6.2.7. This finding was more than minor because there was a potential impact on public safety in that the licensee conducts drills or training in order to maintain proficiency in case an actual radiological emergency occurs. However, it was of very low safety significance because there was no evidence of a loss of proficiency for the group of responders and the issue is viewed as an implementation problem. The inspector identified this as a non-cited violation for the licensee not conducting drills according to the ERP and as required per 10 CFR 50.54(q) and 10 CFR Part 50, Appendix E. IV.F.1.
Inspection Report# : 2001012*(pdf)*

**Significance:** W Jul 10, 2001
Identified By: NRC
Item Type: VIO Violation
**FAILURE TO MAINTAIN PA/EVACUATION ALARM SYSTEM FOR PERFORMING THE DESIGNATED EMERGENCY PREPAREDNESS EVACUATION FUNCTION.**
By letter on August 22, 2001, the NRC issued the final significance determination and violation. The inspectors identified a violation of an emergency planning standard and requirement in that the power block's public address (PA)/evacuation alarm system was degraded from 1992 to 2000 and, once repaired, it continued to be degraded with

breaker problems. Accordingly, the system would not have been able to meet its emergency planning function. Requirements 10 CFR 50.54(q), emergency planning standard 10 CFR 50.47b(8), and Appendix E Section IV.E.9 require that onsite emergency communication systems be maintained and have a backup power source. During the period of 1992-2000, the PA/evacuation alarm system was not functioning correctly, in that up to 47% of the speakers ( as of April 1999) were either inaudible or degraded to the point in which an individual would not be able to clearly hear instructions. From January 19 to February 13 and March 20 to April 17, 2001, the system would have become nonfunctional after 49 seconds of operation because the system had been operating on the backup power breaker and the breaker would have tripped. On February 13 and April 17, 2001, the PA/evacuation alarm system was nonfunctional for the periods of 4.5 hours and 1.5 hours, respectively, because both the primary and backup breakers had tripped resulting in a loss of power to the system. This issue was assessed using the emergency preparedness Significant Determination Process (SDP) described in NRC Inspection Manual Chapter 0609, Appendix B, and characterized as a White finding. The finding was of low to moderate safety significance because the failure to maintain the emergency onsite communication system without adequate compensatory measures or without a backup power source resulted in an emergency preparedness function not being met. The function would not have been met, in that the licensee would not properly inform and alert onsite personnel of protective actions and would unnecessarily delay a site evacuation. (EA-01-148) A supplemental inspection (95001) was performed by the NRC and documented in NRC Inspection report 05000277/2001-014 to assess the licensee's evaluation and corrective actions associated with the violation. The inspector determined that the licensee had performed a thorough evaluation, have taken immediate corrective actions, and continue to address the long term corrective actions in response to this White finding. The licensee determined the cause and developed comprehensive corrective actions to address the causes and prevent recurrence. The licensee's root cause evaluation identified the contributing factors to be: (1) routine testing of the system was suspended in 1992; (2) no recognition of the importance of the audibility of the speakers in carrying out the requirements of the Emergency Plan (E-Plan); (3) less than adequate modification performed in the early 1990's due to not considering the operating loads required for the plant evacuation notifications; (4) less than adequate assessment of the impact to the emergency planning requirements when the breakers were discovered to be tripped.
Inspection Report# : 2001011*(pdf)*
Inspection Report# : 2001014*(pdf)*

**Significance: TBD** Jul 01, 2002
Identified By: NRC
Item Type: AV Apparent Violation
**EXELON'S FORMAL CRITIQUE OF THE FEBRUARY 14, 2002, EMERGENCY PREPAREDNESS EXERCISE FAILED TO IDENTIFY AND CORRECT PERFORMANCE DEFICIENCIES RELATED TO EVENT CLASSIFICATIONS, A RISK SIGNIFICANT**
The inspector identified an apparent violation of 10 CFR 50, Appendix E, IV.F.2.g. Exelon's formal critique of the February 14, 2002, emergency preparedness exercise did not identify and correct weaknesses or deficiencies related to event classifications, a risk significant planning standard. The formal exercise critique did not identify weaknesses or deficiencies observed by the inspector that were directly related to being able to classify an event, including when the operating crew did not recognize conditions or effectively communicate key information needed by the Emergency Director to classify a General Emergency. The final exercise critique did not fully evaluate why the exercise response team classified the exercise as a General Emergency based on Emergency Director judgement rather than a General Emergency when reactor water level decreased to below the top of active fuel. Emergency classification is a risk significant performance standard. Exelon's failure to identify performance deficiencies associated with a risk significant planning standard was determined to be a finding of low to moderate safety significance using Manual Chapter 0609, Appendix B "Emergency Preparedness Significance Determination Process" Sheet 1, Middle Path, Section 4.
Inspection Report# : 2002007*(pdf)*

**Significance: TBD** Jul 01, 2002
Identified By: NRC
Item Type: AV Apparent Violation
**EXELON DID NOT DECLARE AN ALERT IN A TIMELY MANNER WHEN THE CARDOX SYSTEM**

**(CARBON DIOXIDE) DISCHARGED INTO AN EMERGENCY DIESEL GENERATOR ROOM ON JUNE 2, 2002**
The inspector identified an apparent violation of 10 CFR 50.54(q), 50.47(b)(4), Appendix E IV.B, and Appendix E IV.D.1, because Exelon did not make an Alert emergency classification declaration in a timely manner for an actual event on June 2, 2002. On that date, the cardox (carbon dioxide) fire suppression system unexpectedly discharged into the E-3 emergency diesel generator room of the Diesel Generator Building. A cardox system discharge into a diesel generator room creates an atmosphere in the room that is life threatening to plant personnel. Exelon's Alert emergency classification was not timely (10 CFR 50.54(q), 50.47(b)(4), Appendix E IV.B, and Appendix E IV.D.1 require prompt notification) because it occurred 31 minutes after Exelon's emergency action level for toxic gas release into a plant vital structure was reached. Exelon's emergency response procedure ERP-101, Peach Bottom's emergency action level scheme, did not clearly require Exelon to accomplish emergency classifications in a manner to assure a prompt notification of government officials and, therefore, the public. Exelon's failure to make a timely classification during an actual event is associated with a risk significant planning standard (10 CFR 50.47(b)(4)) and determined to be a finding of low to moderate safety significance using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process", Sheet 2.
Inspection Report# : 2002007*(pdf)*

**Significance:** G Jul 01, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
**EXELON DID NOT ACTIVATE THE TSC WITHIN 60 MINUTES FOLLOWING DECLARATION OF AN ALERT ON JUNE 2, 2002**
The inspector identified a non-cited violation of 10 CFR 50.47(b)(2) because during a declared Alert on June 2, 2002, Exelon failed to activate their Technical Support Center (TSC) within 60 minutes as stated in their Nuclear Emergency Plan. Exelon's failure to activate an emergency facility in a timely manner is associated with a significant planning standard and determined to be a violation of very low safety significance using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 2.
Inspection Report# : 2002007*(pdf)*

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# Occupational Radiation Safety

**Significance:** G Feb 16, 2002
Identified By: Licensee
Item Type: NCV NonCited Violation
**LICENSEE DID NOT ADHERE TO RADIATION PROTECTION PROCEDURES**
Technical Specification 6.11 requires that the licensee implement radiation protection procedures. Procedure HP-C-310 requires workers to notify radiation protection personnel of radiological problems and follow written and oral radiation protection guidance including notifying radiation protection upon an electronic dosimetry alarm. During early January 2002, at least 5 individuals experienced dosimetry alarms and did not contact radiation protection. The matter was addressed by various corrective actions and entered into the corrective action process (CR No. 93464).
Inspection Report# : 2001015*(pdf)*

**Significance:** G Sep 30, 2000
Identified By: Licensee

Item Type: NCV NonCited Violation
**ACCESS CONTROL TO RADIOLOGICALLY SIGNIFICANT AREAS**
On September 16, 2000, three workers did not follow oral and written radiation protection instructions, as required by radiation protection procedures and Technical Specifications, to avoid areas of elevated radiation dose rates in the Unit 2 drywell. Specifically, contrary to the instructions given to them, three workers either worked in proximity of, passed through, or transported radiation shielding materials through elevated radiation fields (up to 13.9 R/hr ) in the drywell. As a result, one of the workers exceeded the dose limit specified in the radiation work permit. Further, one of the workers did not contact radiation protection personnel upon alarm of their dosimeter, also as specified in written and oral radiation protection instructions. This PECO-identified issue was determined to be a Non-cited Violation of Technical Specification 5.4.1. This issue was considered to be of very low safety significance because it did not result in an over exposure, did not create a substantial potential for such an exposure, and did not compromise the ability of PECO to assess dose to its workers. This issue was placed in PECO's corrective action system.
Inspection Report# : 2000010*(pdf)*

**Significance:** G Sep 30, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
**DID NOT POST AND BARRAICADE A HIGH RADIATION AREA IN UNIT 2 DRYWELL**
On September 16, 2000, PECO did not post and barricade a High Radiation Area in the Unit 2 drywell. The failure to properly post and barricade the area contributed to three workers entering the area and one of the workers exceeding the dose limit specified in the radiation work permit. This NRC identified issue was determined to be a Non-cited Violation of Technical Specification 5.7.2.f. This issue was considered to be of very low safety significance because it did not result in an over exposure, did not create a substantial potential for such an exposure, and did not compromise the ability of PECO to assess dose to its workers. This issue was placed in PECO's corrective action system.
Inspection Report# : 2000010*(pdf)*

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# Public Radiation Safety

**Significance: N/A** Dec 22, 2000
Identified By: NRC
Item Type: FIN Finding
**SUPPLEMENTAL INSPECTION FOR WHITE FINDING IN PUBLIC RADIATION SAFETY**
This supplemental inspection was performed by the NRC to assess PECO's evaluations and corrective actions associated with a WHITE finding involving failure to properly classify a shipment of radioactive waste sent on June 28, 1999, to the Chem-Nuclear Systems (CNS) waste disposal site, Barnwell, South Carolina. The final significance determination was made for this issue which characterized it as WHITE as discussed in an August 3, 2000, NRC letter to PECO. The inspector determined that PECO performed an evaluation of the issue, identified root and contributing causes, and identified and implemented corrective actions to address these causes and prevent recurrence. Consistent with the guidance contained in NRC Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," this issue will only be considered in assessing plant performance for a total of four quarters from the date when the issue was identified by PECO (July 22, 1999).
Inspection Report# : 2000014*(pdf)*

**Significance:** G May 20, 2000
Identified By: NRC

Item Type: NCV NonCited Violation
**SHIPMENT RECORDS AND DOCUMENTATION**
The NRC identified two examples of failure to ensure proper closure of radioactive material shipping packages. The first example involved an April 25, 2000, shipment during which an incorrect procedure was used to secure the primary lid on a shipping cask being prepared for shipment. The procedure provided incorrect guidance for calculation of torque wrench settings used for closure of the cask. The second example involved a December 8, 1999, shipment during which PECO Nuclear did not ensure accuracy of leak testing equipment used to prepare a shipping cask. The two examples involved matters that had very low risk significance because no radiation limits were exceeded and there was no actual public health and safety consequences. The inspectors identified a non-cited violation of 10 CFR 71.5.
Inspection Report# : 2000002*(pdf)*

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## Physical Protection

**Significance:** G Mar 31, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
**Access Control**
The inspectors identified a non-cited violation of 10 CFR 73.55 (b)(3) because on at least two occasions required personnel were not notified within the specified time to remove terminated individuals from the access authorization list. The finding was of very low safety significance because there was no malevolent act, no actual intrusion occurred, and there have not been greater than two similar findings in the past four quarters.
Inspection Report# : 2001003*(pdf)*

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## Miscellaneous

**Significance: N/A** Nov 09, 2001
Identified By: NRC
Item Type: FIN Finding
**SUMMARY CONCLUSION REGARDING THE EFFECTIVENESS OF THE PROBLEM IDENTIFICATION AND RESOLUTION (PI&R) PROGRAM FROM THE PI&R INSPECTION**
The team concluded that, based on the review of a selected sample, the overall implementation of the corrective action program at Peach Bottom Atomic Power Station, Units 2 & 3, was acceptable. In general, problems were identified at an appropriate level and entered into the corrective action program. Issues were adequately prioritized and evaluated, and the evaluations were of adequate depth to identify the causes and appropriately broad in considering the extent of condition. The corrective actions were reasonable and adequately implemented. Nevertheless, the team identified instances where the licensee missed opportunities to identify and enter problems into the condition report process. In one instance, the issue resulted in a Green finding that was also a non-cited violation.
Inspection Report# : 2001007*(pdf)*

**Significance: N/A** Dec 22, 2000
Identified By: NRC
Item Type: FIN Finding
**IDENTIFICATION AND RESOLUTION OF PROBLEMS**
PECO was effective at identifying problems and entering them into their problem identification and resolution (PI&R)

programs. Workers were not reluctant to input safety issues into the station's PI&R programs. Few deficiencies were identified by external organizations, including the NRC. PECO identified problems in a timely manner, commensurate with their significance and ease of discovery. No instances were identified in which conditions adverse to quality were being handled outside the corrective action program. PECO identified and implemented acceptable corrective actions for individual problems or issues. The corrective actions considered the significance of the issue or problem, extent of condition, generic implications, common cause, and previous occurrences. PECO identified root and contributing causes for significant conditions adverse to quality and adequately completed or scheduled completion of corrective actions.
Inspection Report# : 2000013*(pdf)*

**Significance: N/A** Dec 22, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
**INCORRECT LICENSE APPLICATION SUBMITTED TONRC**
NO COLOR - The team identified a non-cited Severity Level IV violation of 10 CFR 55.31(a)(4) because an operator license application was submitted to the NRC in August 1999 with incorrect information. The application was incorrect because it indicated that the individual completed all required training even though the emergency preparedness portion of his required training was not completed until May 2000 (approximately eight months after the individual had been licensed). When evaluating this issue according to NRC Manual Chapter 0610*, Appendix B, it did involve extenuating circumstances in that the issue potentially impacted the NRC's ability to perform its regulatory function. The team's evaluation of the apparent cause indicated a problem between the emergency preparedness and operator training organizations, and limited to one individual. The issue was documented in PECO's corrective action program as Performance Enhancement Program Issue I0012084.
Inspection Report# : 2000013*(pdf)*

**Significance: N/A** Dec 22, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
**INACTIVE LICENSED OPERATOR PERFORMED THE FUNCTIONS OF A LICENSED OPERATOR**
10CFR55.53 requires performance of operator duties during five 12-hour shifts in a prior calendar quarter to maintain an active license in the current quarter. An operator performed the functions of a licensed operator during four-12 hour shifts in the third quarter of 2000 and thus became inactive. The individual performed the functions of a reactor operator for fifteen 12-hour shifts in the fourth quarter of 2000 without having completed the required actions to restore the individual's license to an active status. This item is PEP I0012046 in PECO's corrective action program.
Inspection Report# : 2000013*(pdf)*

**Significance: N/A** Nov 18, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
**CONDITION PROHIBITED BY TECHNICAL SPECIFICATIONS BY ENTERING MODE 2 WITHOUT PERFORMING A REQUIRED SURVEILLANCE TEST - UNIT 2**
One violation of very low significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee appear reasonable.
Inspection Report# : 2000012*(pdf)*

**Significance: SL-IV** Sep 30, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
**"B" DRYWELL WIDE RANGE PRESSURE INSTRUMENT INOPERABLE FOR GREATER THAN TECHNICAL SPECIFICATION ALLOWABLE OUTAGE TIME - UNIT 2**
As identified in LER 2-00-001, the 2B Drywell Wide Range Pressure recorder was inoperable for greater than 30 days.

The NRC determined this to be a Non-cited violation of Technical Specification 3.3.3.1.
Inspection Report# : 2000010*(pdf)*

**Significance: TBD** Mar 10, 2000
Identified By: NRC
Item Type: FIN Finding
**HEALTH PHYSICS SUPPORT**
The licensee's plans and preparations for controlling radiological activities for the ISFSI were extensive and detailed. A specific radiation work permit included appropriate radiological controls and a review was conducted to maintain dose as low as is reasonably achievable (ALARA). A health physics supervisor and several technicians were dedicated to the ISFSI project. They were actively involved with the dry-run activities, provided pre-job briefings, and projected radiation conditions to the ISFSI work staff.
Inspection Report# : 2000004*(pdf)*

**Significance: TBD** Mar 10, 2000
Identified By: NRC
Item Type: FIN Finding
**MANAGEMENT, ORGANIZATION, RESPONSIBILITIES, SELF-ASSESSMENTS, AND CORRECTIVE ACTIONS**
The operational procedures for the loading, unloading, and transferring activities associated with the TN-68 cask storage system included the appropriate acceptance criteria and met ISFSI program needs and regulatory requirements. The procedures were highly detailed, and reviewed and approved in accordance with the licensee's administrative program for document control.
Inspection Report# : 2000004*(pdf)*

**Significance: TBD** Mar 10, 2000
Identified By: NRC
Item Type: FIN Finding
**PROCEDURES, DOCUMENT CONTROLS, & RECORDS**
The operational procedures for the loading, unloading, and transferring activities associated with the TN-68 cask storage system included the appropriate acceptance criteria and met ISFSI program needs and regulatory requirements. The procedures were highly detailed, and reviewed and approved in accordance with the licensee's administrative program for document control.
Inspection Report# : 2000004*(pdf)*

Last modified : August 29, 2002