

Nine Mile Point 2

3Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Mar 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Reactor Scram due to Inadequate Procedure for RHR Detector Restoration

A self-revealing finding of very low safety significance associated with a non-cited violation (NCV) of Technical Specification (TS) 5.4, "Procedures," was identified when technicians used an inadequate procedure for filling and venting a Unit 2 residual heat removal (RHR) system pressure detector following system maintenance, which resulted in an automatic scram. When the procedure was developed, Nine Mile Point Nuclear Station (NMPNS) did not identify that the detector to be filled and vented was connected to multiple detectors in other systems, and therefore did not evaluate the effect that the activity would have on these additional detectors. As immediate corrective action, RHR detector restoration was stopped and an investigation into the cause of the event was commenced. The issue was entered into the corrective action program (CAP) as condition report (CR) 2010-0192.

The finding was more than minor because it was associated with the procedure quality attribute of the Initiating Events cornerstone and 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. Additionally, the finding was similar to example 4.b in Appendix E of Inspection Manual Chapter (IMC) 0612, in that it resulted in a reactor scram. The finding was of very low safety significance 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. The finding had a cross-cutting aspect in the area of human performance, resources, because Nine Mile Point Nuclear Station (NMPNS) did not provide maintenance personnel with an accurate work package for filling and venting the 'C' RHR pressure detector.

Inspection Report# : [2010002](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Excessive Reactor Pressure Vessel Drain Down due to Inadequate Procedure

A self-revealing finding of very low safety significance associated with a non-cited violation (NCV) of Technical Specification (TS) 5.4, "Procedures," was identified when Nine Mile Point Nuclear Station (NMPNS) Unit 2 operators used an inadequate procedure for reactor cavity drain down, which resulted in water being drained from the reactor pressure vessel (RPV) to a level that was significantly lower than had been planned. As a result, the steam dryer was partially uncovered, which produced elevated radiation levels on the refueling floor. As immediate corrective action, the control room operators took actions to raise water level back to the RPV flange. The event was entered into the corrective action program as condition report (CR) 2010-4408.

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. The finding was evaluated in accordance with Inspection Manual Chapter (IMC) 0609, Appendix G, "Shutdown Operations Significance Determination Process." The change in core damage frequency (?CDF) was determined to be of very low safety

significance because of the multiple methods to inject water into the vessel and the time available to align these systems. The finding had a cross-cutting aspect in the area of human performance, resources, because NMPNS did not ensure that the RPV drain down procedure was adequate to assure nuclear safety.

Inspection Report# : [2010003](#) (*pdf*)

Significance:  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*)

Significance:  Mar 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Performance Testing of Division 1 Battery

An NRC-identified finding of very low safety significance associated with a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified, in that Unit 2 Division 1 vital battery, 2BYS*BAT2A (the 2A battery), performance testing was not performed in accordance with written test procedures. Specifically, procedure deviations were made during the three most recent biennial performance tests which resulted in inaccurate determinations of battery capacity. As immediate corrective action, Nine Mile Point Nuclear Station (NMPNS) entered the issue into the corrective action program (CAP) as condition report (CR) 2010-1987 and implemented actions to estimate the current battery capacity. Based on the magnitude of the errors and current battery capacity margins, NMPNS determined that there were no operability issues with the 2A battery.

The finding was more than minor because it was associated with the human performance 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 similar to example 2.c in Appendix E of Inspection Manual Chapter (IMC) 0612, in that the test performance issue was repetitive. 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 practices, because personnel did not follow the modified performance test procedure.

Inspection Report# : [2010002](#) (*pdf*)

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: FIN Finding

Failure to Implement the Operator Workaround Program During 2009

An NRC-identified finding was identified on November 19, 2009, when inspectors determined the NMPNS Operator Workaround program had not been implemented at Unit 1 and Unit 2 in accordance with Nuclear Administration Instruction NAI-REL-02, "Control of Operator Workarounds, Burdens and Interests," Revision 07, during the year 2009. As a result, determinations of operational encumbrances that constituted workarounds, burdens, and interests, had not been made by the Unit Workaround Coordinators, lists of these items had not been maintained, and quarterly aggregate reviews of their impact on the ability of operators to perform their duties had not been performed during that period. As corrective action, NMPNS performed a review of work orders that were opened during 2009, and were coded as being operator workarounds or burdens, to identify existing operator workarounds and burdens. An evaluation of that information was performed, which concluded that the station had not been in an unrecognized increased risk condition as a result of the cumulative effects of all workarounds and burdens. The issue was entered into the corrective action program (CAP) as condition report (CR) 2009-8395.

The finding was more than minor because the NRC considers licensee identification of operator workaround problems at an appropriate threshold, and implementation of follow-on actions that focus and progress corrective actions to completion, to be an important aspect of problem identification and resolution, as discussed in IP 71152, "Identification and Resolution of Problems." The failure to implement the operator workaround program, if left uncorrected, had the potential to increase the likelihood of operator errors during normal and off-normal conditions and lead to a more significant safety concern. The finding had a cross-cutting aspect in the area of human performance, decision-making, because the roles and authorities of the Operator Workaround Coordinators for Units 1 and 2 were not effectively communicated during the personnel turnover that occurred at the beginning of 2009, and therefore were not implemented as designed during the year 2009.

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Oct 16, 2009

Identified By: NRC


Item Type: NCV NonCited Violation

Failure to identify procedural inadequacies and non-compliances that contributed to the November 4, 2008 SW pumps foreign material intrusion events.

The NRC identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," involving two examples of conditions adverse to quality not properly identified and corrected. For the first example, Constellation failed to identify that responsible station personnel did not adhere to the governing procedures for diving operations and foreign material intrusion for the C service water (SW) pump fouling event, and as a consequence, this led to the fouling of the F SW pump on November 4, 2008. For the second example, Constellation failed to identify that inadequate work controls and procedural guidance contributed to the November 4, 2008, SW pump foreign material intrusion events. The failure of Constellation to have identified these procedural non-compliance and adequacy issues is considered a significant weakness in Constellation's causal analysis and associated corrective actions for the White PI. This NRC-identified finding supports the basis for a parallel White finding. Constellation entered this finding into their Corrective Action Program (Condition Report No. 2008-08430).

This corrective action finding is more than minor because it adversely impacted the equipment performance attribute and the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of this finding using IMC 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings." The finding screened as very low safety significance (Green) because the failure of the C and F SW pumps did not represent an actual loss of safety function of a single train of SW system for greater than its Technical Specification Allowed Outage Time. This finding has a cross-cutting aspect of P.1(c), referring to the area of Problem Identification and Resolution – Corrective Action Program, involving the thoroughness and effectiveness of evaluations.

Inspection Report# : [2009009](#) (*pdf*)

Significance:  Oct 16, 2009

Identified By: NRC

Item Type: FIN Finding

Parallel Performance Indicator White Finding

The NRC identified a parallel White Performance Indicator (PI) inspection finding involving significant weaknesses identified in Constellation's causal evaluation and corrective actions for a White Cooling Water Systems PI.

The inspectors identified significant weaknesses in Constellation's causal evaluation and corrective actions associated with the White Performance Indicator (PI) change. Specifically, the inspectors identified that the initial work controls put in place for the service water (SW) fore bay diving evolutions, and the changes made to the diving work scope on November 4, 2008, were inadequate and directly contributed to the C SW pump foreign material intrusion event. In addition, the inspectors identified that the Constellation staff failed to follow the governing dive procedure and foreign material exclusion guidance after the C SW pump was fouled on November 4, 2008. This failure to follow procedures directly contributed to the F SW pump fouling one hour later. These performance deficiencies were not identified and corrected by Constellation.

In accordance with Inspection Procedure 95001 and NRC Inspection Manual Chapter 0305, "Operating Reactor Assessment Program," a parallel PI inspection finding is assigned the same safety significance as the initiating PI. This parallel PI inspection finding provides for additional NRC review of Constellation's actions to address the weaknesses identified in this report and to demonstrate appropriate progress in reversing the adverse trend in cooling water systems performance as evidenced by the White PI. This finding takes the color (White) of the PI. Constellation entered this parallel finding into its Corrective Action Program (Condition Report No. 2009-007201).

Inspection Report# : [2009009](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2010

Identified By: NRC

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: NRC

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, the 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

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

Significance: N/A Oct 22, 2009

Identified By: NRC

Item Type: FIN Finding

PI&R Team Report Summary

The inspectors concluded that Constellation, in general, adequately identified, evaluated, and resolved problems; however, several weaknesses were noted related to the quality of evaluations. In general, Constellation personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with the safety significance. For most cases, Constellation screened issues for operability and reportability and performed causal analyses that adequately considered extent of condition, generic issues, and previous occurrences. However, weaknesses were noted in this area related to the quality of evaluations, and for one issue reviewed, the inspectors identified that the Plant Process Computer's Safety Parameter Display System (SPDS) was not appropriately scoped into the maintenance rule, resulting in an NRC identified NCV. Corrective actions taken to address the problems identified in Constellation's corrective action process were typically implemented in a timely manner. However, for one issue reviewed, Constellation did not conduct an appropriate extent of condition review for a 2008 NCV related to work hours and repeated the same performance deficiency during the 2009 Unit 1 refueling outage, resulting in an NRC identified NCV.

The inspectors also concluded that, in general, Constellation adequately identified, reviewed, and applied relevant industry operating experience to Nine Mile Point Nuclear Station operations. In addition, based on those items selected for review by the inspectors, Constellation's audits and self-assessments were thorough and probing.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual corrective action program and employees concerns program issues, the inspectors did not identify any concerns that site personnel were not willing to raise safety issues nor did they identify conditions that could have had a negative impact on the site's safety conscious work environment.

Inspection Report# : [2009010](#) (*pdf*)

Last modified : November 29, 2010