Nine Mile Point 2
4Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Aug 23, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Correct a Condition Adverse To Quality Associated With HPCS Medium Voltage Power Supply Cables
The inspectors identified an NCV of 10 CFR 50, Appendix B Criterion XVI, "Corrective Actions," because between November 5, 2012, and July 22, 2013, NMPNS did not promptly identify and correct a failed automatic de-watering system for the buried high pressure core spray (HPCS) medium voltage power supply cable duct bank. As a result, on July 22, 2013, NMPNS unexpectedly discovered significant water level in the two manholes that contained the buried HPCS cable duct bank. NMPNS subsequently determined that multiple level switches for the de-watering system had failed. In response, NMPNS pumped down the affected manholes, replaced the failed level switches and initiated weekly manual
3
Enclosure
pump downs of the manholes until final corrective actions could be completed. NMPNS entered this performance deficiency into the NMPNS CAP under CR-2013-006992.
The inspectors determined that this performance deficiency was more than minor because if left uncorrected the failed automatic dewatering system would have become a more significant safety concern. Specifically, with no preventative maintenance (PM) task to inspect and test the dewatering system and no work order (WO) scheduled to investigate the cause of the MH-1 hi-hi level alarm, the inspectors determined that, based on NMPNS' previous experience of rising level in this manhole and wetting of these cables, it was not likely that NMPNS would identify the failed de-watering system before the HPCS power supply cables were wetted. Wetted cables become a more significant concern because, in accordance with industry and NRC operating experience, the long term reliability of medium voltage cables is negatively affected when wetted. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, the inspectors determined that the finding was of very low safety significance (Green), because the finding was not a design or qualification deficiency, did not represent a loss of safety system function, and did not screen as potentially risk significant due to external initiating events.
The inspectors determined that this finding had a cross-cutting aspect in the area of human performance, resources, because NMPNS did not maintain long term plant safety by maintenance of design margins, minimization of long-standing equipment issues, minimizing PM deferrals, and ensuring maintenance and engineering backlogs which are low enough to support safety. Specifically, an NMPNS planner changed the scope of a PM task to eliminate inspecting MH-1 and MH-3 cable ducts every six months, and as a result, PM activities were not performed in November 2012 and May 2013. This error prevented NMPNS from identifying the condition adverse to quality associated with the HPCS
Inspection Report# : 2013007 *(pdf)*

Mitigating Systems

Significance: G Jun 30, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Containment Isolation System Surveillance Procedure Resulting in Isolation of the Reactor Coolant Isolation Cooling Isolation
A self-revealing non-cited violation of Technical Specification 5.4.1, "Procedures," was identified at Unit 2 when a Constellation Energy Nuclear Group (CENG) instrumentation and control (I&C) technician did not properly implement procedure N2-ISP-LDS-Q010, "Reactor Building General Area Temperature Instrument Channel Functional Test," Revision 00102. As a result, a residual heat removal (RHR)/reactor core isolation cooling (RCIC) isolation bypass switch was inadvertently left in the NORMAL position during surveillance testing resulting in an unplanned RCIC isolation. CENG entered this issue into their corrective action program as condition report CR-2013-002461. Other corrective actions included performing a human performance stand down that reinforced use of human performance tools and the need to identify and mark critical steps during pre-job briefs, retraining the I&C technicians involved in the event on proper use of human performance error prevention techniques, and improving bypass switch verification steps for procedure N2-ISP-LDS-Q010 and other similar lead detection system surveillances procedures.

This finding is more than minor because it is associated with the human 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 (i.e., core damage). Specifically, the inadvertent isolation rendered the RCIC system inoperable and unable to perform its function for approximately 6 hours. Additionally, this finding is similar to example 4.b of Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor issues," and is more than minor due to the procedural error leading to a plant transient, i.e. an unplanned RCIC isolation. This finding was evaluated in accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012. Unit 2 is a boiling-water reactor (BWR)-5, and as a result, RCIC is treated as having a separate high-pressure injection safety function. A detailed analysis was conducted using SAPHIRE version 8.0.8.0 and Unit 2 SPAR model 8.17. Using an exposure period of 6 hours and conservatively assuming no recovery of the failed equipment, this finding had a change in core damage frequency of low E-8. The dominant accident sequence was a grid-related loss of offsite power with a failure of Division III power and the failure to recover offsite power and the emergency diesel generators in 30 minutes. Since the change in core damage frequency was less than 1E-7, contributions from large early release and external event did not need to be considered. Therefore, this finding was of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Work Practices, because the I&C technicians did not effectively employ self-checking and place-keeping when implementing the test procedure which directly contributed to the resulting procedural error [H.4(a)].

Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedural Implementation for Battery Cell Replacement
The inspectors identified a non-cited violation at Unit 2 of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," because Constellation Energy Nuclear Group (CENG) did not assure that the replacement of cells in battery 2C were prescribed and performed by appropriate procedures which resulted in degraded accuracy of test results and potential degradation of safety-related battery cells.

In response to this issue, CENG generated condition report CR-2013-005235 and initiated actions to evaluate replacing the new cells.

This finding is more than minor because it was 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. In accordance with Inspection Manual Chapter (IMC) 0609.04, “Initial Characterization of Findings,” and Exhibit 2 of IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power,” issued June 19, 2012, the inspectors determined this finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Human Performance, Decision-Making component, because CENG did not use conservative assumptions in decision making. Specifically, CENG did not monitor the cells in storage, question the adequacy of the discharged cells, charge the cells prior to installation, or fully evaluate the implications of the test and recharge results [H.1(b)].
Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control for Battery Sizing Calculation
The inspectors identified a non-cited violation at Unit 2 of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, “Design Control,” because Constellation Energy Nuclear Group (CENG) did not verify the adequacy of the design with respect to battery 2C. Specifically, by failing to size the battery to the most limiting time period, the sizing calculation significantly overstated the available design margin. CENG’s corrective actions included generating condition report CR-2013-005117 and evaluating the condition for operability.

This finding is more than minor because it was associated with the design control 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. In accordance with Inspection Manual Chapter (IMC) 0609.04, “Initial Characterization of Findings,” and Exhibit 2 of IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power,” issued June 19, 2012, the inspectors determined this finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. The inspectors did not assign a cross-cutting aspect because the finding was not indicative of current performance.

Inspection Report# : 2013003 *(pdf)*

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)*

Barrier Integrity

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

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 Aug 23, 2013
Identified By: NRC
Item Type: FIN Finding
PI&R Report Summary
Problem Identification and Resolution
The inspectors concluded that NMPNS was generally effective in identifying, evaluating, and resolving problems. NMPNS personnel identified problems, entered them into the corrective action program (CAP) at a low threshold, and prioritized issues commensurate with their safety significance. In most cases, NMPNS appropriately screened issues for operability and reportability and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors also determined that NMPNS typically implemented corrective actions to address the problems identified in the CAP in a timely manner. However, the inspectors identified one violation of NRC requirements in the area of corrective action implementation.
The inspectors concluded that, in general, NMPNS adequately identified, reviewed, and applied relevant industry operating experience to NMPNS operations. In addition, based on those items selected for review, the inspectors determined that NMPNS's self-assessments and audits were thorough.
Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual CAP and employee concerns program (ECP) issues, the inspectors did not identify any indications that site personnel were unwilling to raise safety issues nor did they identify any conditions that could have had a negative impact on the site's safety conscious work environment.
Inspection Report# : 2013007 *(pdf)*

Last modified : February 24, 2014