

North Anna 2

3Q/2003 Plant Inspection Findings

Initiating Events

Significance:  May 23, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Demonstrate the Fire Resistance Rating of 3-Hour Duct Wrap

The fire barrier wrap system installed for 3-hour protection of a main control room (MCR) exhaust duct routed through the Unit 2 Normal Switchgear Room (NSR) had an indeterminate fire resistance rating instead of the required three hours. The fire barrier wrap system had not been specifically determined through testing nor evaluated as being bounded by the referenced test configuration.

This was identified as a non-cited violation of 10 CFR 50.48 and License Condition 2.D. This finding is greater than minor because it degraded the ability to meet the mitigating systems cornerstone objective. The finding is considered to have very low safety significance because the fire detection, automatic suppression, and manual suppression for the Unit 2 NSR fire area met the conditions of the licensing basis; a fire damper rated as a 3-hour fire barrier is located in the ventilation duct where it enters the MCR; and no equipment or cable for systems required for safe plant shutdown are located in the fire areas.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Feb 14, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of the Corrective Action Program to Preclude a Reactor Trip Due to EHC Power Supply System Failures

The licensee failed to take timely action to address an equipment issue identified through their operating experience review. For approximately ten years, identified corrective actions for turbine-generator control cabinet power supply failures were not implemented. A December 2001 Unit 2 reactor trip resulted from delaying the corrective actions.

The self-revealing finding is more than minor because of the potential to increase the frequency of an initiating event and an actual reactor trip occurred. The event was determined to be of very low safety significance because of the availability of non-safety and safety-related systems to mitigate a reactor trip. This finding is a non-cited violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Actions."

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Dec 31, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Inadequate Weld Overlay Repairs on CRDM Nozzle 51 J-Weld

An ineffective weld repair on Unit 2 control rod drive mechanism (CRDM) Nozzle 51 J-Weld resulted in subsequent through wall leakage.

A self-revealing non-cited violation of 10 CFR Appendix B Criterion XVI was identified. This finding is more than minor because it resulted in through wall leakage of the reactor coolant system (RCS) boundary. This finding was of very low safety significance because it is reasonable to assume no loss of function of the RCS boundary and to expect the structural integrity of the RCS to be maintained. An important factor influencing the significance was the very low likelihood of an initiating event (a medium loss of coolant accident) resulting from cracks in the CRDM nozzle J-Welds.

Inspection Report# : [2002004\(pdf\)](#)

Mitigating Systems

 **Significance:** Feb 14, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure of the Corrective Action Program to Determine the Cause of Charging Pump Seal Leaks to Preclude Repetition

From approximately 1996 until 2002, the licensee was unable to determine the cause and take effective corrective actions to preclude repetitive seal leaks on the Unit 1 and Unit 2 charging pumps. Whether the latest cause determination and associated proposed corrective actions will correct the condition has yet to be demonstrated.

This inspector-identified finding is more than minor since the problem resulted in increased charging pump unavailability and increased the potential for charging pump seal leakage during a loss of coolant accident. The latter could have resulted in control room operators receiving radiation exposures in excess of regulatory limits. The event was determined to be of very low safety significance (Green) because alternate charging pumps were available to perform the safety function and the effected charging pump could be isolated to stop the leakage. This finding is a non-cited violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Actions."

Inspection Report# : [2003008\(pdf\)](#)

 **Significance:** Dec 31, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Control Design Drawings for an Integral Construction of Trunnion, Pad, and Run Pipe in Service Water Pump Discharge Pipe Supports

Inadequate design controls resulted in four service water supports not being constructed in accordance with design guides. These supports were to protect the safety-related service water piping and pumps from failures during seismic and other loadings.

An inspector-identified non-cited violation of 10 CFR 50, Appendix B, Criteria III was identified. This finding is more than minor because the supports were incorrectly constructed and allowed potential separation of the supports from the piping. The issue was determined to be of very low safety significance based upon a re-analysis for the as-built condition which concluded that the systems were operable.

Inspection Report# : [2002004\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Significance:  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to classify and declare an Notification of Unusual Event as required by 10 CFR 50.54(q), 50.47(b)(4), and Section IV.B of Appendix E of 10 CFR 50

The inspectors identified a non-cited violation of 10 CFR 50.54(q), 50.47(b)(4), and Section IV.B of Appendix E of 10 CFR 50. On June 27, 2003, the licensee failed to classify and declare an Notification of Unusual Event in accordance with emergency plan implementing procedures following the unplanned release of a toxic gas which could affect safety of station personnel.

The finding is greater than minor because it affected the Emergency Preparedness Cornerstone objective of ensuring the emergency response organization's performance to implement adequate measures to protect public health and safety during an emergency. The finding is associated with a risk significant planning standard and determined to be of very low safety significance using Manual Chapter 0609, Appendix B "Emergency Preparedness Significance Determination Process," Sheet 2 which specifies that failure to declare an Notification of Unusual Event is Green.

Inspection Report# : [2003004\(pdf\)](#)

Occupational Radiation Safety

Significance:  Dec 31, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Properly Monitor Worker Radiation Exposure in a High Radiation Area

The licensee failed to properly monitor a worker's radiation exposure in a High Radiation Area (HRA).

A self-revealing non-cited violation of Technical Specification 6.12.1 (in effect prior to August 20, 2002) was identified. This finding is more than minor because it involved a failure in the personnel monitoring program which could have contributed to unintended dose to a worker, although no unintended dose appeared to have been incurred. This finding was of very low safety significance because it involved the failure to meet a regulatory requirement but did not significantly impair the licensee's ability to assess radiation dose.

Inspection Report# : [2002004\(pdf\)](#)

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Feb 14, 2003

Identified By: NRC

Item Type: FIN Finding

Biennial Problem Identification and Resolution

The team concluded that, in general, problems were properly identified, evaluated, and corrected. The licensee was effective at identifying problems and entering them in the corrective action process. Generally, issues were prioritized and evaluated appropriately, and in a timely fashion. The evaluations of significant problems were in general of sufficient depth to determine the likely root or apparent causes, as well as, address the potential extent of the circumstances contributing to the problem and provide a clear basis to establish corrective actions. Corrective actions that addressed the causes of problems were generally identified and implemented. Reviews of sampled operating experience information were comprehensive. Licensee audits and assessments were found to be adequately broad based and effective in providing management a tool for identifying adverse trends. Previous noncompliance issues documented as non-cited violations were properly tracked and resolved via the corrective action program. The results of the last comprehensive corrective action program audit conducted by the licensee were properly entered and dispositioned in the corrective action program. Based on discussions with plant personnel and the apparently low threshold for items entered in the corrective action program database, the inspectors concluded that workers at the site were free to raise safety concerns to their management.

Inspection Report# : [2003008\(pdf\)](#)

Last modified : December 01, 2003