

Nine Mile Point 2

4Q/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*)

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:  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

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