Susquehanna 1
2Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation for a Degraded Emergency Service Water Ventilation Damper
The NRC identified a non-cited violation for not implementing the Temporary Change procedure, in accordance with Technical Specification 5.4.1.a, "Administrative Controls - Procedures." The temporary change performed in the field resulted in a loss of seismic qualification of the "D" emergency service water (ESW) ventilation subsystem. When this was discovered the "D" ventilation subsystem and the "D" ESW pump were declared inoperable in accordance with the Technical Requirements Manual, Section 3.7.6.E. The inspectors determined that failure to implement the temporary change procedure as required by Technical Specifications caused the loss of the seismic qualification of the "D" ESW ventilation subsystem, which provides cooling for the ESW pumps. PPL declared the "D" ESW ventilation subsystem and the "D" ESW pump inoperable, performed an engineering evaluation (EWR 681288) and approved the use of a special tool to secure and maintain the seismic qualification of the damper. PPL installed this tool and declared the damper operable on June 7, 2005.
This finding is more than minor because the loss of seismic qualification affected the "Protection Against External Factors" Attribute of the Mitigating Systems cornerstone and the objective of ensuring capability of a system (ESW) that responds to initiating events to prevent undesirable consequences. This finding is of very low safety significance because the qualification deficiency did not result in the loss of function.
The inspectors identified that a contributing cause of this finding was related to the organizational performance category of the Human Performance cross-cutting area because operations and maintenance did not recognize the need to have engineering evaluate the method that was used to secure the damper in accordance with NDAP-QA-1218, "Plant Changes."
Inspection Report# : 2005003*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: FIN Finding
Diesel Driven Fire Pump Lack of Engine Cooling
A finding of low safety significance was identified because PPL did not adequately evaluate and correct a degraded condition associated with the high engine operating temperatures and repetitive overheating of the diesel driven fire pump (DFP) which occurred following engine shutdown.
This issue is greater than minor because it affected the Mitigating Systems cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety significance, based on a Phase 1 significance determination process evaluation, because the finding did not result in the loss of a function of equipment designed as risk significant for greater than 24 hours and the finding does not increase the potential or risk of a seismic event , flood or severe weather event.
A contributing cause of this finding is related to the Problem Identification and Resolution (PI&R) cross-cutting area. PPL did not sufficiently evaluate the condition to identify and correct the reduced cooling water flow to the DFP engine. This resulted in ineffective corrective actions because the DFP was removed from service several times without taking action to correct the DFP high engine coolant temperature issue. (Section 4OA2.3)
Inspection Report# : 2004004*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Reactor Building Floor and Equipment Drains Not Fully Scoped into the Maintenance Rule
The inspectors identified a non-cited violation of 10CFR 50.65 paragraph (b)(2) of the Maintenance Rule, because PPL did not scope the Unit 1 and Unit 2 reactor building (RB) equipment and floor drain systems (EFDS) into the Maintenance Rule program and as a result did not demonstrate the effectiveness of preventive maintenance for the RB EFDS. The inclusion of the RB EFDS in the scope of the monitoring program was necessary because the RB EFDS are relied upon to mitigate internal flooding events. Failure of the EFDS to function could have prevented safety-related structures, systems and components from fulfilling their safety-related function.

This finding was more than minor because it had greater significance than similar issues described in the NRC Inspection Manual Chapter 0612, "Examples of Minor Issues," Section 1.h and 1.i. In addition, the RB EFDS's performance is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. On August 18, 2004, the Unit 1 RB EFDS was unable to pass 80 gpm as assumed in the Final Safety Analysis Report during an overflow of the reactor water cleanup backwash receiving tank. Inspectors identified that system performance problems were such that a Maintenance Rule (a)(2) demonstration could not be justified. This finding was considered to have very low safety significance because the finding did not contribute to an actual loss of mitigation equipment functions, and did not increase the likelihood of a fire or flooding event.
A contributing cause of this finding was related to Problem Identification and Resolution cross-cutting area. PPL had eleven previous EFDS blockages and the evaluation of those events did not recognize that portions of the non-safety related EFDS were relied upon to mitigate accidents or transients. Therefore, PPL did not monitor the EFDS under the maintenance rule and this contributed to the degradation of the RB EFDS. (Section 1R12).
Inspection Report# : 2004004*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: FIN Finding
Loss of One Offsite Power Source to Unit 1 (Outage Unit)
A self-revealing finding was identified because PPL did not ensure that the contract workers cleaning the Unit 1 cooling tower maintained the required minimum distance from an energized electrical line as required by PPL's Safety Operations Safety Rule Book. Subsequently, the bucket lift contacted the 230 KV line which resulted in the loss of one of two offsite electrical power sources for Unit 1. Unit 1, shutdown for a refuel and maintenance outage, lost one of two alternate decay heat removal systems that provide cooling for the shutdown reactor fuel.
This finding is more than minor because it affects the Mitigating Systems cornerstone attributes in that the human performance deficiency led to an actual loss of the Unit 1 fuel pool cooling system. The deficiency resulted in a loss of electrical power to an alternate decay heat removal system (spent fuel pool cooling) for the shutdown Unit 1 reactor. The error adversely affected the objective of the Mitigating Systems cornerstone to ensure the availability, reliability and capability of systems that respond to initiating events to prevent reactor core damage. The finding is of very low safety significance because the Unit 1 reactor water temperature minimally increased approximately 2 degrees Fahrenheit. (Section 1R14.1)
Inspection Report# : 2004003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Equipment Status for a Degraded Control Room Radiological Barrier Door
A self-revealing non-cited violation (NCV) was identified because PPL did not correctly implement the equipment status control procedure, in accordance with Technical Specification 5.4.1.a, which resulted in degrading the radiological barrier function for the control room. This finding is greater than minor because the loss of equipment status control resulted in an actual degradation of barrier performance which is an attribute of the Barrier Integrity cornerstone. This finding is of very low safety significance because only the radiological barrier function provided for the control room was affected. The inspectors identified that a contributing cause of this finding is related to the organizational performance category of the Human Performance cross-cutting area, in that PPL did not initially recognize the radiological barrier function of the control structure boundary door because the references utilized by PPL to determine the functions of the degraded door did not contain complete design information (Section 1R15).
Inspection Report# : 2005002*(pdf)*

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Reactor Recirculation and Residual Heat Removal System Instrument Lines Outside of Secondary Containment
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design control," because PPL did not have adequate measures established to control the alignment of the central railroad bay ventilation to the secondary containment as described in the accident analysis in the FSAR. This resulted in several reactor recirculation system and residual heat removal system instrument lines being outside of secondary containment. Upon discovery PPL aligned the central railroad bay ventilation to secondary containment.
This finding was greater than minor because it adversely impacted the Barrier Integrity cornerstone objective to ensure the capability of containment in that inadequate design control allowed the instrument lines in the central railroad bay to be outside of secondary containment. Allowing the instrument lines to be outside of secondary containment resulted in the plant being outside of the FSAR assumptions and analysis. This finding was considered to have very low safety significance (Green), using Phase-1 of the significance determination process. This finding was Green because the finding only represents a degradation of the radiological barrier function provided by secondary containment and the standby gas treatment system.

Inspection Report# : 2004005*(pdf)*

Significance: SL-IV Dec 31, 2004
Identified By: NRC
Item Type: VIO Violation
Failure to Complete 10 CFR 50.59 Analysis
The inspectors identified a Severity Level IV violation of 10 CFR 50.59 requirements for the failure to evaluate a change in plant system configuration that was known to be inconsistent with accident analysis and the final safety analysis report (FSAR) description. On December 16, 20, 23 2004, and on January 4, 2005, PPL aligned the ventilation of the Unit 1 Reactor Building railroad bay to be outside of secondary containment which was inconsistent with the assumptions of a previously analyzed accident described in FSAR Chapter 15.6.2. PPL did not perform an evaluation in accordance with the requirements of 10 CFR 50.59 to determine if the change required a license amendment prior to implementation of this change in plant configuration.
This finding was addressed using traditional enforcement since it potentially impacts or impedes the regulatory process in that a required 10 CFR 50.59 evaluation was not performed and documented. A SDP Phase-1 screening was performed and determined that the condition resulting from the violation of 10CFR 50.59 was of very low safety significance because the finding only represents a degradation of the radiological barrier function provided by secondary containment and the standby gas treatment system. This is a Severity Level IV Violation of NRC requirements in accordance with Section VI.A of the NRC Enforcement Policy (Supplement I - Reactor Operations; Example D.5). This violation is being cited in a Notice of Violation under Section VI of the NRC Enforcement Policy since PPL did not restore compliance within a reasonable time after the violation was identified nor did they enter the violation into a corrective action program to address recurrence.
Inspection Report# : 2004005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Post Horizontal Spent Fuel Storage Module B-5 s a High Radiation Area
A self-revealing non-cited violation of 10 CFR20.1501(a)(1) was identified for not conducting an adequate radiation survey to ensure compliance with the High Radiation Area (HRA) posting requirements of 10 CFR 20.1902(b) during the removal of spent fuel module shield walls. PPL posted and shielded the location and conducted occupational dose assessments for individuals working in the unposted high radiation area.
This finding is a greater than minor because PPL did not conduct adequate radiation surveys to ensure proper posting and control of the area. This finding was evaluated against the criteria in NRC Manual Chapter 609, Appendix C, and found to be of very low safety significance (Green) because it was not an ALARA finding, it did not involve an overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.
The cause of this non-cited violation is related to the Human Performance cross-cutting area because PPL did not complete an adequate survey to identify a high radiation area.
Inspection Report# : 2004005*(pdf)*

Public Radiation Safety

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Package Waste Resin for Shipment
A self-revealing non-cited violation of 10 CFR 20.2001 was identified. PPL's transfer of waste resin to Barnwell Low-Level Waste Disposal facility did not meet Barnwell's license requirements as required by 10 CFR 30.41. On October 25, 2004, Barnwell identified loose spent resin within the annular space between the waste container and transport cask. PPL suspended resin shipments until the cause of the October 25, 2004, event was identified and corrected.
This finding is a greater than minor performance deficiency because PPL failed to meet a waste disposal facility license requirement. This radioactive material control transportation finding was evaluated against criteria specified in NRC Manual Chapter 0609, Appendix D, and determined to be of very low safety significance (Green) because no radiation limits were exceeded, no package breach was involved, no

certificate of compliance finding was involved, and although a low-level burial ground non-conformance was involved, burial ground access was not denied and no 10 CFR 61.55 waste classification issue was involved.
Inspection Report# : 2004005*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : August 24, 2005