Susquehanna 2
4Q/2003 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Sep 27, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
D EDG Bolt Failure - Cause Not Determined Prior to Return to Service
The inspectors identified a non-cited violation of 10 CFR 50 Appendix B Criterion XVI of very low safety significance (Green). On March 19, 2003, PPL returned the "D" EDG to an operable status without adequately determining the cause of a linkage connecting bolt to fall off. The bolt connects the governor positioner arm to the fuel supply rack. PPL's initial repair was not sufficient to prevent repetition because although the bolt was initially reinstalled, it was not tightened to the required torque value of 25-30 foot pounds as required by the diesel vendor and plant procedures. On March 21, 2003, PPL removed the EDG from service and tightened the linkage connecting bolt to the required torque value.
This finding is greater than minor because it adversely impacts the equipment performance attribute of the mitigating system cornerstone and adversely affects the cornerstone objective in that the finding is associated with the reliability of the "D" EDG to respond to initiating events and prevent core damage. This finding is of very low safety significance (Green) using phase one of the significance determination process. The issue does not result in an actual loss of safety function of a system or the loss of safety function of a single train for greater than the Technical Specification allowed outage time of 72 hours. In addition, the finding is not risk significant due to seismic, fire, flooding, or severe weather initiating events.
This finding is related to the Problem Identification and Resolution (PI&R) cross-cutting area because PPL did not identify the cause of a significant condition adverse to quality and take corrective actions to prevent recurrence.
Inspection Report# : 2003004*(pdf)*

Significance: G May 16, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
RHR Soft Fill after LOOP
A non-cited violation of 10 CFR 50, Appendix B, Criterion V, was identified regarding inadequate procedural guidance for placing the residual heat removal system (RHR) suppression pool cooling in service during a condition of low RHR loop pressure.
The finding was determined to be greater than minor because it affected the mitigating systems and barrier integrity objectives of the suppression pool cooling (SPC) function. The procedural method could have challenged the integrity of the affected RHR loop components by creating the potential for a significant water hammer condition. The finding was determined to be of very low safety significance through a SDP, Phase 3 analysis because only one train of RHR was in suppression pool cooling for a limited time period over a year, and the remaining train would be unaffected.
This issue also covers Barrier Integrity

Inspection Report# : 2003006*(pdf)*

Significance: G May 16, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
RHR Hard Card vs Procedural Difference
A non-cited violation of 10 CFR 50, Appendix B, Criterion V, was identified regarding inadequate procedural guidance for operation of RHR in the suppression pool cooling (SPC) mode with a low pressure coolant injection (LPCI) signal present.
The finding was determined to be greater than minor because it affected the mitigating systems and barrier integrity objectives of the suppression pool cooling function, in that the hard card, a procedure attachment that summarizes the detailed steps of the procedure, associated with the SPC procedure contained steps which would have resulted in an incorrect valve alignment resulting in no flow through the RHR heat exchangers. The finding was determined to be of very low safety significance through a SDP, Phase 3 analysis because the operating procedure was correct and the operators had extensive training and practice at SPC operation.
This issue also covers barrier integrity.
Inspection Report# : 2003006*(pdf)*

Significance: G Mar 29, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Unit 2 Scram Discharge Volume Vent and Drain Valve Actuators Undersized
The inspectors identified a non-cited violation of very low safety significance of 10 CFR 50 Appendix B Criterion XVI, because PPL did not promptly identify and correct a condition adverse to quality. Specifically, the Unit 2 scram discharge valve vent and drain valve actuators were not properly sized to open the valves under all reactor pressure conditions as required by Emergency Operating Procedure EO-200-113, "Control Rod Insertion" to allow control rods to be inserted during anticipated transient without scram events.
This finding is more than minor because it had greater significance than a similar issue described in NRC Inspection Manual Chapter 0612 Appendix E, "Examples of Minor Issues," Section 4.g. This violation was of very low safety significance because the scram discharge volume vent and drain valve safety function to close in response to a reactor scram was not affected by the problem. In addition, during the period that the scram discharge volume valves were degraded, there was no actual failure to scram event.
This finding was related to the Problem Identification and Resolution cross-cutting area because PPL did not promptly identify and correct a condition adverse to quality regarding the undersized scram discharge volume inboard vent and drain valve actuators.
Inspection Report# : 2003002*(pdf)*

Barrier Integrity

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PPL Did Not Adequately Implement Alarm Response Procedures for a Refuel Floor Secondary Containment

Low Differential Pressure Condition
The inspectors identified a non-cited violation of very low safety significance of Technical Specification 5.4.1, because PPL did not adequately implement alarm response procedure written instructions to evaluate and correct indicated low differential pressure (D/P) for the refuel floor secondary containment.
This finding affects the Barrier Integrity cornerstone and is more than minor because it is associated with the human performance attribute and adversely affects the objective of the Barrier Integrity cornerstone to provide reasonable assurance that physical design barriers provide protection against a radiological release. This finding is of very low safety significance because the finding only represented a potential degradation of the radiological barrier function provided for the spent fuel pool.
This finding was related to the Human Performance cross-cutting area because operators did not adequately implement alarm response procedures to evaluate and correct indicated low D/P for the refuel floor secondary containment.
Inspection Report# : 2003005*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PPL Had Multiple Opportunities, But Did Not Identify a Condition Adverse to Quality Associated with ASME Fail-safe Closure Testing
The inspectors identified a non-cited violation of very low safety significance of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," because PPL did not promptly identify a condition adverse to quality. From July to December 2003, multiple evaluations by PPL did not identify that an American Society of Mechanical Engineers (ASME) fail-safe closure test was required to be performed on main steam isolation valves. The required test had not been performed since 1994.
This finding affects the Barrier Integrity cornerstone and is more than minor because, similar to example 1.c in the NRC Inspection Manual 0612, Appendix E, "Example of Minor Issues," a required surveillance test was not performed. This finding is of very low safety significance because the finding did not represent an actual open pathway in the physical integrity of the reactor containment.
A contributing cause of this finding is related to the Problem Identification and Resolution cross-cutting area because, although PPL had multiple opportunities, PPL did not promptly identify a condition adverse to quality regarding ASME testing for the main steam isolation valves.
Inspection Report# : 2003005*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PPL Did Not Perform Leakage Testing on the Scram Discharge Volume Vent and Drain Valves, and Did Not Have any Test Data, Evaluations, or Radiological Consequences Analysis to Justify Their Assumption
The inspectors identified a non-cited violation of very low safety significance of Technical Specification 5.5.6, "Inservice Testing Program." Since initial plant startup, PPL did not perform valve seat leakage testing on the SDV vent and drain valves, and did not have an adequate justification that any leakage through these valves would be inconsequential.
This finding affects the Barrier Integrity cornerstone and is more than minor because, similar to example 1.c in the NRC Inspection Manual Chapter 0612, Appendix E, "Example of Minor Issues," a required surveillance test was not performed. This finding is of very low safety significance because the finding did not represent an actual open pathway in the physical integrity of the reactor containment.
A contributing cause of this finding is related to the Problem Identification and Resolution cross-cutting area because PPL's corrective actions for a similar finding were narrowly focused and limited in scope.
Inspection Report# : 2003005*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
PPL Did Not Identify the Need to Perform an Evaluation Using the Current Probabilistic Risk Analysis and Did Not Enter the Issue into the Corrective Action Program
The inspectors identified a non-cited violation of very low safety significance of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions." PPL did not promptly identify a condition adverse to quality and did not enter it into its corrective action program as a condition report. Specifically, following changes made to the Probabilistic Risk Analysis (PRA), PPL did not identify the need to perform an evaluation utilizing the current PRA to verify that a 1998 change to Technical Specification 3.1.8 action statements was still valid.
This finding is more than minor because it is associated with the configuration control attribute and affects the objective of the Barrier Integrity cornerstone to provide reasonable assurance that physical design barriers provide protection against a radiological release. This finding was determined to be of very low safety significance because it did not result in an actual open pathway in the physical integrity of a fission product barrier.
A contributing cause of this finding is related to the Problem Identification and Resolution cross-cutting area in that PPL had prior opportunities to identify and correct this issue.
Inspection Report# : 2003005*(pdf)*

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Standby Gas Treatment System Damper Failure
A self-revealing non-cited violation of very low safety significance of Technical Specification 5.4.1 was identified, because PPL did not adequately implement their written procedures for post maintenance testing of a standby gas treatment system (SGTS) damper. On November 19, 2002, maintenance was performed on the damper and the damper was returned to an operable status without performing an adequate post maintenance or operational test. The inadequate test did not verify that the damper could perform its safety function after completion of maintenance activities. Four months later, PPL discovered that the damper could not perform its safety function. PPL corrected the condition and restored the damper to an operable condition.
This finding is more than minor because it is similar to examples 1.a and 5.b in NRC Inspection Manual 0612 Appendix E, "Examples of Minor Issues." This violation is of very low safety significance because the finding only represented a degradation of the radiological barrier function provided by the SGTS. During the 4 month period, there were no events that required a SGTS actuation.
A contributing cause of this finding was related to the Human Performance cross-cutting area, in that maintenance technicians and operators did not follow procedures to perform an adequate post maintenance test. As a result, the component was returned to service while in a degraded condition and was unable to perform its safety function.
Inspection Report# : 2003003*(pdf)*

Significance: G Mar 29, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Unit 2 Primary Containment Penetration Integrity
The inspectors identified a non-cited violation of very low safety significance of Technical Specification 5.4.1, because PPL did not implement their written procedures for the Technical Requirements for Operations (TRO) program. Although operators closed a Unit 2 primary containment isolation valve, they did not de-activate the valve as required by TRO 3.6.4 Condition B when both a primary containment isolation valve (first containment barrier) and a corresponding closed system boundary isolation valve (second containment barrier) were concurrently inoperable.

This finding is more than minor because operators did not implement the TRO Required Actions for an inoperable component as required by a station procedure, similar to example 2.g in NRC Inspection Manual 0612 Appendix E, "Examples of Minor Issues." This violation is of very low safety significance because the finding did not represent an actual open pathway in the primary containment.
This finding is related to the Human Performance cross-cutting area because plant operators did not follow procedures to implement TRO Required Actions.
Inspection Report# : 2003002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: SL-III Sep 28, 2002
Identified By: NRC
Item Type: VIO Violation
Spent Fuel Cannister Filled with Wrong Gas
An apparent violation (severity level yet to be determined) was identified that resulted in an unanalyzed condition for the spent fuel dry storage system. PPL filled a spent fuel storage cannister with Argon and Helium gases instead of using all Helium gas as required by the Certificate of Compliance No. 1004 for the NUHOMS-52B Dry Cask Fuel Storage System. The 10 CFR Part 72 Technical Specification 1.2.3, "24P and 52B DSC Helium Backfill Pressure," requires a helium backfill pressure of 2.5 pounds per square inch (psig) +/- 2.5 psig (stable for 30 minutes after filling). This issue is considered an apparent violation that resulted in an unanalyzed condition for a storage system designed to prevent or mitigate a serious safety event being degraded to the extent that a detailed evaluation was required to determine its operability. The issue is being considered for escalated enforcement in accordance with the NRC Enforcement Policy, NUREG 1600, Supplement VI, "Fuel Cycle and Materials Operations."
Inspection Report# : 2002005*(pdf)*

Last modified : March 02, 2004