

North Anna 1

Initiating Events

Mitigating Systems



Significance: 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: 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: N/A Apr 28, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ANALYZE NON-SAFETY CIRCUITS WHICH COULD PRODUCE TRANSIENTS DUE TO POTENTIAL FIRE INDUCED SPURIOUS OPERATION

The licensee's analyses for associated circuits was limited to the emergency power system and did not include associated non-safety circuits. The non-safety associated circuits could produce transients due to potential fire induced spurious operations that were not considered by the licensee in their Safe Shutdown Analysis. Although the licensee had not analyzed for associated non-safety circuits, there were no specific examples of associated non-safety circuits identified by the team. This issue is in the licensee's corrective action program as item N-02-98-2218-001. A non-cited violation of 10 CFR 50, Appendix R, Section III.G.2, was identified.

Inspection Report# : [2000007\(pdf\)](#)



Significance: 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\(pdf\)](#)

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Significance: 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\(pdf\)](#)**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\(pdf\)](#)

G

Significance: 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\(pdf\)](#)

G

Significance: 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\(pdf\)](#)

G

Significance: 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\(pdf\)](#)

Barrier Integrity

G**Significance:** 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

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

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: May 11, 2001

Identified By: NRC

Item Type: FIN Finding

Problem Identification 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\(pdf\)](#)

Last modified : March 29, 2002