

Quad Cities 2

3Q/2004 Plant Inspection Findings

Initiating Events

G**Significance:** Jun 30, 2004

Identified By: NRC

Item Type: FIN Finding

FAILURE TO APPROPRIATELY IMPLEMENT TURBINE THRUST BEARING WEAR DETECTOR CALIBRATION AND SURVEILLANCE TESTING PROCEDURES

A finding of very low safety significance was self-revealed when the Unit 2 main turbine and reactor automatically tripped during thrust bearing wear detector testing. The turbine trip was a result of the licensee's failure to implement the thrust bearing wear detector test program as described in the vendor manual. The inspectors determined that the licensee had modified their test program to gain efficiencies in plant operation, work control, and radiation protection. However, the licensee did not recognize that the increased efficiencies also increased the likelihood of a plant transient during thrust bearing wear detector testing.

This finding was more than minor because it was viewed as a precursor to a significant event (a transient). This finding was of very low safety significance because Unit 2 responded to the turbine trip and reactor trip as designed and all mitigating systems equipment was available following the reactor trip. The finding was not considered a violation of regulatory requirements since the main turbine thrust bearing wear detector was a non-safety related component.

Inspection Report# : [2004005\(pdf\)](#)

Mitigating Systems

G**Significance:** Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

VIOLATION OF TS 3.3.6.1 DUE TO MAIN STEAM LINE HIGH FLOW SWITCHES BEING FOUND OUT OF TOLERANCE

A finding of very low safety significance was identified when the setpoint for two of the Unit 2 main steam line high flow switches were found to be higher than allowed by Technical Specification 3.3.6.1 in July 2003. As corrective actions, the licensee recalibrated the switches and performed a root cause analysis.

This finding was more than minor because if left uncorrected the switches could have continued to drift to a level above the analytical limit. Had this occurred, the licensee would have been operating in a condition not previously reviewed by the NRC. This finding was determined to be of very low safety significance since the out of tolerance switches did not result in a loss of safety function for the containment isolation system. However, this finding was a Non-Cited Violation of Technical Specification 3.3.6.1 as the out of tolerance switches resulted in the failure to ensure that two trip systems per channel per steam line were operable during Mode 1 operations.

Inspection Report# : [2004009\(pdf\)](#)**G****Significance:** May 28, 2004

Identified By: NRC

Item Type: FIN Finding

Failure to Provide Adequate Minimum Flow Protection for the RCIC Pump

Green. The inspectors identified a finding of very low safety significance involving inadequate design control of the reactor core isolation cooling system. Specifically, the design of the reactor core isolation cooling system and plant operating procedures did not provide adequate minimum flow protection for the reactor core isolation cooling pump. As a result, the reactor core isolation cooling flow could be reduced below the minimum flow requirements for the pump, potentially resulting in pump damage. This finding applies to both units.

This finding was more than minor since it could have affected the mitigating system cornerstone objective of ensuring the availability of systems required to respond to initiating events. This finding was of low safety significance because it did not represent an actual degradation of the reactor core isolation cooling system. The licensee initiated appropriate corrective actions, including implementing a procedure change and obtaining formal minimum flow information from the pump vendor, to ensure continued operability. No violation of NRC requirements occurred.

Inspection Report# : [2004004\(pdf\)](#)

Significance:  Mar 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

AUTOMATIC DEPRESSURIZATION SYSTEM VALVE 1-0203-3B WAS INOPERABLE WHEN REQUIRED TO BE OPERABLE

Technical Specification 3.4.3.A requires that with one relief valve inoperable, restore the valve to operable status within 14 days or be in mode 3 within 12 hours and in mode 4 within 36 hours. In addition, Technical Specification 3.5.1.G requires that with one automatic depressurization system valve inoperable, restore the valve to operable status within 14 days or be in mode 3 within 12 hours and reduce reactor dome pressure to 150 psig or below within 36 hours. Contrary to the above, the licensee discovered on November 15, 2003, that automatic depressurization system valve 1-0203-3B was inoperable when required to be operable from July 23 until November 11, 2003.

Inspection Report# : [2004002\(pdf\)](#)

Significance:  Dec 31, 2003

Identified By: NRC

Item Type: FIN Finding

FAILURE OF STEAM DRYER MONITORING PLAN TO DETECT SIGNIFICANT DRYER DEGRADATION IN THE EARLY STAGES TO PRECLUDE FAILURE WHICH COULD IMPACT SAFETY-RELATED EQUIPMENT.

A self-revealing finding was identified due to the failure of the steam dryer monitoring plan to detect significant Unit 1 dryer degradation in the early stages. As a result, actions which could have been taken to preclude the generation of loose parts, and minimize potential damage to mitigating systems equipment, were unable to be taken.

This finding was determined to be more than minor because it impacted the equipment performance attribute of the mitigating systems cornerstone and impacted the objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that this finding was of very low safety significance as the dryer failure did not result in the loss of safety function of any mitigating systems equipment.

Inspection Report# : [2003013\(pdf\)](#)

Significance:  Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

PROCEDURES FOR PLACING RESIDUAL HEAT REMOVAL PUMP IN SHUTDOWN COOLING NOT APPROPRIATE TO THE CIRCUMSTANCES

A self-revealing event occurred on April 17, 2003, due to the failure to have procedures appropriate to the circumstances for placing a residual heat removal pump in the shutdown cooling mode of operation. When taken in conjunction with a degraded relief valve, the inadequate procedural guidance increased the pressure in the residual heat removal piping to a level which exceeded the relief valve setpoint. The discharge from the relief valve traveled to the reactor building floor drain sump and was unnoticed by control room and radwaste operations personnel for more than 10 hours due to weaknesses in control room and radwaste panel monitoring. By the time this condition was identified, the floor drain sump had overflowed and approximately one-half inch of water had accumulated on portions of the reactor building basement floor. The failure to have a procedure appropriate to the circumstance was determined to be a violation of NRC requirements. The inspectors considered the weakness in panel monitoring by both control room and radwaste operations personnel to be a human performance issue since this delayed the identification of this self-revealing condition. Lastly, the failure of the licensee to identify the weaknesses in operator performance prior to prompting by the inspectors was considered a problem identification and resolution issue.

This finding was more than minor because it was associated with the procedure quality and protection against external factors attributes of the mitigating systems cornerstone. In addition, this finding impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences such as flooding. The inspectors determined that this finding was of very low safety significance as adequate decay heat removal and mitigating systems capability was maintained.

Inspection Report# : [2003013\(pdf\)](#)

Significance:  Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO DEMONSTRATE PERFORMANCE OR CONDITION OF REACTOR BUILDING FLOOR DRAIN SUMP HIGH LEVEL ALARMS WERE EFFECTIVELY CONTROLLED THROUGH PERFORMANCE OF PREVENTIVE MAINTENANCE

The inspectors identified a Green finding involving a Non-Cited Violation for the failure to demonstrate effective control of the condition of the reactor building floor drain sump high level alarms through the performance of preventive maintenance. As a result, the licensee had not set goals or monitored the performance of the alarms as required by 10 CFR Part 50.65(a)(1).

This finding was determined to be more than minor because if left uncorrected the failure to perform appropriate preventive maintenance would become a more significant safety concern. Due to the nature of this finding, it was unable to be assessed using the Significance Determination Process. However, the details of this finding were reviewed by Region III management, maintenance rule personnel in the Office of Nuclear Reactor Regulation, and Office of Enforcement personnel and determined to be of very low risk significance.

Inspection Report# : [2003013\(pdf\)](#)

Barrier Integrity

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CHANNEL CHECK PROCEDURE FOR DRYWELL RADIATION MONITORS

A finding of very low safety significance was self-revealed in January 2004 when the Unit 2 drywell radiation monitor failed downscale due to an un-soldered wire connection. The finding was considered a violation of regulatory requirements due to having a channel check procedure which failed to provide appropriate acceptance criteria to determine whether the radiation monitors remained operable. Corrective actions included validating that additional drywell radiation monitors had soldered wire connections where needed, training personnel to verify the proper operation of the drywell radiation monitors, and revising the appropriate procedures with appropriate quantitative and qualitative acceptance criteria.

This finding was more than minor because it was associated with the containment procedure attribute of the barrier integrity cornerstone and impacted the objective of providing reasonable assurance that the physical design barriers protect the public from radionuclide releases caused by accidents and events. The finding was of very low safety significance because it did not contribute to: (1) a degradation of the radiological barrier function provided for the control room, the auxiliary building, the spent fuel pool, or the standby gas treatment system; (2) a degradation of the barrier function of the control room against smoke or a toxic atmosphere; or (3) an actual open pathway in the physical integrity of reactor containment. The finding was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V due to the failure to have a channel check procedure which contained appropriate acceptance criteria.

Inspection Report# : [2004009\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Last modified : December 29, 2004