Nine Mile Point 2
1Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2012
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Evaluation and Implementation of Design Modifications to the Turbine Gland Seal Supply System
A self-revealing Green finding (FIN) was identified for NMPNS' failure to properly evaluate and implement plant design changes on the Unit 2 turbine gland seal steam supply system. Specifically, incorrect implementation of ECP-11-000977, "Turbine Gland Seal and Exhaust System Instrument Changes," in May 2012 caused a reactor scram on July 13, 2012, following a return to full power operations from refueling outage N2RF13. NMPNS immediate corrective actions (CAs) included implementing ECP-12-000629 to revise the initiation setpoints for the emergency seal steam (ESS) system to accommodate higher gland seal operating pressures and properly gagging 2TME-RV135. NMPNS entered this issue into its corrective action program as CR 2012-006615.

This finding is more than minor because it is similar to examples 5.a, 5.b and 5.c of IMC 0612 Appendix E, "Examples of Minor Issues." In each example, plant modifications were installed and the system was returned to service without identifying and correcting a problem with the design change. This finding also adversely affects the design control attribute of the Initiating Events Cornerstone and affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated the finding using Attachment 0609.04, "Initial Characterization of Findings," in Inspection Manual Chapter (IMC) 0609, "Significance Determination Process." The finding was determined to be of low safety significance (Green) because while it did cause a reactor scram, it did not result in the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The finding has a cross-cutting aspect in the area of human performance in that NMPNS did not ensure that personnel and procedures were available and adequate to assure nuclear safety. Specifically, the procedures that were necessary to implement ECP-11-000977, by gagging relief valve 2TME-RV135, were not adequate to ensure proper installation of the gagging device.
Inspection Report# : 2012004 *(pdf)*

Significance: G Jun 30, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Corrective Action for Instrument Fill and Vent Activities
A self-revealing NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for NMPNS' failure to effectively implement corrective actions. Specifically, NMPNS's corrective actions from a differential fill and vent evolution which caused a reactor scram in January 2010 were ineffective in preventing an inadvertent start of the Division I EDG on a Level 1 ECCS initiation (reactor pressure vessel low-low-low level)

signal on April 26, 2012, during a similar fill and vent evolution. NMPNS entered this issue into its corrective action program as CR-2012-003778.

The finding is more than minor because it adversely impacted the human performance attribute of the Initiating Events Cornerstone 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 significance (Green) because of the availability of safety systems and procedures pertaining to core heat removal, inventory control, electrical power, and secondary containment. The finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because Nine Mile Point Nuclear Station did not take appropriate corrective actions to address safety issues commensurate with their safety significance and complexity. Specifically, the corrective actions taken as a result of the January 7, 2010 event were ineffective in preventing the April 26, 2012 event. [P.1(d)] (Section 1R19)

Inspection Report# : 2012003 *(pdf)*

Significance: G Sep 30, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Actions to Prevent Vibration Induced Failure on a Socket Weld for a Vent Line on the 'A' FWP Minimum Flow Line
A Green self revealing finding was identified for inadequate implementation of corrective actions regarding vibration induced failures of socket welds. This finding resulted in an August 11, 2011, Nine Mile Unit 2 scram due to a failed socket weld on the vent line for the 'A' feedwater pump (FWP) minimum flow line. NMPNS did not properly consider the impact of high vibration levels on a vent line attached to the 'A' FWP mini-flow recirculation line. NMPNS corrective actions included upgrading the socket weld to the requirements outlined in industry operating experience (OE).

The inspectors determined that the finding was of very low safety significance (Green) through performance of a Phase 1 SDP in accordance with IMC 0609.04, Table 4a, "Characterization Worksheet for Initiating Events, Mitigating Systems (MS) and Barrier Integrity Cornerstones." Specifically, the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. This finding has a cross-cutting aspect in the area of problem identification and resolution in that NMPNS did not implement and institutionalize OE through changes to station processes, procedures, equipment and training programs. Specifically in 1998 and again in 2010, NMPNS did not institutionalize external and internal OE to reduce the probability of a socket weld failure.

Inspection Report# : 2011004 *(pdf)*

Mitigating Systems

Significance: G Mar 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Maintenance Rule Monitoring of the Leak Detection System Performance
The inspectors identified an non-cited violation of Title 10 of the Code of Federal Regulations 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," under section (a)(1) of the rule for failing

to properly monitor the leak detection system (LDS) to assure that the Riley temperature modules at Unit 2 were capable of fulfilling their intended functions. Specifically, CENG did not correctly account for maintenance-related functional failures and plant level events during a 2-year assessment period resulting in a failure to transition the LDS into an (a)(1) status at Unit 2. CENG entered this issue into their corrective action program as condition report (CR)-2013-002015 and assessed the LDS for transition into (a)(1) status.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failures of the Riley temperature modules caused safety system isolations to occur which impacted the availability of these systems. This finding was evaluated in accordance with Inspection Manual Chapter 0609.04, “Initial Characterization of Findings,” and Exhibit 1 of IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power,” issued June 19, 2012. The inspectors determined this finding was of very low safety significance (Green) because this finding did not represent an actual loss of system safety function, did not represent an actual loss of function of at least a single train for greater than its technical specification allowed outage time, and did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety significant in accordance with CENG’s maintenance rule program for greater than 24 hours. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because CENG failed to thoroughly evaluate the failures of the Riley temperature modules to identify concerns with reliability in accordance with the maintenance rule (a)(1) [P.1(c)].

Inspection Report# : 2013002 *(pdf)*

Significance: G Mar 30, 2010
Identified By: NRC
Item Type: FIN Finding
Inadequate Maintenance Procedure Results in Loss of Loads for Non-Vital UPS
A self-revealing finding of very low safety significance was identified for inadequate coordination during concurrent execution of a maintenance procedure and an operating procedure, which resulted in a loss of power to the loads supplied by Unit 2 uninterruptible power supply (UPS) 2VBB-UPS1A. The loss of operational capabilities, and alarm and display functions, complicated normal plant operations and impacted an "anticipated transient without scram" (ATWS) mitigation strategy. As immediate corrective action, maintenance on UPS1A was stopped pending causal evaluation of the event. The issue was entered into the corrective action program (CAP) as condition report (CR) 2009-8928.

The finding was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Additionally, the finding was significant because it would have impacted Nine Mile Point Nuclear Station's (NMPNS's) ability to execute emergency operating procedure N2-EOP-C5, "Failure to Scram," in that the reactor manual control system was not available for use in accordance with N2-EOP-6, Attachment 14, "Alternate Control Rod Insertions." The finding was of very low safety significance because it 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. The finding had a cross-cutting aspect in the area of human performance, work control, because NMPNS did not address the impact of changes to the work activity on the plant and human performance.

Inspection Report# : 2010002 *(pdf)*

Barrier Integrity

Significance: G Jun 30, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Loss of Spent Fuel Pool Cooling due to Inadequate Procedure
A self-revealing NCV of TS 5.4.1, "Procedures," was identified for NMPNS' failure to provide an adequate procedure for spent fuel pool (SFP) cooling system restoration. Specifically, procedure N2-PM-082, "RPV Floodup/Draindown," Revision 00600, did not contain adequate guidance for restoring the spent fuel cooling (SFC) system from single to two skimmer surge tank operation during a medium risk configuration for decay heat removal. As a result, on May 17, 2012 SFP cooling was lost when the 'A' SFP pump tripped on low suction pressure. NMPNS restored SFP cooling within 30 minutes and entered this issue into its corrective action program as CR 2012-004850.

This finding is more than minor because it affects the Barrier Integrity Cornerstone attribute of maintaining the functionality of the SFC system to provide reasonable assurance that physical design barriers protect the public from radiological releases caused by accidents or events. The finding was determined to be of very low safety significance (Green), due to it not being associated with a loss of cooling to the SFP that would have precluded restoration prior to boiling, a fuel handling error, or loss of SFP inventory. Specifically, control room operators had a contingency plan in place to restore the loss of SFC if it were to occur.

This finding has a cross-cutting aspect in the area of human performance, resources, because NMPNS did not ensure that procedures were adequate to ensure nuclear safety. Specifically, procedure N2-PM-082 did not provide adequate instructions to establish a valve lineup that would ensure that the SFP cooling pump had sufficient suction pressure. [H.2(c)] (Section 1R13)

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 30, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Special Operating Procedure for Loss of Spent Fuel Pool Cooling
A self-revealing Green NCV of TS 5.4.1, "Procedures," was identified for NMPNS' failure to provide an adequate special operating procedure for loss of SFP cooling. On May 25, 2012, following a loss of SFP cooling, the inadequate procedural guidance delayed restoration of SFP cooling for over two hours during which SFP temperature rose three degrees. NMPNS entered this issue into its corrective action program as CR 2012-004850 to track resolution of this issue.

The finding is more than minor because it was associated with the procedure quality attribute of the Barrier Integrity cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radiological release by maintaining functionality of the SFP cooling system. The finding was determined to be of very low safety significance (Green), due to it not being associated with a loss of cooling to the SFP that would have precluded restoration prior to boiling, a fuel handling error, or loss of SFP inventory.

This finding has a cross-cutting aspect in the area of human performance, resources, because NMPNS did not ensure that procedures were adequate to ensure nuclear safety. Specifically, the special operating procedure for loss of SFP cooling did not contain adequate guidance either for restoration of a two skimmer surge tank lineup or for starting a SFP cooling pump on a single surge tank. [H.2(c)] (Section 4OA3.1)

Inspection Report# : 2012003 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Sep 30, 2010
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Maintain Radiation Exposure ALARA During RHR System Modification
A self-revealing finding of very low safety significance was identified due to Nine Mile Point Nuclear Station (NMPNS) having unplanned, unintended occupational collective dose resulting from deficiencies in "as low as is reasonably achievable" (ALARA) planning and work control while performing the removal of steam condensing mode piping and components associated with the Unit 2 residual heat removal (RHR) system. Specifically, NMPNS failed to properly plan and coordinate outage work, and failed to perform welding activities correctly. This resulted in expansion of the collective exposure for this work from 8.557 person-rem to 17.968 person-rem. NMPNS entered this issue into their corrective action program (CAP) as condition report (CR) 2010-8443.

The finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Additionally, the finding was similar to example 6.i in Appendix E of Inspection Manual Chapter (IMC) 0612, in that it resulted in collective exposure of greater than 5 person-rem and exceeded the outage goal by greater than 50 percent. The finding was evaluated in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," and was determined to be of very low safety significance because NMPNS's current three year rolling average collective dose is 144.781 person-rem, less than 240 person-rem per unit. The finding had a cross-cutting aspect in the area of human performance, work control, in that the outage plan did not adequately incorporate actions to address the impact of work on different job activities.
Inspection Report# : 2010004 *(pdf)*

Significance: G Sep 30, 2010
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Maintain Radiation Exposure ALARA During Refueling Floor Activities
A self-revealing finding of very low safety significance was identified due to Nine Mile Point Nuclear Station (NMPNS) having unplanned, unintended occupational collective dose resulting from deficiencies in "as low as is reasonably achievable" (ALARA) planning and work control while performing refueling floor activities at Unit 2. Specifically, the failure to have cleaned up a crud burst that had occurred late in the previous refueling outage, th

decision to flood up the refueling cavity while refueling water activity remained four times higher than planned, incorrect calculations during reactor vessel (RV) head stud tensioning that resulted in having to remove the RV head insulation package and re-tension the RV head, and the inability to control work crew size on the refueling floor, resulted in expansion of the collective exposure for this work from 19.810 person-rem to 38.222 person-rem. NMPNS entered this issue into their corrective action program (CAP) as condition report (CR) 2010-8444.

The finding was more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Additionally, the finding was similar to example 6.i in Appendix E of Inspection Manual Chapter (IMC) 0612, in that it resulted in collective exposure of greater than 5 person-rem and exceeded the outage goal by greater than 50 percent. The finding was evaluated in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," and was determined to be of very low safety significance because NMPNS's current three year rolling average collective dose is 144.781 person-rem, less than 240 person-rem per unit. The finding had a cross-cutting aspect in the area of human performance, work control, in that the job site conditions which impacted human performance were not adequately incorporated into the outage plan.
Inspection Report# : 2010004 *(pdf)*

Public Radiation Safety

Significance: G Sep 30, 2012
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Maintain Radiation Exposure ALARA During Refueling Activities
A self-revealing Green finding (FIN) was identified due to NMPNS having unplanned, unintended occupational collective dose resulting from deficiencies in As Low As Reasonably Achievable (ALARA) planning and work control while performing refueling activities at Unit 2. Specifically, inadequate work planning and control of refueling activities resulted in unplanned, unintended collective exposure that was greater than 50 percent above the intended collective exposure, and greater than five person-rem due to conditions that were reasonably within NMPNS's ability to foresee and correct. These factors resulted in the collective exposure for refueling activities increasing from the original estimate of 31 person-rem to an actual dose of 56 person-rem. NMPNS entered this issue into its corrective action program as CR 2012-005939.

This finding is more than minor because it was associated with the program and process attribute of the Occupational Radiation Safety cornerstone, and affected the cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine reactor operation. This performance deficiency is similar to example 6.i of IMC 0612, Appendix E "Examples of Minor Issues" in that the actual collective dose exceeded 5 person-rem and exceeded the planned, intended dose by more than 50 percent. The inspectors evaluated the finding using Attachment

0609.04, “Initial Characterization of Findings,” of Inspection Manual Chapter (IMC) 0609, “Significance Determination Process.” The finding was determined to be of very low safety significance (Green) because NMPNS's current three year rolling average collective dose (143 person-rem/reactor year for 2009 to 2011) is less than the criterion of 240 person-rem per boiling water reactor unit. The finding has a cross-cutting aspect in the area of human performance, work control, in that the job site conditions which impacted human performance were not adequately incorporated into the outage plan. Specifically, the ALARA planning and work controls for refueling activities did not avert a significant unplanned and unintended collective occupational dose.
Inspection Report# : 2012004 *(pdf)*

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Apr 03, 2012
Identified By: NRC
Item Type: VIO Violation
CENG failed to provide complete and accurate information about the transfer of control of the licenses
Based on the information developed during an NRC investigation (Office of Investigations Report No. 1-2010-037) and the information that you subsequently provided during the conference, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it were discussed with you, and described in our April 3, 2012 letter (ADAMS Accession No. ML12089A097). It is our conclusion that CENG failed to provide complete and accurate information about the transfer of control of the licenses in accordance with paragraph 50.9(a) of Title 10 of the Code of Federal Regulations (10 CFR) when it amended the Operating Agreement but did not inform the NRC.
Inspection Report# : 2012008 *(pdf)*

Last modified : June 04, 2013