

Kewaunee 3Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Procedures For Reduced Inventory Operations Were Not Appropriate To Preclude Air Entrainment

The inspectors identified a finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to establish procedures for reduced inventory operations that were appropriate to manage gas accumulation. Specifically, the procedures did not preclude air entrainment into the residual heat removal (RHR) and reactor coolant systems (RCSs). This finding was entered into the licensee's corrective action program. The licensee's immediate corrective actions included calculating the instrument inaccuracies for RHR flow and refueling level instrument loops, referencing the level inaccuracies based on inactive flow in RCS loops in the associated procedures., evaluating levels, and updating the procedures with a new graph.

The performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of procedure quality, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Specifically, the failure to establish procedures for reduced inventory operations that were appropriate to preclude air entrainment did not limit the likelihood of events that result from adverse air entrainment into the RHR and RCSs. The finding screened as having very low safety significance (Green) because the Region III Senior Reactor Analysts determined that it reasonably met the safety functions of core heat removal, RCS inventory control, power availability, containment control, and reactivity control; and there had been no actual air entrainment problems that had occurred using the procedures. The finding has a cross-cutting aspect in the area of Problem Identification and Resolution because the licensee did not thoroughly evaluate relevant operating experience. Specifically, the licensee's evaluation of gas related issues in response to NRC Generic Letter (GL) 2008 01 was deficient in that it did not consider vortexing during reduced inventory operations. (P.2(a))

Inspection Report# : [2011005](#) (*pdf*)

Significance: G Oct 07, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Flammable Gas Bottles Installed and/or Stored in the Auxiliary Building

The inspectors identified a finding of very low safety significance and associated NCV of Title 10, Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion III, "Design Control," for the failure to check the adequacy of design for flammable gas bottles installed and/or stored in fire areas and fire zones located within the auxiliary building and their impact on safe shutdown cables, safety-related cables and safety-related equipment. Specifically, the licensee failed to evaluate how a failure of the flammable gas bottles and a resulting fire or explosion at the installed and/or stored locations could impact nearby safety-related structures, systems, or components. The licensee entered this issue into their corrective action program to review the placement of the flammable gas bottles.

The inspectors determined that the finding was more than minor because the finding was associated with the Initiating

Events cornerstone attribute of Protection against External Factors (Fire) and affected the cornerstone's objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was of very low safety significance due to the low fire initiating frequency and the availability of remaining mitigating systems. This finding did not have a cross-cutting aspect because the finding was not representative of current performance.

Inspection Report# : [2011008](#) (*pdf*)

Mitigating Systems

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Assessment During Heavy Lift Over Service Water System

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," paragraph (a)(4), for the failure to properly assess and manage risk when the licensee lifted a 44,000-pound motor over the portion of the service water screenhouse containing the train B service water header. Specifically, the licensee should not have credited train B emergency diesel generator (EDG) in the power availability portion of their shutdown safety assessment. The licensee entered this into their corrective action program as CR491721. The licensee assigned an apparent cause evaluation to determine the organizational failures.

The finding was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of protection against external factors, and adversely 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). The licensee did not maintain a shutdown probabilistic risk analysis model, so an incremental core damage probability could not be estimated for the specific plant conditions. For this reason, the inspectors determined that IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," could not be used. The inspectors used IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," dated April 12, 2012, which directs inspectors to perform a bounding analysis. The inspectors conservatively assumed that EDG B was actually lost and used Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, "Phase 1 Operational Checklists for Both PWRs [Pressurized Water Reactors] and BWRs [Boiling Water Reactors]," dated May 25, 2004, to determine the risk. Specifically, the inspectors selected Checklist 4, "PWR Refueling Operation," and found, for the power availability function, the licensee met the checklist objective to comply with technical specifications because only one EDG was required to be operable, and EDG A remained operable and protected. Therefore, the inspectors determined that the finding was determined to have very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance, work control, because the licensee did not plan and coordinate work activities consistent with nuclear safety. Specifically, the licensee failed to incorporate risk insights and plant systems, structures, and components into their evaluation (H.3 (a)).

Inspection Report# : [2012004](#) (*pdf*)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Degradation Evaluation Of Leaking Refueling Water Storage Tank

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix

B, Criterion III, “Design Control,” for the licensee’s failure to adequately evaluate a through wall flaw in the refueling water storage tank (RWST). Specifically, the licensee failed to perform a degradation growth evaluation as required by ASME Code Case (CC) N 705, Section 2.5, and failed to use the appropriate acceptance criteria as required by CC N 705, Section 5, in their operability determination (OD) of the leaking RWST. The licensee subsequently took corrective actions to revise the RWST OD 492 to include the CC N-705, Section 2.5 required calculation of the degradation growth considering all the appropriate acceptance criteria described in CC N 705, Section 5. The licensee’s final revision to the POD adequately calculated the allowable time (Tallow) for RWST operation per CC N 705 to be ~25 months. This issue was entered into the licensee’s CAP as CR482703.

The finding was determined to be more than minor, and determined to be a performance deficiency, because if left uncorrected, it could become a more significant safety concern. This finding was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance (reliability), 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 inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” dated June 19, 2012 and Appendix A, “The Significance Determination Process (SDP) for Findings At-Power” Exhibit 2, Mitigating Systems Screening Questions, dated June 19, 2012. Because the licensee intended to repair/replace the RWST weld during the next RFO, the inspectors answered “No” to all of the Mitigating Systems Screening questions, and screened the finding screened as having very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance, resources, because the licensee did not ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety, particularly those necessary for maintaining long term plant safety by maintenance of design margins. Specifically, the licensee failed to provide adequate resources to verify the adequacy of the RWST degradation evaluation and supporting calculations. The inspectors determined the primary cause of this finding based upon discussions with the licensee’s engineering staff (H.2(a)).

Inspection Report# : [2012004](#) (*pdf*)

Significance: N/A Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Commercial Grade Dedication Leads to Premature Bearing Failure (Section 1R18)

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion VII, “Control of Purchased Material, Equipment, and Services,” because the licensee failed to adequately dedicate a commercial-grade item for use in a safety-related (SR) application. Specifically, the licensee failed to properly dedicate two motors for use in SR fan coil units (FCUs). The finding was entered into the licensee’s CAP as CR 487269. The licensee assigned an ACE to determine the organizational failures that led to the violation.

The finding was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone and adversely affected the design control attribute objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to properly dedicate a commercial grade item, the FCU motor, caused the non functionality of the TBFCU 1B and the inoperability of the train B AFW system. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process (SDP) for Findings At-Power” Exhibit 2, Mitigating Systems Screening Questions. The inspectors concluded that the TS equipment supported by TBFCU 1B, which consisted of buses 61, 62, and the train B AFW system, may have been inoperable for a time period greater than the respective TS action statements, and therefore answered “Yes” to Mitigating System Cornerstone Question 3, and determined that a detailed risk assessment was necessary. The inspectors worked with RIII senior reactor analysts (SRAs) and concluded that the finding is of very low safety significance (Green). Specifically, the licensee had abnormal operating procedures (AOPs) in place to prop open doors upon a complete loss of safeguards alley room cooling and supporting calculations that concluded the affected equipment would perform for the 24 hour probabilistic

risk assessment (PRA) mission time without the TBFCU. The inspectors concluded there was no cross-cutting aspect with this finding because the failure to properly dedicate the motors occurred in 2005, and was not representative of current performance.

Inspection Report# : [2012004](#) (*pdf*)

Significance: G Sep 28, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Battery Rack Configuration Not In Accordance With Design Basis

The inspectors identified a finding of very low safety significance (Green) and an associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," because the licensee failed to ensure that the configuration of the safeguards battery racks was in accordance with the design basis Seismic Category I qualification. Specifically, the Seismic Category I qualification specified that the battery rack end rails be snug against the battery. The inspectors found gaps greater than 1/8 inch and up to approximately 3/8 inch. The vendor instructions directed that the rails should be within 1/8 inch. The licensee entered this into the Corrective Action Program as CR489958 and CR487875 and took short term corrective actions to adjust the battery rack end gaps to within 1/8 inch, and assigned an apparent cause evaluation, which was not complete at the end of the inspection period.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of protection against external factors and affected the cornerstone objective to ensure the availability, reliability, and Corrective Action Programability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee failed to ensure that the batteries were constrained from sliding along the rack to avoid over stressing the battery terminals, battery casing, or rack ends. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012, Exhibit 2, Mitigating Systems Screening Questions. The inspectors answered "Yes" to question 1, and screened the finding as having very low safety significance (Green). The inspectors did not assign a cross-cutting aspect because the installation of the battery racks occurred in 2008, and was not representative of current performance.

Inspection Report# : [2012008](#) (*pdf*)

Significance: G Jun 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure To Utilize Work Order For Temporary Weld Repair On ASME Code, Class 2 Piping

A finding of very low safety significance and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed for the failure to accomplish Temporary Modification (TMOD) 2012-11 in accordance with Work Order (WO) KW100894696 and the associated weld data sheet and map. Specifically, licensee personnel failed to utilize the WO instructions, weld data sheet and weld map when welding a temporary NRC-approved clamp on American Society of Mechanical Engineers (ASME) Code Class 2 residual heat removal (RHR) piping. The failure to use the required documentation to perform the work resulted in the worker creating a second through wall leak on the ASME Code, Class 2 RHR piping upstream of valve RHR 600. The licensee entered the issue into its corrective action program (CAP) as condition report (CR) 472915 and permanently corrected both through wall leaks on the RHR system piping following the approval of a second proposed alternative, without incident on May 5, 2012. At the end of the inspection period, the licensee continued to perform an apparent cause evaluation (ACE) to determine the causes for the organizational failures that occurred.

The finding was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because the finding was associated with the Mitigating Systems Cornerstone attribute of human error (pre-event) and adversely affected the cornerstone objective to ensure the reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined that the finding could be evaluated in accordance with IMC 0609, Appendix G, "Shutdown Operations SDP," dated February 28, 2005. The inspectors used Checklist 1, "PWR Hot Shutdown Operation: Time to Core Boiling <2 Hours," contained in Attachment 1 and determined that the finding affected core heat removal guidelines I.B(1), "Procedures," and I.C(2), "Equipment." The inspectors screened the finding as very low safety significance (Green) because it did not degrade the licensee's ability to establish an alternate core cooling path if decay heat removal could not be re established and, therefore, did not require a phase 2 or phase 3 analysis. This finding has a cross-cutting aspect in the area of human performance, resources, because the licensee did not ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Specifically, the inspectors identified that the pre-job brief conducted by supervision and management for this work did not include a review of the WO, weld sheet, or weld map and did not convey accurate information regarding the significance of the activity, the type of weld to be performed and the system conditions where the weld was performed. (Section 1R18)

Inspection Report# : [2012003](#) (*pdf*)

Significance: G Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Provide Adequate Suppression In Cable Spreading Area

The inspectors identified a finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix R, Section III.G.3, for the licensee's failure to provide adequate fire suppression coverage for fire zone AX-32. Specifically, the licensee failed to provide required fire suppression coverage for safe shutdown functions of source range monitoring, isolation of a steam generator (SG) blowdown line, and pressurizer level instrumentation in the cable spreading area. The licensee entered the issue into the CAP, designated manual backup from hose stations, and implemented an hourly fire watch for the radiation protection office (RP) in fire zone AX-32.

The inspectors determined that the finding was more than minor because the failure to provide suppression for redundant trains of safe shutdown equipment increased the likelihood that alternative shutdown methods would have to be used in the event of a fire. The finding was of very low safety significance based on a Phase 3 significance determination analysis. The finding has a cross-cutting aspect in the area of problem identification, corrective action program, because the licensee did not take appropriate corrective actions to address the inadequate suppression system in fire zone AX 32. (Section 4OA2.4)

Inspection Report# : [2012003](#) (*pdf*)

Significance: G Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Unanalyzed Flood Source From Technical Support Center Building

A finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to identify and analyze a potential flooding source that was within the Kewaunee licensing basis. Specifically, during the internal flood basis reconstitution in 2005, the licensee failed to realize and assess the potential for fire main piping in the technical support center (TSC) building to be ruptured during a tornado or seismic event. Water from a ruptured fire main had the potential to accumulate in the basement of the TSC building, flow into the attached auxiliary building, and potentially affect safety related (SR) equipment. The licensee initiated a condition report (CR) and completed calculations and analyses

to demonstrate the existing barriers, although not credited at the time, were adequate to support this internal flood scenario. In addition, the licensee performed an extent of condition analysis to determine if any additional internal flood scenarios were missed.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because it was associated with the Mitigating Systems (MS) Cornerstone attribute of Equipment Performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to analyze all potentially credible internal flood sources could affect the availability of SR systems. The inspectors determined that the finding could be evaluated using the significance determination process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the MS Cornerstone, dated January 10, 2008. The inspectors answered "No" to the MS questions and screened the finding as having very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the internal flood design basis reconstitution occurred in 2005 and the inspectors determined that there was not an opportunity to identify this deficiency in the past three years.

Inspection Report# : [2011005](#) (*pdf*)

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Two Of Six Operating Crew Failures On The Simulator Operational Evaluation Portion Of The 2011 Annual Requalification Operating Test

A self-revealed finding associated with operating crew performance on the simulator during a licensee-administered requalification examination was identified. Two of the six crews evaluated during the annual operating tests failed to pass their simulator examinations. As immediate corrective action, the failed operating crews were remediated (i.e., the operating crews were re-trained and successfully re-tested) prior to returning to shift. The licensee entered this issue into the CAP as CR456328.

The inspectors determined that the crew failures constituted a performance deficiency based on the fact that licensed operators are expected to operate the plant with acceptable standards of knowledge and abilities demonstrated through periodic testing as required by 10 CFR 55.59(a)(2). Two out of six crews of licensed operators failed to demonstrate a satisfactory understanding of the required actions and mitigating strategies required to safely operate the facility under normal, abnormal, and emergency conditions. The finding was more than minor because the performance deficiency potentially affects the Human Performance attribute of the MS Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

Specifically, the finding reflected the potential inability of the crews to take appropriate SR action in response to actual abnormal and emergency conditions. The perceived risk associated with the number of crews failing the annual operating test is provided in the Simulator Operational Evaluation matrix of IMC 0609, Appendix I, "Licensed Operator Requalification SDP." The finding was of very low safety significance (Green) because only two of six of the operating crews failed; the failed operating crews were remediated (i.e., the operating crews were re-trained and successfully re-tested) prior to returning to shift; and because there was not a finding associated with operating crew failures during calendar year 2010. The cause of this finding was directly related to the cross-cutting aspect of personnel training and qualifications in the area of Human Performance – Resources, in that the licensee failed to ensure the adequacy of the training provided to operators to assure nuclear safety. (H.2(b))

Inspection Report# : [2011005](#) (*pdf*)

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: FIN Finding

Inadequate Operability Determination Of Control Room Air Conditioning System Components

A finding of very low safety significance was identified by the inspectors for the failure to adequately assess operability of the Control Room Air Conditioning Component (ACC) dampers, ACC-15 and ACC-16, in Operability Determination (OD) 456, Revision 0, "ACC-15 and ACC-16 QA Classification," in accordance with site Procedure OP AA 102 1001, "Development of Technical Basis to Support Operability Determinations," Revision 4. The licensee entered the issue into their CAP and was completing an apparent cause evaluation at the conclusion of the inspection period.

The finding was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated December 24, 2009, because the finding, if left uncorrected, had the potential to become a more significant safety concern. Specifically, the failure to give the operators written instructions to manually reposition the SR dampers could have lead to situations where the operators would not have been able to rapidly and correctly manually reposition the SR dampers to perform their required safety functions necessary to mitigate design basis accidents. The inspectors determined the finding could be evaluated using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, for the MS Cornerstone, dated January 10, 2008. The inspectors answered "No" to the MS questions and screened the finding as having very low significance (Green). The finding has a cross-cutting aspect in the area of Human Performance - Decision Making, because the licensee failed to communicate decisions and the bases for decisions to personnel who had a need to know the information in order to perform work safely, in a timely manner. Specifically, the licensee failed to communicate in a timely manner to the reactor operators the written instructions in the standing order necessary to manually reposition the dampers to their SR positions after a design basis accident. (H.1(c))

Inspection Report# : [2011005](#) (pdf)

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Unanticipated Closure Of Emergency Diesel Generator B Output Breaker

A finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed for the failure to implement a procedure for an activity affecting quality. Procedure OP-KW-OSP-DGE-003B, "Diesel Generator B Semi-Annual," required electrical maintenance personnel to check only the voltage of the emergency diesel generator (EDG) B output breaker Relay 52C/1-603; however, the electricians checked voltage and then attempted to check resistance of the relay. Specifically, after successfully testing for voltage, an electrician then selected a resistance setting for the volt-ohm meter (VOM) in an attempt to perform a continuity check of the relay, which was not prescribed by the procedure. The electrician's actions resulted in the closure of the EDG output Breaker 1 603, and EDG B was paralleled to the grid out-of-phase. The licensee initiated a condition report and took remedial corrective actions that included additional testing and inspections of EDG B to ensure that no damage occurred to the equipment as a result of the system transient, followed by the successful completion of post maintenance testing. At the end of the inspection period, the licensee was performing a root cause evaluation to determine the cause of the event and to develop additional corrective actions related to the organizational performance issues.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the MS Cornerstone attribute of Equipment Performance, and adversely impacted the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the attribute of equipment performance impacted the availability and reliability of EDG B and could have resulted in the catastrophic failure of the generator. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening

and Characterization of Findings,” Table 4a, for the MS Cornerstone, dated January 10, 2008. The inspectors answered "No" to the MS questions and screened the finding as having very low safety significance (Green). The inspectors determined that this finding has a cross-cutting aspect in the area of Human Performance - Work Practices, because the maintenance personnel and supervision failed to communicate and ensure human error prevention techniques were used, such as holding formal pre job briefings, and self and peer checking. The licensee also failed to ensure that these techniques were used commensurate with the potential risk of the assigned task, such that work activities were performed safely. Finally, during these maintenance activities, the inspectors concluded that licensee personnel proceeded in the face of uncertainty. (H.4(a))

Inspection Report# : [2011005](#) (pdf)

Barrier Integrity

Significance:  Jun 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Loose Cable Clamp Caused Loaded Spent Fuel Upender To Unintentionally Lower

A finding of very low safety significance (Green) and associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1, “Procedures,” was self-revealed because procedure MCM-FH-001, “Repair of the Fuel Transfer System,” was inadequate. Specifically, the procedure did not contain torque specifications for tightening the upender frame cable clamps and, on April 23, the cable for the spent fuel pool (SFP) upender slipped through the cable clamps and allowed the upender containing a fuel assembly to descend approximately 12 inches. The licensee confirmed that no damage occurred to the fuel assembly and placed procedure MCM-FH-001 on administrative hold to prevent its use until it could be updated with the appropriate torque specifications. At the end of this inspection period, the licensee was performing an ACE to determine the causes of the event, and develop corrective actions.

The finding was determined to be more than minor because, if left uncorrected, the finding had the potential to lead to a more significant safety concern. Specifically, the upender containing the fuel assembly could have fallen from the near full vertical position to the horizontal position. The inspectors evaluated the finding by applying the SFP questions in the Fuel Barrier column of Table 4a, located in IMC 0609, Attachment 4, dated January 10, 2008. The inspectors answered "No" to all three questions and determined that the finding was of very low safety significance (Green). The finding has a cross-cutting aspect in the areas of problem identification and resolution, operating experience (OE), because the licensee failed to communicate to affected internal stakeholders in a timely manner relevant external OE. Specifically, the licensee failed to discuss available and relevant OE related to the failure to appropriately torque cable clamps on an SFP upender. (Section 1R20)

Inspection Report# : [2012003](#) (pdf)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Post-Maintenance Test Of Motor Replacements

The inspectors identified a finding of very low safety significance and associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1, “Procedures,” which required, in part, that written procedures shall be implemented covering the applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A. Specifically, Procedure GNP 08.02.12, “Post-Maintenance Testing/Operations Retest,” stated, in part, that the post-maintenance tests (PMTs) were performed upon completion of maintenance activities, and demonstrated that the identified deficiency was repaired, and that no new deficiency was created. On July 4, 2011, the licensee replaced the

spent fuel pool (SFP) pump motor B, and failed to conduct an adequate PMT, which demonstrated no new deficiency was created. The PMT only tested the replaced motor and failed to include testing of the pump to ensure that no new deficiency was created. The licensee entered the issue into its corrective action program (CAP) as condition reports (CRs) 464645, 466183, and 466215, and planned to perform an apparent cause evaluation (ACE) and take corrective actions.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because, if left uncorrected, the failure to perform adequate PMT on motor replacements would have the potential to lead to a more significant safety concern. The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a, for the Barrier Integrity Cornerstone, dated January 10, 2008. The inspectors answered "No" to the "Reactor Coolant System or Fuel Barrier Questions" related to "Spent Fuel Pool Issues," and screened the finding as having very low safety significance (Green). The inspectors also determined that this finding had a cross-cutting aspect in the area of human performance, resources, because the licensee did not ensure the PMT procedure guidance related to motor replacements was adequate and accurate to assure nuclear safety. (H.2(c))

Inspection Report# : [2012002](#) (*pdf*)

Significance: G Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure For Technical Specification Surveillance

The inspectors identified a finding of very low safety significance (Green) and an associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to have appropriate procedures to complete TS required surveillances. Specifically, OSP CCI 004, "Containment Isolation Valve Verification," did not contain adequate steps to complete a TS required airlock door check and the procedure did not include six manual containment isolation valves (CIVs) that should have been included in the procedure for position verification. The licensee corrected the procedure and entered the issue into its corrective action program as condition reports (CRs) 464355, 464494, and 467560, and planned to perform an apparent cause evaluation (ACE).

The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because the finding was associated with the Barrier Integrity Cornerstone attribute of procedure quality and affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, inspectors found seven examples in OSP-CCI-004 where either the procedure steps were not adequate or CIVs were missing that should have been included in the procedure for position verification. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1- Initial Screening and Characterization of Findings," Table 4a for the Barrier Integrity Cornerstone, dated January 10, 2008. The inspectors answered "No" to the Containment Barrier questions and screened the finding as having very low safety significance (Green). This finding has a cross-cutting aspect in the area of human performance, resources, because the licensee did not ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Specifically, OSP-CCI-004 did not get an approval review during the procedure review process and the supervisory review that was conducted did not identify the procedural errors. (H.4(c))

Inspection Report# : [2012002](#) (*pdf*)

Emergency Preparedness

Significance: G Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Assumptions Used In The Development Of Emergency Action Level Thresholds

A finding of very low safety significance and associated non-cited violation of 10 CFR 50.54(q) was identified by the NRC for failing to maintain emergency plans that meet the requirements of emergency planning standard 10 CFR 50.47(b)(4). The inspectors determined that a performance deficiency existed in that incorrect assumptions were used in the development of Emergency Action Level (EAL) thresholds associated with containment gas (R12) and containment ventilation (R21) radiation monitors. The licensee entered this issue into its CAP as CR356229 and corrected the errant EAL thresholds in its emergency classification and action level scheme.

This finding was determined to be more than minor because the deficiency, if left uncorrected, could have the potential to lead to a more significant safety concern. Specifically, in the event of a radiological emergency, the deficiency has the potential to increase the risk to the public through a premature and/or unnecessary general emergency declaration and subsequent protective action recommendation of evacuation. This finding was evaluated using IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 1, "Failure To Comply." This finding is associated with a failure to meet or implement a regulatory requirement. The deficiency is not greater than Green because it did not result in the Risk-Significant Planning Standard Function being lost or degraded. No cross-cutting aspect is assigned to this finding because it is not indicative of current plant performance. Inspection Report# : [2011005](#) (*pdf*)

Occupational Radiation Safety

Significance: G Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Effective Dose Equivalent Determination (Section 2RS4)

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 20.1201(c) for the failure to accurately assess occupational dose specific to effective dose equivalent for external exposure (EDEex) determinations. The issue has been entered into the licensee's CAP as CR487980. Corrective actions include procedural review and required revisions, a review of previous EDEex calculations and appropriate adjustments, and issuance of industry operating experience.

The inspectors reviewed the guidance in IMC 0612, and determined that the finding was more than minor because it was associated with the program and process attribute of Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that inaccurate radiation monitoring affects the licensee's ability to control and limit radiation exposures. Using IMC 0609, Attachment C, of the Occupational Radiation Safety SDP, the inspectors determined that the finding was of very low safety-significance because the finding did not involve: (1) As-Low-As-Is-Reasonably-Achievable (ALARA) planning and controls; (2) a radiological overexposure; (3) a substantial potential for an overexposure; or (4) a compromised ability to assess dose. Because this finding was of very low safety significance, was not repetitive or willful, and was entered into the CAP, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. The primary cause of this finding was related to the cross-cutting aspect of human performance, resources. Specifically, the licensee failed to provide complete and accurate procedures to the radiation safety staff (H.2(c)).

Inspection Report# : [2012004](#) (*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 Jun 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Leakage Requirement Submitted For A Proposed Temporary Pipe Clamp

A Severity Level (SL) IV NCV of 10 CFR Part 50.9(a), "Completeness and Accuracy of Information," was identified by the inspectors for the failure of the licensee to provide complete and accurate information in all material respects to the Commission in licensee Request RR 2 3, dated April 29, 2012 (ADAMS Accession No. ML12122A138). As part of a license amendment for a proposed temporary deviation from the requirements of 10 CFR 50.55a and ASME Code, Section XI, the licensee incorrectly stated the allowable leakage from the temporary clamp in transition from Mode 5 to 4 was governed by TS 5.5.2, "Primary Coolant Sources Outside Containment," and proposed an allowable leakage value of 5.5 gallons per hour (gph). After licensee Request No. RR 2 3 was verbally approved by the NRC on April 30, 2012, the inspectors and NRC staff determined that the governing leakage requirement was no leakage in Mode 4 for the clamp as required by TS 3.4.13, "Reactor Coolant System Operational Leakage."

The performance deficiency was determined to be more than minor in accordance with the NRC Enforcement Policy and Enforcement Manual because the NRC identified the performance deficiency, the NRC relied on the information provided in a licensing decision, and the misinformation was identified after the NRC relied on the information in its licensing decision. Because violations of 10 CFR 50.9 are considered to be violations that potentially impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the ROP SDP. Because the performance deficiency, specifically a failure to submit complete and accurate information, was not an ROP finding per IMC 0612, Appendix B, "Issue Screening," a cross-cutting aspect was not assigned to this violation. The severity of the violation was mitigated because of the facts surrounding the licensee's implementation of Request No. RR-2 3. (Section 40A3.1)

Inspection Report# : [2012003](#) (*pdf*)

Significance: N/A Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Submit LER Per 10 CFR 50.73

The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.73(a)(2)(vii) for the failure of the licensee to

report an event where a single cause or condition caused two independent trains to become inoperable in a single system designed to control the release of radioactive material. Specifically, the licensee failed to report that both trains of shield building ventilation (SBV) were inoperable due to a single cause, because both trains contained unqualified control card standoffs that were needed to maintain the seismic qualification and operability of the system. The licensee entered this into their CAP as CR429469, planned to perform an ACE, and was drafting an update to Licensee Event Report (LER) 05000305/2011-005.

The inspectors determined that the failure to report the event in accordance with 10 CFR 50.73 was a performance deficiency. Because violations of 10 CFR 50.73 are considered to be violations that potentially impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the Reactor Oversight Process (ROP) SDP. Because the performance deficiency, a failure to report, was not an ROP finding per IMC 0612, Appendix B, "Issue Screening," a cross-cutting aspect was not assigned to this violation. Per the NRC Enforcement Policy, Section 6.0, "Violation Examples," a failure to submit a required LER is categorized as an SL IV violation. Inspection Report# : [2012002](#) (*pdf*)

Last modified : November 30, 2012