Nine Mile Point 2
1Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Dec 30, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Untimely Corrective Action for Degraded Service Water Pumps
An NRC-identified Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified on November 8, 2008 in that Nine Mile Point Nuclear Station (NMPNS) did not take prompt action to verify that service water (SW) pump performance had not been adversely affected following the inadvertent introduction of a cleaning hose into the pump suction lines. This resulted in delayed identification of two inoperable Unit 2 SW pumps due to fouling of the impellers by foreign material that had been drawn into the pumps on November 4, 2008. As immediate corrective action, the affected pumps were disassembled and the pieces of cleaning hose were removed.

The finding was more than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone and affected the associated 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 determined to be of very low safety significance in accordance with Inspection Manual Chapter (IMC) 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," based on a Phase 2 analysis using the Nine Mile Point Unit 2 plant-specific Phase 2 pre-solved worksheets. The finding had a cross-cutting aspect in the area of human performance because NMPNS did not use conservative assumptions in decision making, in that they did not timely verify the assumption that the cleaning hose was fully retrieved and had not impacted operability of the service water pumps.
Inspection Report# : 2008005 *(pdf)*

Significance: G Sep 29, 2008
Identified By: NRC
Item Type: FIN Finding
Inadequate Maintenance Practices Result in a Plant Transient
A self-revealing finding was identified on July 14, 2008, when inadequate maintenance practices, during replacement and troubleshooting of a Unit 2 radioactive waste sump pump, caused an electrical transient that resulted in the loss of numerous plant components and required a power reduction. The inadequate maintenance practices included failure to perform post-maintenance testing and continuation of troubleshooting despite having obtained results that were not consistent with the troubleshooting plan. This issue was entered into NMPNS’s corrective action program for evaluation.

The finding was greater than minor because it affected the human performance attribute of the Initiating Events 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 and determined to be of very low safety significance because the finding did not contribute to both the likelihood of a rector trip and the likelihood that mitigation equipment or functions would not be available, and did not screen as potentially risk significant due to external events. The finding had a cross-cutting aspect in the area of human performance because NMPNS did not appropriately plan the pump troubleshooting activity by incorporating abort criteria.
Inspection Report# : 2008004 *(pdf)*

Significance: G Jul 31, 2008

Identified By: NRC
Item Type: FIN Finding
Failure to perform a technical evaluation or restore a nonconformance to the original design requirement
A self revealing Green finding was identified because Constellation failed to either perform a technical evaluation or restore a nonconforming condition to the original design requirement which resulted in a failure of the Unit 2 instrument air piping on March 26, 2008. The nonconforming condition was unannealed red brass piping which was installed in the Unit 2 instrument air system. Subsequent to the piping failure, the licensee performed corrective actions which included replacing all unannealed red brass piping that is not protected by an excess flow check valve and began closely monitoring for water in the instrument air system. Additionally, the licensee plans to replace the instrument air dryers and replace the remaining unannealed red brass piping in the instrument air system.

The finding was greater than minor because it is associated with the design control attribute of the initiating events cornerstone and the associated 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 in that a loss of instrument air could cause a plant scram with complications. 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 to determine the risk significance.
Inspection Report# : 2008007 *(pdf)*

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)*

Mitigating Systems

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Maintenance Instructions Result in Residual Heat Removal System Voiding
A self-revealing non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified when inadequate instructions for maintenance that had previously been performed on the Unit 2 residual heat removal (RHR) system were found to have allowed the accumulation of voids in the 'C' RHR

pump suction line, the combined volume of which could have potentially affected the operability of the pump. As immediate corrective action, the 'C' RHR pump suction line was filled and vented. After the void volume had been sufficiently reduced to allow pump operation, the 'C' RHR pump quarterly surveillance was performed to sweep out the remaining voids. This issue was entered into the corrective action program (CAP) as condition report (CR) 2009-457.

The finding was more than minor because it was similar to example 3.k in Appendix E of Inspection Manual Chapter (IMC) 0612, in that there was a reasonable doubt on the operability of the 'C' RHR system because the as-found condition exceeded the industry standard limit for operability. The finding was associated with the procedure quality 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 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. This finding had a cross-cutting aspect in the area of problem identification and resolution because the susceptibility of the RHR pump discharge lines to voiding was identified in 1999 and reflected in plant procedures, but this internal operating experience was not incorporated into the 2008 maintenance procedure (P.2.b per IMC 0305). (Section 1R13)

Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Properly Perform Standby Liquid Control System Surveillance
A self-revealing non-cited violation (NCV) of Technical Specification (TS) 5.4, "Procedures," was identified on January 30, 2009, when operators did not align the Unit 2 Division 2 Standby Liquid Control (SLC) system in accordance with the surveillance procedure and establish a pump discharge flow path. As a result, following pump start, the pump discharge relief valve lifted due to high system pressure and the valve subsequently required replacement due to excessive seat leakage. As immediate corrective action for this event, the SLC pump was secured and the system was returned to its normal standby alignment to support further testing. The issue was entered into the corrective action program (CAP) as condition report (CR) 2009-548.

The finding was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance 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. This finding had a cross-cutting aspect in the area of human performance because the operators did not effectively use human error prevention techniques such as pre-job briefing, self and peer checking, and proper documentation of activities (H.4.a per IMC 0305). (Section 1R22)

Inspection Report# : 2009002 *(pdf)*

Significance: G Oct 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control Regarding Adequacy of Safety Bus Allowable Degraded Voltage Relay Reset Setpoint and Impact on Offsite Power Supply
The team identified a finding of very low safety significance (Green) involving a non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, in that Constellation did not verify the adequacy of design with respect to ensuring the availability of offsite power during postulated events such as a loss-of-coolant accident (LOCA) or a unit trip. Specifically, Constellation did not perform a calculation or analyses to demonstrate that the allowable degraded voltage relay reset setpoint was adequate with respect to preventing spurious separation of offsite power for postulated events. Constellation entered the issue into their corrective action program for further review. They initiated

administrative controls during the inspection period to prevent aligning a safety bus to the alternate source pending resolution of the issue. They also plan to review and revise, as appropriate, the allowable relay reset values in surveillance procedures to provide more margin.

The finding is more than minor because it was associated with the design control 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 team determined the finding was of very low safety significance (Green) because it was a design deficiency confirmed not to result in the loss of operability of the normal power source for the onsite emergency power distribution system. The issue had a cross-cutting aspect in the area of Problem Identification and Resolution – Corrective Action, because Constellation had not thoroughly evaluated similar non-conservative issues with the associated calculation raised in a December 2007 vendor letter and again in a subsequent condition report.
Inspection Report# : 2008008 *(pdf)*

Significance: G Sep 29, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Incorrect Risk Assessment for RCIC Unavailability
An NRC-identified non-cited violation (NCV) of 10 CFR 50.65(a)(4) was identified for inaccurate risk assessments completed for August 5 and 6, 2008. Specifically, the unavailable reactor core isolation cooling (RCIC) system was not properly incorporated into the risk assessment. The cause was determined to be that an error had been made while entering a change to the risk monitor computer software, which resulted in RCIC incorrectly being assigned a zero risk importance. As corrective actions, the modeling of RCIC was corrected and a verification of all mapping codes used in the risk monitor was performed.

The finding was greater than minor because the risk assessment for RCIC system maintenance was inadequate due to inaccurate information that was provided to the risk assessment tool. As a result, the overall elevated plant risk, when correctly assessed, put the plant into a higher licensee-established risk category. The finding was evaluated in accordance with IMC 0609, Appendix K, and determined to be of very low safety significance because the incremental core damage probability deficit (ICDPD) was less than 1E-6. The finding had a cross-cutting aspect in the area of human performance because NMPNS did not appropriately plan work activities by incorporating valid risk insights.

Inspection Report# : 2008004 *(pdf)*

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)*

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

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