Beaver Valley 2
2Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Mar 29, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
INEFFECTIVE CORRECTIVE ACTIONS TO ADDRESS DEGRADED INSTRUMENT AIR SYSTEM PERFORMANCE
Ineffective corrective actions to address degraded instrument air system performance resulted in a Unit 2 loss of instrument air (LOIA) pressure event on March 8, 2003. Specifically, corrective and preventive maintenance (PM) activities were not performed as specified in work orders and station procedures. The finding was an NCV of 10 Code of Federal Regulations (CFR) 50.65(a)(1) for failure to take appropriate corrective action for a maintenance rule scope system which did not meet its category (a)(1) performance goals. The finding was of very low safety significance because operator action recovered instrument air pressure in time to avoid a plant transient and mitigation equipment was not affected.
Inspection Report# : 2003002*(pdf)*

Mitigating Systems

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
UNTIMELY AND INCOMPLETE CORRECTIVE ACTIONS REGARDING INADEQUATE CONTROL ROOM STAFFING
The inspectors determined that corrective actions for having no senior reactor operator (SRO) present in the Unit 2 control room during Mode 1 (at power) operation, were untimely and incomplete. Senior reactor operator presence is required to oversee operation of safety related structures, systems, and components, and to act as Emergency Director during emergency events. Station management initially incorrectly concluded that the November 21, 2002, occurrence was isolated and did not implement measures to verify all licensed operators understood the regulatory requirements of 10 CFR 50.54(m)(2)(iii) for control room staffing. Nuclear Regulatory Commission inspectors independently determined that additional licensed operators were also unaware of the regulatory requirements for control room staffing and corrective action program requirements to address such an issue. This finding was not suitable for NRC Significance Determination Process evaluation, but has been reviewed by NRC management and is determined to be a Green finding of very low significance. Absence of SRO oversight during licensed control room activities increases the likelihood of human performance errors, which in turn increase the likelihood of and initiating event and reduce the availability of mitigating systems. Knowledge of SRO control room staffing requirements is important to ensure appropriate oversight of licensed control room activities. No further control room staffing deficiencies occurred during the 3-day period of untimely and incomplete corrective actions. This finding was a violation of 10 CFR 50, Appendix B, Criterion XVI "Corrective Action."
Inspection Report# : 2002007*(pdf)*

Significance: G Sep 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
POOR MAINTENANCE (HUMAN PERFORMANCE) CAUSES EXCESSIVE CORROSION AND 'B' RECIRCULATION SPRAY HEAT EXCHANGER DEGRADATION
The inspectors identified a Non-Cited Violation of Technical Specification 6.8.1 for failure to perform maintenance on the safety-related 'B' recirculation spray (RS) heat exchanger (HX) in accordance with written procedures or instructions. Maintenance personnel human performance was deficient in that 'B' RS HX endbell closure bolts were not properly tightened in accordance with work instructions. This led to excessive corrosion, which subsequently degraded service water flow and performance capability of the 'B' RS HX. The finding was of very low significance because the degraded 'B' RS train did not represent an actual loss of safety function for actual plant conditions which existed during the period of concern.
Inspection Report# : 2002006*(pdf)*

Significance: G Sep 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
HUMAN ERROR WHEN CONNECTING TEST EQUIPMENT FOR SURVEILLANCE TEST MAKES 2-2 EMERGENCY DIESEL GENERATOR INOPERABLE
The inspectors identified a Non-Cited Violation of 10CFR 50, Appendix 'B', Criterion XI, "Test Control," for failure to properly use test equipment during the performance of a surveillance test on safety-related equipment. An operator incorrectly connected test equipment to safety injection relay K604B, located in the 2-2 emergency diesel generator (EDG) output breaker cubicle. This human error caused an electrical arc and potentially damaged the terminal block and relays. Improper use of test equipment resulted in the 2-2 EDG being declared inoperable for approximately 36 hours for associated corrective maintenance. The finding was of very low significance because the 2-1 EDG remained operable during the relay replacement and the 2-2 EDG was returned to an operable condition within the 72-hour Technical Specification allowed outage time.
Inspection Report# : 2002006*(pdf)*

Significance: G Sep 20, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
DESIGN CONTROL - FAILURE TO PROPERLY IMPLEMENT AND TEST A PLANT MODIFICATION
The licensee failed to properly use drawings that reflected the as-installed piping elevations while implementing a design change to install a high point vent in the recirculation spray/low head safety injection to HHSI cross-over piping. As a result, the vent was installed at an elevation that was not the high point. The modification package also failed to adequately test the installed vent and, therefore, did not identify the ineffective venting configuration. This issue was considered to be of very low safety significance (Green) based on a Phase 1 evaluation of the At-Power Reactor Safety Significance Determination Process (SDP) because the design deficiency did not result in a loss of safety system function. The finding was determined to be a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, Design Control.
Inspection Report# : 2002012*(pdf)*

Significance: G Sep 20, 2002
Identified By: NRC

Item Type: NCV NonCited Violation
DESIGN CONTROL - FAILURE TO ESTABLISH SUITABLE ACCEPTANCE LIMITS FOR GAS VOID
The licensee failed to assure that appropriate quality standards were specified for the high head safety injection (HHSI) system. Engineers assumed an upper limit of 30% void fraction in their 1997 design calculation for gas entrained fluid entering the suction of the HHSI charging pumps, and this limit was based on the point at which gas entrained in liquid transitions from homogeneous to slug flow. However, this limit was non-conservative and exceeded the pump service vendor limits. This issue was considered to be of very low significance (Green) based on a Phase 1 evaluation of the At-Power Reactor Safety Significance Determination Process (SDP) because the gas void found in the piping would not have resulted in a void fraction at the pump suction exceeding the limits recommended by the pump service vendor. Therefore, there was not a loss of the safety system function. The finding was determined to be a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, Design Control.
Inspection Report# : 2002012*(pdf)*

Significance: G Aug 29, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
RECIRCULATION SPRAY RADIATION MONITOR COOLER FLOWS NOT ACCOUNTED FOR IN SERVICE WATER HYDRAULIC CALCULATION
The inspectors identified that the Unit 2 service water system hydraulic model in calculation 10080-N-726 failed to include the service water branch flows to four recirculation spray (RS) radiation monitor sample coolers. This design deficiency was considered to be of very low safety significance (Green) based on service water piping flow measurements obtained during previous refueling outages in lines of similar size which indicated no impedance in service water flows. Phase 1 of the SDP screened this finding to (Green) because the failure to include the service water piping branch flows into the hydraulic model calculation would not have resulted in a loss of safety function. This design deficiency was determined to be a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion III, Design Control.
Inspection Report# : 2002011*(pdf)*

Significance: G Aug 29, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
UNIT 2 SERVICE WATER VALVE PIT FLOOD PROTECTION BARRIER NOT MAINTAINED DURING DESIGN MODIFICATION
The inspectors identified a missing piping penetration flood seal between redundant Unit 2 service water valve pit compartments. The seal had been removed during an in-progress piping modification without the licensee implementing appropriate compensatory measures while Unit 2 was operating. During the time that the flood seal was removed a passive failure of service water piping in either service water valve pit would have flooded both compartments. The issue was considered to be of very low safety significance (Green) based on a Phase 3 evaluation of the SDP because in the event of a pipe rupture, the missing service water flood seal would not have resulted in an initiating event and the recirculation spray system, which would have been lost due to the flooding of both of the compartments in the service water valve pit, would only have been needed if another initiating event occurred following the pipe rupture. In addition, the likelihood of a pipe rupture combined with an initiating event during the limited exposure period was very small. The issue was determined to be a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion III, Design Control.
Inspection Report# : 2002011*(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: W Apr 30, 2003
Identified By: NRC
Item Type: VIO Violation
ADEQUATE AND TIMELY EMERGENCY RESPONSE STAFFING IN FOUR KEY FUNCTIONAL ARES NOT MAINTAINED AT ALL TIMES
The 12 augmented radiation protection (RP) technician responders (i.e., six to respond in 30 minutes (M) and six to respond in 60 M) in the Emergency Response Organization (ERO) were not capable of meeting the minimum and timely staffing requirements in Emergency Preparedness Plan (EPP), Section 5, Table 5-1. EPP Section 5.2 states that Table 5-1 identifies the staffing requirements and capabilities for additions of the ERO. Table 5-1 requires that 12 RP technicians must respond to augment the shift crew in the four functional areas of offsite surveys (two in 30M and two in 60M), onsite surveys (one in 30M and one in 60M), in-plant surveys (one in 30M and one in 60M), and in-plant protective actions (two in 30M and two in 60M). This was an apparent violation of 10 CFR 50.47(b)(2) and the EPP for not ensuring that adequate and timely emergency response staffing, in the four stated functional areas, was maintained at all times. This finding was of low to moderate safety significance because staffing augmentation processes were not capable of ensuring augmentation of the initial response staff in accordance with EPP facility activation commitments for RP technicians. A violation of 10 CFR 50.47(b)(2), 10 CFR 50.54(q), and The 'Emergency Preparedness Plan, Table 5.1, was issued by EA Letter 03-054, dated July 10, 2003. Reference NRC Inspection Report 50-334(412)2003-003.
Inspection Report# : 2003003*(pdf)*
Inspection Report# : 2003006*(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : September 04, 2003