North Anna 2

Initiating Events

Significance: G Apr 04, 2000
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW MAINTENANCE PROCEDURES RESULTS IN UNIT 2 MANUAL REACTOR TRIP
A non-cited violation was identified for plant personnel failing to follow plant approved maintenance activity procedures. This is a violation of Unit 2 Technical Specification (TS) 6.8.1.a and is in the licensee's corrective action program as PI N2-2000-002-00. The procedure violation resulted in a reactor coolant pump trip and a manual reactor trip on Unit 2 and a recognition that the 1H emergency diesel generator was inoperable when the diesel failed to start. The issue had very low safety significance for Unit 2 due to the safety systems performing as designed. On Unit 1, the issue was also of low safety significance due to the following mitigating factors: (1) the short time that the 1H emergency bus was unavailable; (2) the availability of safety related equipment powered by the 1J emergency bus; and, (3) the availability of the station blackout diesel generator.
Inspection Report# : 2000003*(pdf)*

Mitigating Systems

Significance: N/A Jun 30, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Violation of 10 CFR 50.54(k) and Technical Specification 6.8.1.a due to a senior reactor operator being inattentive while on licensed duty
A non-cited violation was identified for a senior reactor operator (SRO) not being attentive to licensed duties as required by 10 CFR 50.54(k) and Technical Specifications 6.8.1.a. The SRO was inattentive and sleeping while on licensed duty in the control room during 1999. Failure of a SRO to be attentive to licensed duties while in the control room could have credible impact on safety since he may not be able to immediately respond to plant conditions or events. The safety significance was lessened due to the small amount of time the SRO was not attentive during the year [i.e., the cumulative exposure time was a few minutes out of approximately 8,000 hours in a year], the licensee typically staffed the shift with one more SRO than the minimum number required by Technical Specifications [and the SRO would typically respond when approached or would become attentive when an alarm annunciated. No plant problems or events were attributed to the SRO's inattentiveness].
Inspection Report# : 2001002*(pdf)*

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to develop an inspection schedule for the turbine driven auxiliary feedwater pump lube oil coolers
Technical Specification 6.8.1.a and Appendix A, Item 9.b of Regulatory Guide 1.33, Revision 2, require that preventive maintenance schedules be developed to specify inspections of equipment. Prior to March 12, 2001, the licensee had not inspected the turbine driven auxiliary feedwater pump lube oil coolers on a specified schedule. The preventive maintenance adequacy and frequency is being addressed as part of the root cause evaluation associated with Plant Issue N-2001-0656.
Inspection Report# : 2000006*(pdf)*

Significance: G Mar 31, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to analyze for the affect on the post-fire safe shutdown capability of fire-induced failures of the main feedwater system
A non-cited violation was identified for the licensee's failure to meet the requirements of 10 CFR 50, Appendix R, Section III.G.2. Specifically, the licensee's safe shutdown analyses for fire in the emergency switchgear room and in the cable vault and tunnel did not evaluate the impact that fire induced failures on the main feedwater system cables routed in the fire areas may have on the facility with regard to post-fire safe shutdown. Fire damage to these unprotected circuits could produce transient plant operations that were not considered in the licensee's analysis. However, because of system and operator response capabilities and the relatively minor increase in auxiliary feedwater component failure rates resulting from fire damage to these unprotected circuits, the safety significance of this issue was very low.
Inspection Report# : 2000006*(pdf)*

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Inadequate procedural guidance for implementing alternate shutdown for a fire in the emergency switchgear room
Technical Specification (TS) 6.8.1.a and Regulatory Guide 1.33, Appendix A, Item 6.p, require written procedures for plant operations during emergencies such as a fire. The licensee failed to have an adequate procedure in the event of a fire in the emergency switchgear room. Reference Plant Issue Resolution N-2000-0469-R3 and URI 50-338, 339/00007-04.
Inspection Report# : 2000006*(pdf)*

Significance: G Jul 01, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
INADEQUATE PROCEDURE FOR ALTERNATIVE SHUTDOWN FOR A CONTROL ROOM FIRE
A non-cited violation was identified for the failure to have an adequate procedure in effect to provide alternative shutdown capability (i.e., to achieve and maintain a safe shutdown condition) in the event of a main control room fire. This is a violation of Technical Specification 6.8.1.a and is in the licensee's corrective action program as DR N-99-0795. This item is associated with Licensee Event Report 50-338, 339/99-003-00 which has an event date of March 31, 1999. The issue was of very low safety significance due to the very low fire initiating event frequency associated with the condition.
Inspection Report# : 2000003*(pdf)*

Significance: G Jun 09, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
PRECONDITIONING THE LOW HEAD SAFETY INJECTION PUMPS PRIOR TO A SURVEILLANCE TEST
A non-cited violation of 10 CFR 50, Appendix B Criterion XI, "Test Control," was identified for preconditioning the low head safety injection pumps prior to a surveillance test. The violation is in the licensee's corrective action program as Plant Issue N-2000-1535. The safety significance was low because the amount of gas vented during the testing, although not measured or evaluated, was relatively small.
Inspection Report# : 2000008*(pdf)*

Significance: G Apr 28, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE PROCEDURE GUIDANCE FOR IMPLEMENTING ALTERNATE SHUTDOWN FOR A FIRE IN THE MAIN CONTROL ROOM
The licensee's procedure for implementation of alternative shutdown capability was inadequate. The alternative shutdown procedure for a fire in the main control room (MCR) directed the operator to monitor steam generator level using the indication provided on the alternative shutdown panel located in the emergency switchgear room. This indication was not protected and was not electrically isolated from the MCR. The protected indication was located on the fuel building monitoring panel. The fuel building indication was also specified in the procedure, but was only to be used if an indication could not be obtained from the alternative shutdown panel instrument. The licensee was tracking this issue in their corrective action program as item N-02-2218-001. A non-cited violation of Technical Specifications 6.8.1.a was identified.
Inspection Report# : 2000007*(pdf)*

Significance: G Apr 04, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
ON UNIT 1 NO OPERABLE EMERGENCY DIESEL GENERATOR DURING FUEL MOVES AND ON UNIT 2 A SERVICE WATER LOOP INOPERABLE FOR LONGER THAN ALLOWED BY TECHNICAL SPECIFICATIONS
A non-cited violation was identified for failure to have an operable emergency diesel generator (EDG) during Unit 1 fuel handling activities (TS 3.8.1.2.b), and to have a loop of service water unavailable for longer than allowed (TS 3.7.4.1) when Unit 2 was in Mode 1. This violation is in the licensee's corrective action program as PI N2-2000-002-00. The violations resulted from 1H EDG unknowingly being inoperable due to oil in the 1H EDG cylinder and the 1J EDG being removed for maintenance from March 22 until March 26, 2000. The issue was of very low safety significance because during the time frame both Unit 1 EDGs were inoperable, two independent offsite power supply circuits were operable and capable of supplying power to safety related equipment and the station blackout diesel was available to provide power if necessary.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: N/A Jul 07, 2001
Identified By: NRC
Item Type: FIN Finding
Supplemental Inspection Results for a Unit 2 White Reactor Coolant System Leakage Performance Indicator
In accordance with the Action Matrix in NRC Manual Chapter 0305, "Operating Reactor Assessment Program," a supplemental inspection was performed to assess the licensee's identification, root cause and extent of condition evaluation, and corrective actions associated with a Unit 2 White Reactor Coolant System (RCS) Leakage Performance Indicator (PI). The PI crossed into the White band for January 2001 due to the partial failure of the reactor coolant system C loop bypass valve packing. After the valve packing was replaced and the unit restarted, the PI returned to the Green band for February 2001. During this supplemental inspection, performed in accordance with inspection procedure 95001,"Inspection for One or Two White Inputs In a Strategic Performance Area," the inspectors determined that the problem was self-revealing and that the licensee's root cause evaluation was thorough and effectively identified the primary and contributing causes. The licensee determined that the failure was due to a lack of preventive maintenance and equipment aging. Due to no periodic program to replace the valve packing, the packing exceeded its operational life and failed after 18 years in service. The licensee's immediate actions after indicated RCS identified leakage exceeded the Technical Specifications limit were proper. A Notice of Unusual Event was declared and the unit was removed from service to replace the packing. The licensee's completed and proposed corrective actions, including

actions to prevent recurrence, adequately addressed the results of the root cause evaluation. Completed actions include replacing the packing of the similar Unit 2 valves on RCS loops A and B and placing the RCS system into the Maintenance Rule a(1) status. Proposed actions include replacing the packing on the Unit 1 loop bypass valves in the next refueling outage and developing a periodic packing replacement program for other similar RCS valves (168 per unit).
Inspection Report# : 2001007*(pdf)*

Significance: G Apr 27, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
INADEQUATE SURVEILLANCE PROCEDURE TO TEST AIR ACCUMULATORS FOR SAFEGUARD AREA VENTILATION DAMPERS
A non-cited violation was identified for inadequate surveillance testing procedures associated with the performance testing of the safeguards area exhaust dampers and air accumulators. The time duration specified in the procedures for determining air leakage from the system's accumulators was not sufficient for determining whether the exhaust dampers would remain open for 30 days following a design basis loss of coolant accident. This is a violation of Technical Specification 6.8.1.c and is in the licensee's corrective action program as PI N-2000-3043. After the exhaust dampers were tested with the revised surveillance procedures, they were determined to not meet the 30 day requirement. The issue was of very low safety significance since the auxiliary building central ventilation system (although not seismic class 1 nor class 1E powered) can serve as a backup to the safeguards exhaust ventilation system by manual realignment through the charcoal filters. In addition, the emergency core cooling pumps located in the safeguards building can operate in excess of 24 hours without ventilation cooling. This would allow sufficient time for the radioactive dose to decrease enough for plant personnel to install a temporary air supply or restore instrument air.
Inspection Report# : 2000003*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Significance: G Aug 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Violation of Security Plan Paragraph 2.2.3
A Non-Cited Violation of the North Anna [Physical Security Plant], Paragraph 2.2.3 (a), Revision 7, was identified by the NRC inspectors. While the risk is low in this case, the issue was identified as more than a minor finding because allowing individuals to penetrate the protected area perimeter without being detected could have a credible impact on safety and could be viewed as a precursor to a more significant event. Using the Physical Protection Significance Determination Process and identifying the finding as a vulnerability in Safeguards Systems or Plans, without an

intrusion, and with fewer than two similar findings in four quarters, the finding was determined to be within the licensee response band and a Green finding.
Inspection Report# : 2001009*(pdf)*

Significance: G Aug 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Violation of Security Plan Paragraph 4.2
A Non-Cited Violation of the North Anna (PSP), Paragraph 4.2., Revision 7, was identified by NRC inspectors. While the risk is low in this case, the issue was identified as more than a minor finding because allowing individuals to penetrate the protected area perimeter without being assessed could have a credible impact on safety and could be viewed as a precursor to a more significant event. Using the Physical Protection Significance Determination Process and identifying the finding as a vulnerability in Safeguards Systems or Plans, without an intrusion, and with fewer than two similar findings in four quarters, the finding was determined to be within the licensee response band and a Green finding.
Inspection Report# : 2001009*(pdf)*

Miscellaneous

Significance: N/A Sep 29, 2001
Identified By: NRC
Item Type: FIN Finding
Resolution Of Undersized Welds Improperly Performed
During the licensee's resolution of a previous violation associated with undersized welds, the licensee incorrectly applied Electric Power Research Institute guidelines to disposition undersized welds. As a result a proper engineering evaluation was not performed on two pipe supports in the Unit 2 Auxiliary Feedwater System. The finding is of very low safety significance because a subsequent engineering evaluation showed the supports would perform their function.
Inspection Report# : 2001003*(pdf)*

Significance: N/A Jul 07, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to Adhere to Unit 2 Reactor Coolant System Leak Rate Determination Procedure
Technical Specification 6.8.1.c requires procedures be implemented for surveillance and testing activities of safety-related equipment. Section 6.8 of Periodic Test procedure 2-PT-52.2A, "Reactor Coolant System Leak Rate (Computer Calculation)," Revision 21, requires a hand calculation when the Reactor Coolant System (RCS) identified leakage exceeds 9.00 gpm. On January 19, 2001, the licensee violated TS 6.8.1.c when the computer calculated RCS leak rate exceed the 2-PT-52.2A limit and no hand calculation was performed. This is in the licensee's corrective action program as Plant Issue N-2001-0122.
Inspection Report# : 2001007*(pdf)*

Significance: G May 11, 2001
Identified By: NRC
Item Type: FIN Finding
Problem Identication and Resolution Annual Inspection
The inspectors determined that the licensee was generally effective at identifying problems and initiating corrective action documents. A low threshold for individual problem identification was demonstrated. Overall, licensee self-assessment processes were multi-faceted and effective in identifying areas for improvement. Minor issues occasionally were not entered into the corrective action process. Issues were typically properly characterized, prioritized, and evaluated. Root cause evaluations were thorough. The licensee exhibited a strong safety-conscious work environment.

The inspectors identified an example involving a lack of a thorough review of an operating experience item. The licensee failed to identify that possible defective material used for security facilities had been utilized. Subsequent reviews resulted in a determination that the material was acceptable.
Inspection Report# : 2001006*(pdf)*

Significance: N/A Jun 09, 2000
Identified By: NRC
Item Type: FIN Finding
IDENTIFICATION AND RESOLUTION OF PROBLEMS
The licensee was adequately identifying and resolving problems; however, some negative findings were identified by the NRC. Issues were entered into the corrective action program and their evaluations were aggressive and appropriate corrective actions were identified. Issues were appropriately prioritized and categorized for evaluation based on risk and safety significance. Root cause evaluations and corrective actions were generally effective to prevent recurrence. Where issues recurred, the Plant Issue Review Team meetings were promptly identifying the repetitive nature in the corrective action program and assigning the appropriate level of root cause evaluation needed. One instance was found where the licensee was slow to respond to several operating experience items regarding a high head safety injection (HHSI) pump suction pipe gas accumulation issue. The findings of the licensee's audits and self-assessments were consistent with NRC findings. The inspectors determined that the licensee maintains a safety conscious work environment.
Inspection Report# : 2000008*(pdf)*

Last modified : December 02, 2002