Nine Mile Point 2
2Q/2008 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2008
Identified By: NRC
Item Type: FIN Finding
Untimely Corrective Action for IA System Corrosion Resulted in Reactor Feedwater Valve Malfunction
A self-revealing finding was identified on April 18, 2008, when NMPNS failed to take appropriate corrective actions to address corrosion products in the instrument air (IA) system in a timely manner, which led to an accumulation of water in the Unit 2 IA system. As a result, water intrusion into the air operator for the 'B' reactor feedwater pump recirculation valve caused the valve to open during plant power ascension, causing a reduction in feedwater flow to the reactor and thereby challenging plant stability. As immediate corrective action, operators secured power ascension and isolated the recirculation valve.

The finding was greater than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was evaluated in accordance with IMC 0609, Attachment 4, and determined to be of very low safety significance per the SDP Phase one determination because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and it did not screen as potentially risk significant due to external events. The finding had a cross cutting aspect in the area of problem identification and resolution because NMPNS did not take appropriate corrective actions to address corrosion products in the IA system in a timely manner (P.1.d per IMC 0305).

Inspection Report# : 2008003 *(pdf)*

Significance: G Sep 28, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate CCP system venting procedure resulted in loss of main CCP pumps
A self-revealing Green NCV of Unit 2 Technical Specification (TS) 5.4, “Procedures,” occurred when an inadequate procedure was used to vent the reactor building closed loop cooling water (CCP) system which resulted in tripping both CCP pumps on low suction pressure. NMPNS determined that the main CCP pumps tripped due to introduction of air into the CCP system when restoring the 1A spent fuel pool cooling (SFC) heat exchanger to its normal alignment. The procedure was not maintained to ensure proper CCP system venting when the 1A SFC heat exchanger supply water was shifted to CCP from service water. Operators restored one main CCP pump to service to stabilize conditions while the procedure was modified to recover normal CCP system configuration. The issue was entered into the corrective action program (CAP) as condition report (CR) NM 2007-4299. Corrective actions were to develop a procedure change to vent the SFC heat exchangers when shifting to CCP from service water, and to further evaluate the fill and vent requirements for the closed loop cooling systems.

The finding is greater than minor because it is associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affects the cornerstone’s objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. The inspectors determined the finding to be of very low safety significance based on an SDP Phase 2 analysis using the pre solved table for the NMPNS Unit 2 Site Specific Risk-Informed Inspection Notebook. This finding has a cross-cutting aspect in the area of human performance because NMPNS failed to maintain procedure accuracy when revising the CCP operating procedure (H.2.c per IMC 0305.) (Section 4OA3)

Inspection Report# : 2007004 *(pdf)*

Mitigating Systems

Significance: G Jun 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Appropriately Evaluate the Effect of Accelerated Aging of J-10 Relays
A self-revealing non-cited violation (NCV) of 10 CRF 50, Appendix B, Criterion XVI, "Corrective Action," was identified on March 22, 2008, when the Unit 2 Division I emergency diesel generator (EDG) service water (SW) return isolation valve failed to fully open following a start of the Division I EDG, thus challenging the EDG's ability to perform its safety function. The motor operated valve (MOV) malfunction was due to age-related failure of the J-10 relay in the MOV control circuit. The susceptibility of J-10 relays to age-related failure had been previously identified; however, NMPNS did not take action to establish a maintenance strategy to replace these relays prior to failure. As corrective action, the EDG was declared inoperable, the J-10 relay was replaced, and an extent of condition review was initiated.

The finding was greater than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609, Attachment 4, and determined to be of very low safety significance per the SDP Phase one determination because the finding was not a design or qualification deficiency, did not represent a loss of a system/train safety function, and did not screen as potentially risk significant due to external events.

Inspection Report# : 2008003 *(pdf)*

Significance: G Jun 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Properly Control Operations Staff Overtime
An NRC-identified non-cited violation (NCV) of Unit 1 Technical Specification (TS) 6.2.2 and Unit 2 TS 5.2.2, "Unit Staff," was identified for not properly implementing and maintaining procedures for controlling plant staff work hours of personnel performing safety-related activities. Specifically, over 400 overtime deviations were approved between July 2007 and April 2008 for Operations personnel to work greater than procedurally established work hour limits for routine outage support activities during outages and other reasons not permitted by TS. Corrective actions were being developed to increase qualified operator levels.

The finding was greater than minor because, if left uncorrected, it would become a more significant safety concern. Specifically, the excessive work hours would increase the likelihood of human errors during plant activities and response to plant events. The finding has been reviewed by NRC management in accordance with IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Although the increased likelihood of human error would adversely affect the station’s defense-in-depth, the violation was determined to be of very low significance because no significant events or human performance issues were directly linked to personnel fatigue as a result of the hours worked. The issue had a cross-cutting aspect in the area of human performance because the licensee did not use conservative assumptions in decision making, in that, the consequences of the high number of overtime deviations were not fully considered and the possible unintended consequences evaluated. (H.1.b per IMC 0305).

Inspection Report# : 2008003 *(pdf)*

Significance: G Jun 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Repetitive Improper Authorization and Evaluation of Overtime Deviations
A non-cited violation (NCV) of Unit 1 Technical Specification (TS) 6.2.2 and Unit 2 TS 5.2.2, "Unit Staff," was identified by the inspectors for a recurring trend of operations personnel being required to stand 24 hour shifts in order to ensure adequate shift coverage. There were eight occurrences between May 2007 and May 2008. Several of these overtime deviations were not properly authorized or documented in accordance with station procedures as required by TS. Corrective actions were being developed to increase qualified operator levels.

The finding was greater than minor because, if left uncorrected, it would become a more significant safety concern. Specifically, the excessive work hours would increase the likelihood of human errors during plant activities and response to plant events. The finding has been reviewed by NRC management in accordance with IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Although the increased likelihood of human error would adversely affect the station's defense-in-depth, the violation was determined to be of very low significance because no significant events or human performance issues were directly linked to personnel fatigue as a result of the hours worked. The issue has a cross-cutting aspect in the area of problem identification and resolution because NMPNS failed to periodically trend and assess information from the corrective action program and other assessments in the aggregate to identify programmatic and common cause problems
Inspection Report# : 2008003 *(pdf)*

Significance: G Mar 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Perform Procedure Caused Inadvertent Isolation of RCIC Steam Supply
A self-revealing, non-cited violation (NCV) of Technical Specification (TS) 5.4, "Procedures," was identified on January 14, 2008, when technicians improperly performed a surveillance procedure which resulted in isolation of the Unit 2 RCIC system. Specifically, while performing a test of the area temperature instruments that provide high temperature isolation signals for the main steam system, technicians erroneously disconnected an electrical lead associated with the RCIC leak detection system. This resulted in an automatic isolation of the RCIC system steam supply and the unavailability of RCIC for approximately four hours. Operators immediately recognized the error and halted the surveillance procedure. Technicians reconnected the lead and operators restored RCIC to a normal standby lineup.

The finding was greater than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," based on a Phase 3 analysis. The Region I senior reactor analyst (SRA) used the Nine Mile Point Unit 2 Standardized Plant Analysis Risk (SPAR) model and the actual out-of-service time to determine the risk significance. This finding had a cross-cutting aspect in the area of human performance because of the ineffective use of human error prevention techniques (H.4.a per IMC 0305). (Section 1R22)

Inspection Report# : 2008002 *(pdf)*

Significance: G Dec 29, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate RCIC Room Temperature Channel Checks
An NRC-identified NCV of Unit 2 TS 3.3.6.1, "Primary Containment Isolation Instrumentation," occurred when NMPNS failed to perform Technical Specification (TS) required channel checks of the reactor core isolation cooling (RCIC) room area temperature instruments. This resulted in a failure to detect that the Division 1 instrument was malfunctioning. Immediate corrective actions were to replace the defective temperature instrument and to perform instrument cross-checks as a part of channel checks.

The finding was greater than minor because it resulted in an instrument malfunction not being promptly identified. The finding affected the equipment performance attribute of the Mitigating Systems cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The impact of the 2ICS*TE16A malfunction was that it reduced the amount of time that would be available for operators to bypass the RCIC room area high temperature isolation to maintain RCIC operability during a station blackout event. The finding was evaluated in accordance with IMC 0609, Appendix A, and determined to be of very low safety significance (Green) per the SDP Phase one determination because the finding was not a design or qualification deficiency, did not represent a loss of system safety function or safety function of a single train, and did not screen as potentially risk significant due to external events. This finding had a cross-cutting aspect in the area of problem identification and resolution because NMPNS did not identify the inadequate channel checks in a timely

manner (P.1.a per IMC 0305). (Section 1R15)

Inspection Report# : 2007005 *(pdf)*

Significance: G Dec 29, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Loss of Shutdown Cooling due to Inadequate Maintenance Planning
A self-revealing NCV of Unit 2 TS 5.4, "Procedures," occurred when NMPNS failed to adequately implement procedure GAP-PSH-01, “Work Control,” while Unit 2 was in the refueling mode. Specifically, an unanticipated loss of shut down cooling (SDC) occurred because operators had not adequately assessed the operational impact of emergent maintenance to test a degraded reactor protection system (RPS) cable. As a result, establishing the electrical isolation for this maintenance initiated a Division 2 primary containment isolation system (PCIS) Group 5 isolation, which caused the associated isolation valve in the common SDC suction line to close. Operators promptly recognized the cause and restored shutdown cooling to service.

The finding was greater than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone's objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process." The finding was determined to be of very low safety significance (Green) because, although the finding resulted in there being less than one loop of RHR in SDC operation, it did not increase the likelihood of a loss of RCS inventory, degrade the ability to terminate a leak path or add RCS inventory if needed, or degrade the ability to recover decay heat removal. This finding had a cross-cutting aspect in the area of human performance because NMPNS failed to adequately assess the impact of the emergent work activity on plant operations (H.3.b per IMC 0305). (Section 1R20)

Inspection Report# : 2007005 *(pdf)*

Significance: G Sep 28, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Installation of a Design Change Resulted in Inadvertent Discharge of the CO2 Suppression System
A self-revealing Green NCV of Unit 2 TS 5.4, “Procedures,” occurred when an inadequate procedure was used for installation of a fire protection modification. Specifically, the installation procedure enabled plant technicians to establish an electrical circuit that initiated an unanticipated CO2 suppression system discharge into the Division 3 switchgear room. An Alert was declared in accordance with NMPNS’ emergency plan based on the presence of a toxic gas in an area required for safe shutdown. Operators took immediate corrective actions and isolated the CO2 supply to the suppression system using manually operated valves, and implemented compensatory measures for the suppression system isolation. NMPNS planned to develop additional corrective actions after completion of the root cause analysis of this event under CR NM-2007-5538.

The finding is greater than minor because it is associated with the external factors attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone’s objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the finding to be of very low safety significance in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance and reliability of the suppression system would be minimally impacted by the inspection finding; specifically, action to manually unisolate the system would be required before the system could be used. This finding has a cross-cutting aspect in the area of human performance because NMPNS failed to develop an accurate work package for implementation of the fire protection system design change (H.2.c per IMC 0305.) (Section 4OA3)

Inspection Report# : 2007004 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : August 29, 2008