

Beaver Valley 1 3Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

OVERPOWER EVENT CAUSED BY INADVERTENT OPENING OF A FEEDWATER HEATER BYPASS VALVE

The inspectors identified a self-revealing non-cited violation (NCV) of License Condition 2.C.1, because reactor power exceeded the licensed maximum power level of 2689 (100 percent) megawatts thermal. The transient was caused by an inadequate procedure that resulted in the unexpected opening of a feedwater train bypass valve, and an overpower excursion to approximately 105 percent power for four minutes.

This finding is more than minor because it affected an attribute and the objective of the initiating events cornerstone in that it caused a transient that upset plant stability and therefore could be viewed as a precursor to a significant event. Without operator action, this inadvertent valve opening could have resulted in a reactor trip. This finding is of very low safety significance since although it did contribute to the likelihood of a reactor trip, it did not contribute to the likelihood of unavailable mitigating system components. FENOC initiated a root cause investigation, identified deficiencies in the procedure and work order, and have identified actions in the corrective action program to prevent this event from recurring. A contributing cause to this finding is related to the resources subcategory of the human performance cross-cutting area because the resources aspect includes items that support performance such as complete and accurate procedures.

Inspection Report# : [2005007\(pdf\)](#)

Mitigating Systems

Significance:  Jun 30, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INADEQUATE PROCEDURE RESULTS IN INCORRECT LEAD TIME CONSTANT IN THE OVER TEMPERATURE DELTA TEMPERATURE REACTOR TRIP FUNCTION

A self-revealing, non-cited violation of the Unit 1 Technical Specification (TS) Limiting Condition for Operation (LCO) 3.3.1.1 was identified, in that an inoperable channel of the Over-Temperature Delta-Temperature (OTDT) Circuit was not placed in the tripped condition within six hours. Specifically, inadequate procedural steps within maintenance procedures resulted in the lead and lag switches of a circuit card in the OTDT channel of the Reactor Protection System (RPS) being left in the "OFF" position for several days following maintenance.

This finding is greater than minor because it affected an attribute and objective of the Mitigating Systems Cornerstone, in that it reduced the reliability of a RPS component and thus reactivity control was degraded. Specifically, the lead and lag switches being left in the "OFF" position caused the loop 1 channel OTDT setpoint to be less responsive than required by TS. The finding is of very low safety significance because the affected channel of OTDT was still capable of causing a reactor trip and other trips were available to provide a backup to this safety function.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Mar 31, 2005

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

INEFFECTIVE PROCEDURAL CONTROLS CAUSED A MECHANICAL SEAL FAILURE ON THE UNIT 1 "A" RIVER WATER PUMP

A self-revealing, non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified, which involved maintenance procedures used for installation of mechanical seals that were not implemented correctly and did not contain appropriate quantitative acceptance criteria (e.g., torque values). This resulted in subsequent seal failure and shaft damage to the "A" river water pump. The failure was caused by incorrect bolting material installed on the mechanical seal package, contrary to approved instructions and drawings, and incorrect torque values that were specified in the work instructions.

This finding is greater than minor because it affected an attribute and objective of the Mitigating Systems Cornerstone, in that it reduced the availability and reliability of a safety-related river water pump. Specifically, the seal failure and shaft damage resulted in the unplanned unavailability of the river water pump until repairs were completed. Further, from a reliability perspective, the degraded seal increased the likelihood of failure when the pump would be required to perform its safety function during design basis events, as evidenced by its ultimate

failure when the pump was placed in service in March 2005. The finding is of very low safety significance since the river water pump was out of service for less than its technical specification allowed outage time. A contributing cause to this finding is related to the corrective action subcategory of the problem identification and resolution cross-cutting area, because seal leakage was not appropriately evaluated for a period of nine months until the pump was secured due to the seal failure.

Inspection Report# : [2005002\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO TAKE ADEQUATE CORRECTIVE ACTIONS TO PRECLUDE REPETITIVE EMERGENCY RESPONSE FACILITY EMERGENCY DIESEL GENERATOR FAILURES

The inspectors identified a non-cited violation of the Unit 1 facility operating license, Section 2.C.5, "Fire Protection Program" for failure to adequately correct repetitive failures of the Emergency Response Facility (ERF) Emergency Diesel Generator (EDG). The ERF EDG provides emergency power to the 'dedicated' Auxiliary Feedwater (AFW) pump which is required by the Unit 1 Updated Fire Protection Appendix 'R' Review, Rev. 25, due to the lack of fire train separation of the three safety-related Unit 1 AFW pumps.

The finding is greater than minor because it adversely affected the availability of a fire protection program component and mitigating systems cornerstone objective. The finding is of very low safety significance due to the lack of large fire sources as well as the existence of sufficient cable separation in the affected fire zone. This finding is related to the problem identification and resolution cross-cutting area because the licensee's failure to implement effective corrective actions resulted in three ERF EDG failures in 2004.

Inspection Report# : [2004006\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : November 30, 2005