Susquehanna 2
3Q/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 - ause 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)*

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Demonstrate the Effectiveness of Preventative Maintenance Nor Set Goals and Monitor the Unit 1 and 2 Emergency Lighting Systems
The inspectors identified a non-cited violation of 10 CFR 50.65 (a)(2), the Maintenance Rule, because PPL did not demonstrate the effectiveness of preventative maintenance for the emergency lighting systems and did not place the systems in a 50.65(a)(1) category and monitor against established goals. As a result, a progressive degradation of the 125 VDC emergency lighting systems occurred that caused the lighting systems to not be capable of performing their

intended function.
This finding was more than minor because PPL's maintenance rule 10 CFR 50.65 (a)(2) demonstration became invalid when the lighting system degradation resulted in a loss of the system's function. This finding was only of very low safety significance because the finding did not contribute to a loss of mitigation equipment functions, and did not increase the likelihood of a fire or flooding event. In addition, during the period that the emergency lights were unavailable, there was no actual loss of normal lighting.
A contributing cause of this finding was related to the Problem Identification and Resolution cross-cutting area. Plant personnel did not identify and report numerous emergency lights which had burnt out. The lack of problem identification contributed to the systems' progressive degradation. The causal relationship between this finding and the cross-cutting area was that plant personnel did not identify that numerous emergency lights were not functional and, as a result, the systems degraded to a point where they could not perform their intended functions.
Inspection Report# : 2002006*(pdf)*

Barrier Integrity

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

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Implement Emergency Plan Procedures for Event Classification During an Actual Event (Declared Unusual Event)
The inspectors identified a non-cited violation of 10 CFR 50.54(q), "Conditions of Licenses for Emergency Plans," because PPL did not follow their written procedures for their Emergency Plan, Section 5.1, "Classification System." As a result, PPL did not obtain sufficient information, available from security and other plant personnel, related to a transformer failure (explosion and fire), to adequately evaluate plant conditions against the appropriate Emergency Plan classification criteria.
This finding was more than minor because it affected the Emergency Preparedness cornerstone objective, to ensure that PPL is capable of implementing adequate measures to protect public health and safety in response to an actual event. The inadequate assessment of all available plant information could lead to an incorrect or missed event classification. In addition, it could result in delayed activation of the on-shift emergency response organization and delayed notification to off-site agencies. This finding was only of very low safety significance, and was not greater than very low safety significance, because the performance issue occurred during an actual Unusual Event and did not occur during an event of a higher emergency classification.
Inspection Report# : 2002006*(pdf)*

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Emergency Plan Procedures to Use a Trained Individual for Control Room Communicator During an Actual Event (Declared Unusual Event)
The inspectors identified a non-cited violation of 10 CFR 50.54(q), "Conditions of Licenses for Emergency Plans," because PPL did not follow their written procedures for their Emergency Plan, Section 6.0, "Organizational Control of Emergencies." As a result, during a declared Unusual Event, PPL used an individual who was not pre-assigned or trained, per procedure, to perform the control room communicator function. This contributed to PPL's inadequate communication to the NRC on the cause of the event classification.
This finding was more than minor because it affected the Emergency Preparedness cornerstone objective, to ensure that PPL is capable of implementing adequate measures to protect public health and safety in response to an actual event. Contrary to plant procedures, PPL did not use a trained person to perform the control room communicator function during an actual event. This performance deficiency had a direct relationship to the cornerstone's emergency response organization performance attribute, in that the untrained individual provided the wrong reason for the event classification to an off-site agency. This finding was only of very low safety significance, and was not greater than very low safety significance, because the performance issue occurred during an actual Unusual Event and did not occur

during an event of a higher emergency classification.
A contributing cause of this finding was related to the Human Performance cross-cutting area. The causal relationship between this finding and the cross-cutting area was that plant operators did not follow procedures to use a trained individual as the control room communicator.
Inspection Report# : 2002006*(pdf)*

Significance: G Oct 11, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Performance Deficiencies by an In-Plant Repair Team
The inspectors identified a finding of very low safety significance (Green) that is also a non-cited violation of 10 CFR 50.47(b)(14) and Appendix E.IV.F.2.g., formal critiques shall identify weak or deficient areas that need correction. The licensee failed to identify an exercise deficiency regarding the inadequate performance of an in-plant repair team in performing a critical task to stop the off-site release during the biennial full scale exercise. Consequently, the repair team was exposed to a higher (simulated) dose than necessary and an opportunity to stop the off-site release was significantly delayed.
This finding was determined to be of very low safety significance (Green) by the using the Emergency Preparedness (EP) SDP, Manual Chapter 0609, EP Risk Determination Flow Chart, Sheet 1, Second Column because the finding was identified during an EP exercise with simulated activities and is associated with the failure to identify a problem associated with a non-risk significant planning standard. This finding is more than minor because it could be reasonably viewed as a precursor to a significant event in that had this been an actual event, PPL could have missed an opportunity to quickly stop a radiological release to the public and to minimize the dose exposure to their emergency workers.
Inspection Report# : 2002011*(pdf)*

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 : December 01, 2003