

Quad Cities 1

4Q/2004 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW LOCKING AND TAGGING PROCEDURE WHILE DEVELOPING SYSTEM RETURN TO SERVICE INSTRUCTIONS CONTRIBUTES TO LEAK CREATION DURING POST MAINTENANCE TESTING

A self-revealing finding of very low safety significance was identified during post maintenance testing of the 1A residual heat removal service water system on October 7. Several human performance deficiencies resulted in operations personnel starting the 1A residual heat removal service water pump without a discharge flow path. The deficiencies included: a failure to follow the licensee's locking and tagging procedure when developing system return to service instructions; the use of unverified assumptions when developing return to service instructions; weaknesses in briefings; and deficient control board panel monitoring. A Non-Cited Violation of Technical Specification 5.4.1 was also identified.

The inspectors determined that this issue was more than minor because the failure to follow procedure, the inadequate briefings, and the deficient panel monitoring resulted in creating a sizeable leak in the residual heat removal service water system and operating a system in a condition which had the potential to lead to pump damage. This issue was of very low safety significance because the leak did not result in a loss of safety function for the residual heat removal service water system. Corrective actions for this issue included briefing operations personnel on the issue, improving human performance in the operations department, and repairing the leak.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

TECHNICAL SPECIFICATION ALLOWABLE VALUE EXCEEDED FOR LOW PRESSURE COOLANT INJECTION LOOP SELECT REACTOR LOW PRESSURE SWITCHES

A finding of very low safety significance was self-revealed when the setpoints for two of the Unit 1 low pressure coolant injection loop select low pressure switches were found above Technical Specification value on July 30, 2004. The inspectors determined that an unapproved modification had resulted in the removal of one of two internal micro-switches which caused the pressure switches to drift more than expected. The implementation of an unapproved modification was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."

This issue was determined to be more than minor because if left uncorrected, the unapproved modification could result in the switch setpoints drifting above both the Technical Specification limits and the allowable value. However, this finding was determined to be of very low safety significance because it did not result in an actual loss of safety function for the low pressure coolant injection system. The licensee's short term actions included increasing the pressure switch testing frequency and performing an extent of condition review to determine whether other switches had been modified. In the long term, the licensee planned to replace the pressure switches, or return the installed pressure switches to their original design, during the next refueling outage.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

HISTORICAL FAILURE OF MAIN STEAM SAFETY VALVES TO MEET TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENTS

A finding of very low safety significance and a Non-Cited Violation of Technical Specification 3.4.3 were identified by the inspectors in November 2004 due to the licensee's repeated inability to demonstrate that the main steam safety valves would actuate within plus or minus one percent of the nameplate value when required.

This issue was determined to be more than minor because it led to continued degradation of the main steam safety valves and put the licensee at

risk for exceeding their vessel overpressure limits following an accident or an anticipated transient without scram. This finding was of very low safety significance because an adequate number of safety valves and relief valves were available to prevent an overpressure condition from occurring. Corrective actions for this issue included installing new main steam safety valves, submitting a license amendment to change the main steam safety valve operating tolerances, and revising a previously issued Licensee Event Report to report the previous failures.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE ADEQUATE CAPABILITY TO ISOLATE THE SAFETY RELATED TORUS FROM THE NON-SEISMIC PORTIONS OF THE REACTOR CORE ISOLATION COOLING SYSTEM

The inspectors identified a finding and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in May 2004 when they discovered that the design of the reactor core isolation cooling system did not provide adequate capability to isolate the safety-related torus from the non-seismic reactor core isolation cooling system under all conditions. As a result, torus water could potentially drain into the reactor building following a seismic event and a failure of the reactor core isolation cooling piping. The loss of torus inventory could potentially affect the safety-related water supply for the emergency core cooling systems.

This finding was more than minor since it could have affected the mitigating cornerstone objective of ensuring the availability of systems required to respond to initiating events. This finding was of low safety significance because a subsequent evaluation demonstrated that the reactor core isolation cooling piping would not have failed during a seismic event. The licensee initiated a procedure change to remotely bypass the valve control logic such that the reactor core isolation cooling system remained operable and the operators could close the valve when required for containment isolation. The licensee also initiated engineering changes to revise the valve control logic as a permanent resolution to the issue.

Inspection Report# : [2004010\(pdf\)](#)

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTIONS FOR JULY 2003 OUT OF TOLERANCE EVENT RESULTS IN REPEAT EVENT IN JULY 2004

The inspectors identified a finding of very low safety significance due to the failure to adequately correct a July 2003 main steam line high flow switch out of tolerance condition. The failure to correct this condition resulted in a July 2004 out of tolerance event on the Unit 1 main steam line high flow switches. Corrective actions included placing the switches on an increased calibration frequency, performing additional drift analysis procedures, and plans to replace the current switches with differential pressure transmitters during upcoming refueling outages.

This finding was considered to be more than minor because if left uncorrected the condition could have led to the setpoint for multiple main steam line high flow switches drifting above the analytical limit. 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. A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, was identified due to the licensee's failure to adequately address the cause of the July 2003 out of tolerance event. In addition, the corrective actions taken following the July 2003 event failed to preclude a repeat event in July 2004.

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

Significance:  Sep 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROMPTLY CORRECT DEFICIENCIES ASSOCIATED WITH A DEGRADED RESIDUAL HEAT REMOVAL SERVICE WATER VALVE

The inspectors identified a finding of very low safety significance involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." As of September 17, 2004, the licensee had failed to promptly identify and correct the adverse effects of corrosive water on residual heat removal service water (RHRSW) valves. Specifically, in August 2002, an operating experience report from the Dresden Station described the failure of three RHRSW supply valves due to stem to disk separation because of corrosion. On December 7, 2002, Work Request 76586 was written to repair a potential disk to stem separation in safety-related 1A RHRSW supply to Train B control room heating, ventilation and air conditioning Valve 1-5799-385. However, as of September 17, 2004, the work request had not yet been completed, and the licensee had not examined any other RHRSW valves for corrosion. The licensee entered this issue into its corrective action program. Valve 1-5799-385 was partially repaired and labeled as "emergency use only" on October 6, 2004.

This issue was more than minor because it involved the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The issue was of very low safety significance since the degraded valve did not result in a loss of safety function for either the residual heat removal service water or the control room emergency ventilation system.

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\(pdf\)](#)**G****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\(pdf\)](#)

Barrier Integrity

G**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE OF SAFETY VALVE DISCHARGE LINE FLANGES TO MEET CODE REQUIREMENTS

The inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in August 2004 due to the licensee's failure to adequately translate code design requirements into an operability evaluation for the main steam safety relief valve discharge line flanges.

This issue was more than minor because if left uncorrected the failure to perform adequate operability evaluations could become a more significant safety concern. This issue was of very low safety significance because it did not involve the degradation of a radiological barrier, a barrier used to protect the control room from smoke or toxic gases, and did not result in an actual open pathway in the physical integrity of the reactor containment. As part of the corrective actions for this issue, the licensee implemented compensatory actions to ensure continued operability of the installed flanges and initiated plans to modify the operable but degraded flanges to meet their design requirements.

Inspection Report# : [2004010\(pdf\)](#)**G****Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

CONTROL ROOM EMERGENCY VENTILATION TEST FAILURE DUE TO INADEQUATE PROCEDURE AND DEFICIENT MODIFICATION TO HATCH COVERS

A finding of very low safety significance and a Non-Cited Violation of Technical Specification 3.7.4.A were identified by operations personnel in October 2004 due to the licensee's failure to demonstrate that the control room emergency ventilation system was capable of maintaining the control room emergency zone differential pressure at greater than 1/8 of an inch at a flow rate of 2000 standard cubic feet per minute since 1998.

This issue was determined to be more than minor because if left uncorrected, the condition of the control room emergency ventilation system would have continued to degrade without being identified by the licensee. This issue was of very low safety significance since the finding only represented a degradation of the radiological barrier provided for the control room. Corrective actions for this issue including providing additional sealing material to the cable tunnel hatch covers and revising the control room emergency ventilation surveillance procedures to

ensure that the Technical Specifications continue to be met.

Inspection Report# : [2004010\(pdf\)](#)



Significance: G 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 : March 09, 2005