D.C. Cook 2
4Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2015
Identified By: Self-Revealing
Item Type: FIN Finding
Failure of Steam Dump Valves Results in Plant Trip
A finding of very low safety significance (Green) was self revealed on April 23, 2015, when two condenser steam dump valves failed open during startup following the Unit 2 refueling outage. In response to the failure, the licensee manually tripped the Unit 2 reactor. Contrary to the requirements of PMP–5040–MOD–007, "Engineering Modifications," the design of the new valves that were installed was not compatible with the steam dump system. This finding does not involve enforcement action because no violation of a regulatory requirement was identified. The licensee replaced three steam dump valves on Unit 2 with a new design during the spring refueling outage. Shortly following reactor startup, two of the new valves failed open after being placed in service. The resulting temperature transient required operators to manually trip the reactor to comply with Technical Specification (TS) requirements for minimum temperature while critical. Design work and planning to perform the modifications failed to meet timeliness milestones prior to the outage. Contrary to the modification procedure for these circumstances, the change was not considered 'fast track,' therefore, additional risk assessments and management oversight were not provided. As a result, the operational impact of the new design was not fully realized. The steam dump system can be subject to significant amounts of condensate. The new valves trapped some of the condensate. This, along with a different plug design, caused a backpressure of sufficient force to cause the valves to fail open when steam was admitted. The licensee stabilized the plant following the trip, replaced two valves with the old design, isolated the other via a temporary modification, and returned the unit to service. The issue was also entered into the Corrective Action Program (CAP) as Action Request (AR) 2015–5825.

The issue was more than minor because it adversely affected the Design Control attribute of the Initiating Events Cornerstone, whose objective is to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the inadequate design caused the new valves to fail open, which resulted in a manual reactor trip. Utilizing Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At Power," effective July 1, 2012, the inspectors determined the finding was Green, or very low safety significance, by answering 'no' to the "Transient Initiators" question in Exhibit 1. Specifically, while the transient caused a plant trip, all mitigation equipment remained available to respond to the trip. The inspectors determined the finding had an associated cross cutting aspect in the Human Performance area, namely, H.8, "Procedure Adherence." The licensee failed to follow the requirements of the modification procedure, which would have prompted a more thorough review of the modification.
Inspection Report# : 2015003 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2015
Identified By: NRC

Item Type: FIN Finding
Probablistic Risk Assessment Model Errors
The inspectors identified a finding of very low safety significance for the failure of the licensee to follow procedure 12–EHP–9010–PRA–001, "PRA Model Update." Procedure 12–EHP–9010–PRA–001 establishes requirements to ensure that Donald C. Cook Probabilistic Risk Analysis (PRA) models represent the as built, as operated plant in a manner sufficient to support the applications for which they are used. One of the requirements is to perform an update every four years. The updates include activities such as reviewing internal and external operating experience, reviewing procedures that have an impact on human error probabilities or equipment test frequencies, and updating basic event data resulting from current reliability and unavailability data. Contrary to these requirements, the Donald C. Cook internal events model was not updated for six years following the last update in 2008. The inspectors also determined the licensee did not have a formal process to ensure all of the update items were being met. Additionally, the procedure required that any needed peer reviews are performed and that any significant model issues are addressed prior to any use of the revised model for risk informed applications. Specifically, formal peer reviews are to be performed for changes that constitute PRA "upgrades." Contrary to the procedure, a formal peer review was not completed for a change to certain test and maintenance modeling factors that met the definition of a PRA upgrade. The change resulted in an error that affected the license amendment request for National Fire Protection Association (NFPA)–805 fire regulations and several risk informed applications onsite.

The issue was more than minor because if left uncorrected, it could become a more significant safety concern. Specifically, the failure to ensure peer reviews were performed and the failure to perform updates as required were reflective of programmatic weaknesses. Per IMC 0612 Appendix E, "Examples of Minor Issues," evidence of programmatic weaknesses constitute an example of a more than minor issue. The inspectors determined the Mitigating Systems cornerstone was adversely affected by the finding since it was associated with maintenance of PRA models, which could impact probabilities of mitigating systems' ability to perform their functions. The finding screened as Green, or very low safety significance, utilizing IMC 0609 Appendix A, "The Significance Determination Process for Findings at Power." Specifically, the inspectors answered 'no' to questions under both the "Mitigating Structures, Systems, and Components, and Functionality" and "External Event Mitigation Systems" sections. The finding had an associated cross cutting aspect in the Human Performance area, namely, Avoid Complacency (H.12), because of the lack of rigor applied in ensuring procedural requirements were met.

Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate the Adverse Effects of TRM Section Deletion
The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," with an associated finding of very low safety significance (Green), for the licensee's failure to perform a written safety evaluation that provided the bases for the determination that the removal of Technical Requirements Manual (TRM) Section 8.4.3, "ASME Code Class 1, 2, and 3 Components" did not require a license amendment. TRM Section 8.4.3 directed the implementation of the Inservice Inspection (ISI) Program for ASME Class 1, 2, and 3 components and directed actions if nonconformances were discovered. The licensee had received a violation in 2014 for removing the same requirement via a 50.59 Evaluation. The inspectors reviewed the corrective actions for the previous violation. The licensee had restored the section via guidance to operators, revised the wording of the TRM section, and then subsequently deleted the section from the plant's current licensing basis again via the 50.59 Screening process. The inspectors determined the licensee had incorrectly referenced NRC inspection guidance dealing with the operability of components when providing a basis for the deletion. Further, the operability determination process could result in less restrictive actions being taken for some degraded ASME components as compared to the TRM requirements. Therefore, the change should have received a 50.59 Evaluation. The licensee entered the issue into their Corrective Action Program.

The issue was more than minor because it adversely affected the Mitigating Systems Cornerstone. Specifically, a series of changes (which ultimately resulted in the deletion of TRM Section 8.4.3) had an adverse effect on component reliability given that required actions to address nonconformances within the ISI program were removed. In addition, violations of Title 10 of the Code of Federal Regulations (CFR) 50.59 are disposed using the traditional enforcement process in addition to the SDP because they are considered to be violations that potentially impede or impact the regulatory process. The associated traditional enforcement violation was determined to be more than minor because the inspectors could not reasonably determine if the changes would have ultimately required NRC prior approval. The finding screened as Green, or very low safety significance, because there was no actual known loss of functionality of components. The traditional enforcement violation was categorized as SL IV because the associated finding screened as Green in the SDP. The inspectors determined that the finding had a cross cutting aspect in the area of problem identification and resolution because the licensee did not take effective corrective action to address the issue. Specifically, the licensee received a previous finding for not evaluating the adverse effects of deleting TRM Section 8.4.3. As part of the corrective actions, the licensee revised and then deleted the TRM section; however, the resulting adverse effects were not recognized nor subsequently evaluated
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Evaluate the Adverse Effects of TRM Section Deletion
The inspectors identified a Severity Level (SL) IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” with an associated finding of very low safety significance (Green), for the licensee’s failure to perform a written safety evaluation that provided the bases for the determination that the removal of Technical Requirements Manual (TRM) Section 8.4.3, “ASME Code Class 1, 2, and 3 Components” did not require a license amendment. TRM Section 8.4.3 directed the implementation of the Inservice Inspection (ISI) Program for ASME Class 1, 2, and 3 components and directed actions if nonconformances were discovered. The licensee had received a violation in 2014 for removing the same requirement via a 50.59 Evaluation. The inspectors reviewed the corrective actions for the previous violation. The licensee had restored the section via guidance to operators, revised the wording of the TRM section, and then subsequently deleted the section from the plant’s current licensing basis again via the 50.59 Screening process. The inspectors determined the licensee had incorrectly referenced NRC inspection guidance dealing with the operability of components when providing a basis for the deletion. Further, the operability determination process could result in less restrictive actions being taken for some degraded ASME components as compared to the TRM requirements. Therefore, the change should have received a 50.59 Evaluation. The licensee entered the issue into their Corrective Action Program.

The issue was more than minor because it adversely affected the Mitigating Systems Cornerstone. Specifically, a series of changes (which ultimately resulted in the deletion of TRM Section 8.4.3) had an adverse effect on component reliability given that required actions to address nonconformances within the ISI program were removed. In addition, violations of Title 10 of the Code of Federal Regulations (CFR) 50.59 are disposed using the traditional enforcement process in addition to the SDP because they are considered to be violations that potentially impede or impact the regulatory process. The associated traditional enforcement violation was determined to be more than minor because the inspectors could not reasonably determine if the changes would have ultimately required NRC prior approval. The finding screened as Green, or very low safety significance, because there was no actual known loss of functionality of components. The traditional enforcement violation was categorized as SL IV because the associated finding screened as Green in the SDP. The inspectors determined that the finding had a cross cutting aspect in the area of problem identification and resolution because the licensee did not take effective corrective action to address the issue. Specifically, the licensee received a previous finding for not evaluating the adverse effects of deleting TRM Section 8.4.3. As part of the corrective actions, the licensee revised and then deleted the TRM section; however, the resulting adverse effects were not recognized nor subsequently evaluated

Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Deletion of Hot Shutdown Panel Procedures
The inspectors identified an SL IV NCV of very low safety significance of 10 CFR 50.59 for the licensee's improper deletion of procedures for the operation of the hot shutdown (HSD) panel. Specifically, in 2003, the licensee used a 50.59 screen to delete procedures associated with operation of the hot shutdown panel. The screen failed to recognize that the change impacted technical specifications and included adverse impacts. Therefore, 10 CFR 50.59 required a written evaluation to show why a license amendment was not required. The inspectors discussed the condition with the licensee and the licensee entered the condition in the Corrective Action Program and developed procedures for use of the HSD.

The licensee's failure to comply with 10 CFR 50.59 was a performance deficiency that warranted a significance determination. Because the finding included both traditional and Reactor Oversight Program aspects, the inspectors evaluated using both process. Under the Reactor Oversight Process, the inspectors determined that the finding was more than minor because it adversely affected the Mitigating system cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events and adversely affected the attribute of procedure quality. Using IMC 0609 appendix A Ex2 1, the inspectors answered no to questions A 1 thru 4. Therefore, the finding screens as Green. For traditional enforcement, the enforcement policy considers 50.59 violations of Green significance to be SL IV. Although the performance deficiency occurred in 2003, the corrective action program documents recent opportunities to identify and correct the condition. In this instance, the inspectors concluded that the licensee did not take effective corrective actions. Therefore, the finding includes a cross cutting aspect P.3, resolution, in the Problem Identification and Resolution area.

Inspection Report# : 2015004 *(pdf)*

Significance: G Nov 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Ensure the Required Seven Day EDG Fuel Oil Storage (Section 1R21.3.b(1))
Green. The team identified a finding of very low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion III, "Design Control," for the failure to translate the emergency diesel generator (EDG) fuel oil storage design basis into applicable procedures and calculations. Specifically, the required 7-day fuel oil supply did not account for the fact that the fuel oil storage tanks (FOSTs) were shared between the two reactor units. The licensee captured this issue in their Corrective Action Program (CAP) as Action Request (AR) 2015-15019 with a proposed action to revise the applicable calculations and procedures to ensure the FOSTs can supply fuel for seven days while accounting for the diesel fuel oil consumption of both reactor units.
The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of the mitigating systems. Specifically, the licensee performed a past operability review and reasonable determined the FOST remained operable because fuel oil volume was maintained greater than the value established by calculation MD-12-DG-004-N. In addition, the availability of a fuel oil low level alarm with an administrative setpoint greater than the value established by this calculation and the expected relatively slow FOST depletion would have reasonably prompted and allowed operators to initiate actions to conserve fuel had an event occurred. The team did not identify a

cross-cutting aspect associated with this finding because it was an original design issue; therefore, it was not reflective of current performance. (Section 1R21.3.b(1))

Inspection Report# : 2015008 *(pdf)*

Significance: G Nov 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Verify the Acceptability of the Surveillance Acceptance Limits for CRID Inverter Operability (Section 1R21.3.b(2))
Green. The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to verify the adequacy of the surveillance acceptance limits for control room instrumentation distribution (CRID) inverter operability. Specifically, the licensee did not verify the CRID inverter acceptance limits included in the applicable Technical Specification (TS) Surveillance Requirement procedures were adequate to demonstrate CRID operability. The licensee captured this issue in their CAP as AR 2015-14430 and AR 2015-14607, and established a compensatory action to impose more restrictive acceptance limits.
The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee reviewed the affected surveillance results for the last 12 months and reasonably determined operability was maintained because the results were within the vendor specifications. The team did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance due to the age of the performance deficiency. (Section 1R21.3.b(2))

Inspection Report# : 2015008 *(pdf)*

Significance: G Nov 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Verify CRID Inverter Capability to Function During Fault Conditions (Section 1R21.3.b(3))
Green. The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to verify the CRID inverter capability to interrupt faulted conditions on its output during postulated design basis events. Specifically, the licensee did not ensure that the vital inverter was adequately protected from the effects of a fault occurring at the circuit non safety related loads. The licensee captured this issue in their CAP as AR 2015 14805 and AR 2015 14807, and reasonably determined the installed non safety related circuit protective devices would be expected to operate and protect the vital inverter during fault clearing conditions on the non-safety related loads powered by the inverter supplied CRID panel bus.
The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee evaluated the condition for operability and reasonably determined that installed non-safety related circuit protective devices would be expected to operate and protect the vital inverter during fault clearing conditions on the non-safety related loads powered by the inverter supplied CRID panel bus. The team did not identify a cross-cutting aspect associated with this finding because it was not reflective of current performance. (Section 1R21.3.b(3))

Inspection Report# : 2015008 *(pdf)*

Significance: G Nov 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Consider All Design Basis CCW Passive Failures (Section 1R21.3.b(4))
Green. The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to verify that the component cooling water (CCW) design was capable of accepting a passive failure as described in the Updated Final Safety Analysis Report (UFSAR). Specifically, the passive failure definition described in the UFSAR was more limiting than the licensee postulated passive failure. The licensee entered this issue into their CAP as AR 2015-15073 with a proposed plan to reconcile the differences between the design basis and plant documentation.
The performance deficiency was more than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not represent a loss of function, an actual loss of function of a single TS train or two separate TS safety systems, or an actual loss of function of one or more non-TS trains. Specifically, the licensee performed a historical review of CCW isolation valve leakage and reasonably determined that actual leakage values would have reasonably allowed sufficient response time to provide system makeup to the redundant train. In addition, the licensee performed a historical review of CCW passive failures and did not find an actual loss of function due to a passive failure. The team did not identify a cross-cutting aspect associated with this finding because it was an original design issue; therefore, it was not reflective of current performance. (Section 1R21.3.b(4))

Inspection Report# : 2015008 *(pdf)*

Significance: G Nov 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Meet Applicable ISI Requirements for All CCW System Portions Within the ASME Code Class 3 Boundary (Section 1R21.3.b(5))
Green. The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR 50.55a, "Codes and Standards," for the failure to meet the Inservice Inspection (ISI) requirements for all CCW components within the American Society of Mechanical Engineers (ASME) Code Class 3 boundary. Specifically, the licensee did not apply the applicable ISI requirements to all portions of the CCW system within the system ASME Code Class 3 boundary because this boundary was not appropriately established or justified. The licensee entered this issue into their CAP as AR 2015-15069 and reasonably determined the CCW remained operable.
The performance deficiency was more than minor because it was associated with the mitigating systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a historical system health review and reasonably determined the CCW remained operable because periodic system walkdowns by the system owner and shiftly rounds by operations had not identified significant CCW system leaks. The team did not identify a cross-cutting aspect associated with this finding because it was not reflective of current performance. (Section 1R21.3.b(5))

Inspection Report# : 2015008 *(pdf)*

Significance: G Nov 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Develop Procedures to Provide Starting Air to the EDGs to Recover From a SBO (Section 1R21.3.b (6))
Green. The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR 50.63, "Loss of All Alternating Current Power," for the failure to develop procedures to provide starting air to the EDGs to restore emergency alternating current power when recovering from a station blackout (SBO). Specifically, plant procedures did not ensure that there would be sufficient pressure in the EDG air receivers to start an EDG at the end of a 4-hour SBO coping period. In addition, the licensee did not have another proceduralized method of starting an EDG after a 4-hour period. The licensee entered this issue into their CAP as AR 2015-14802 and established an air receiver leak down rate administrative limit that would reasonably preserve sufficient pressure for four hours until the issue is resolved.
The performance deficiency was more than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green). Specifically, a senior risk analyst performed a detailed risk evaluation and determined that the estimated change in core damage frequency was approximately 1.8E–8/yr. The team determined that this finding had a cross cutting aspect in the area of problem identification and resolution because the licensee did not systematically and effectively evaluate relevant external operating experience. Specifically, the licensee self-assessment, conducted in preparation to this inspection, reviewed a similar issue identified at a different station and incorrectly concluded that, "This issue is not likely to occur at Cook." [P.5] (Section 1R21.3.b(6))

Inspection Report# : 2015008 *(pdf)*

Significance: G Nov 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Verify the Station's Capability to Isolate Postulated CCW System Out-Leakage (Section 1R21.6.b (1))
Green. The team identified a finding of very low safety significance (Green), and an associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to verify the CCW design capability to isolate a postulated CCW system out leakage. Specifically, the CCW isolation valves were not periodically leak tested, and the system design and plant procedures did not include safety related and/or seismic-qualified makeup capabilities. The licensee entered this issue into their CAP as AR 2015-14961, and established temporary procedures and pre-staged equipment to quickly provide system makeup from alternate sources.
The performance deficiency was more than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as of very low safety significance (Green) because it did not result in the loss of operability or functionality of mitigating systems. Specifically, the licensee performed a historical review of isolation valve leakage and reasonably determined that actual leakage values would have reasonably allowed sufficient response time to provide system makeup. The team did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance due to the age of the performance deficiency. (Section 1R21.6.b(1))

Inspection Report# : 2015008 *(pdf)*

Significance: G Mar 31, 2015

Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Account for Essential Service Water Strainer Debris Loading and Isolation Valve Gross Leakage
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 account for the effects of the maximum strainer debris loading, and isolation valve gross leakage in the emergency service water flow balance testing and hydraulic analysis. As a result, the hydraulic calculations and flow balance test acceptance criteria overestimated the system flow capacity and, thus, did not ensure the capability of the system to meet its flow demand. The licensee entered this finding into their Corrective Action Program (CAP) to evaluate and resolve, including revising the affected calculations and test procedures.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of design control, and affected the cornerstone objective of ensuring the availability, reliability, and capability of mitigating systems to respond to initiating events to prevent undesirable consequences. The finding screened as very-low safety significance (Green) because it did not result in the loss of operability or functionality. Specifically, the licensee reviewed the latest flow balance test results and determined sufficient margin existed between the as-found value and the minimum required flowrate value to account for the effects of the strainer maximum debris loading. In addition, the licensee performed a historical review which did not find instances of isolation valve leakage in excess of the remaining margin. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not confirmed to reflect current performance due to the age of the performance deficiency.

Inspection Report# : 2015001 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Ensure NFPA-805 Sprinkler System Demands Met
The inspectors identified a finding of very-low safety significance with an associated NCV of the Donald C. Cook Operating Licenses for the failure to ensure minimum fire sprinkler head pressure would be available for all required sprinkler systems. Specifically, the licensee transitioned to National Fire Protection Association (NFPA)–805 fire regulations without assessing the impact of a previously identified NRC finding regarding the starting setpoints of the fire pumps. The licensee changed the pressure setpoints such that it became possible only one pump would be automatically started during certain fire scenarios. For those situations, the NRC identified that sufficient pressure may not be available to all required sprinklers per the requirements of NFPA 13, "Standard for the Installation of Sprinkler Systems." The licensee corrected the issue by performing calculations to demonstrate one pump would be sufficient. However, when the licensee subsequently transitioned to NFPA–805 fire regulations (which added more required sprinklers and continued compliance to NFPA 13), the licensee did not review the previous issue to ensure sufficient pressure would be maintained with the newly required systems. When identified by the NRC, the licensee performed additional calculations to demonstrate that one pump could provide sufficient pressure based on current pump performance. However, the licensee also discovered that current surveillance procedures for the pumps were inadequate, in that, for the full range of allowed performance; pumps could pass the tests yet be below the requirements of the new systems. The licensee initiated action to change the procedures.

The finding was more than minor because adversely affected the Protection Against External Factors (Fire) attribute of the Mitigating Systems Cornerstone. The licensee failed to incorporate previous issues with fire pump starting setpoints while validating fire system performance under the new NFPA–805 fire regulations and that failure impacted the design control attribute of the mitigating system cornerstone. Specifically, the licensee did not ensure that at least 7 psi would be available at all required sprinkler heads, as required by NFPA 13. The inspectors determined the finding had an associated cross-cutting aspect in the Problem Identification and Resolution area,

specifically, P.5, Operating Experience. The licensee did not effectively evaluate and implement relevant internal operating experience with respect to the adoption of new fire protection regulations. As a result, a previously identified NRC issue was not assessed with regard to new demands on the fire protection system.

Inspection Report# : 2015001 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Auxiliary Feedwater Pump Declared Operable Without All Post-Maintenance Testing Complete
The inspectors identified a finding of very-low safety significance with an associated NCV of TS 5.4.1.a, "Procedures," for the failure to perform all required post-maintenance testing (PMT) before declaring the Unit 1 West Motor-Driven Auxiliary Feedwater Pump operable following maintenance. Following work to repair degraded room cooler piping for the pump, Essential Service Water (ESW) was restored to the piping. A report was made to the control room that no leakage was identified. During the following shift, after vibration testing was complete, operations staff reviewed the status of other maintenance tasks. In the electronic work management system, it was noted that a task to perform a leak check was in "Finished" status. Based on this review and the earlier report of no leaks, the associated Auxiliary Feedwater (AFW) pump was declared operable. However, approximately one hour later, the control room received a report that there were leaks from the pump's room cooler. Subsequent investigation by the licensee revealed that when the pump was declared operable, the American Society for Mechanical Engineers (ASME) Code-required leakage check had not been completed yet. The task for the leak check had actually been closed to another "contingency" task, which the operations staff did not believe was applicable when declaring the pump operable. Contrary to procedure PMP–2291–WMP–001, "Work Management Process Flowchart," the licensee did not ensure PMTs were complete and adequate for the work scope. The licensee declared the cooler and the pump inoperable and addressed the leakage.

The finding is more than minor because it adversely affected 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 licensee returned the AFW system to an operable status prior to completing PMT. Further, the inspectors noted other recent examples of safety-related equipment that had been declared operable before the appropriate PMTs had been performed, indicating a more programmatic issue. In one case, new welds on charging system piping did not receive the ASME-Code inspections prior to the system being restored. In another instance, ESW flow was prematurely restored to a new control room chiller. As a result, a train of ESW and an associated AFW cooler became inoperable. The finding screened as Green, or very-low safety significance, because it did not represent an actual loss of function beyond Technical Specification allowed outage times. The finding had an associated cross-cutting aspect in the area of Human Performance; specifically, the aspect of H.4, "Teamwork," because the performance deficiency occurred, in part, due to communication issues between and within organizations.

Inspection Report# : 2015001 *(pdf)*

Barrier Integrity

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation

Inadequate Acceptance Criteria for Containment Spray Heat Exchanger Inspections
The inspectors identified a finding of very-low safety significance, and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow the containment spray (CS) heat exchanger inspection procedure. Specifically, the licensee did not develop acceptance criteria applicable for the visual inspection of these heat exchangers. The licensee entered this finding into their Corrective Action Program (CAP) to evaluate and resolve, including developing applicable visual inspection acceptance criteria for the CS heat exchangers.

The performance deficiency was determined to be more than minor because it was associated with the Barrier Integrity cornerstone attribute of structures, systems, components (SSCS), and barrier performance, and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) can protect the public from radionuclide releases caused by accidents or events. The finding screened as very-low safety significance (Green) because it did not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, or heat removal components, and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors determined this finding had an associated cross-cutting aspect in the area of Human Performance because the licensee did not stop when faced with uncertain conditions. Specifically, the licensee did not develop shell-side visual inspection acceptance criteria because they did not challenge the applicability of the guidance contained in their procedures.

Inspection Report# : 2015001 *(pdf)*

Emergency Preparedness

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Changes to Minimum 60-Minute Emergency Responder Staffing Without Prior Approval
The inspectors identified a finding of very low safety significance with an associated Severity Level IV (SL IV) Non-Cited Violation of Title 10, Code of Federal Regulations (CFR) 50.54(q)(3) and 10 CFR 50.54(q)(4) related to a staffing change in the licensee's Emergency Plan that reduced the effectiveness of the Plan, which was made without prior NRC approval. Specifically, in March 2004, the licensee made changes to wording in the Donald C. Cook Emergency Plan that allowed two Radiation Protection (RP) Technician positions to be augmented by staff that were not qualified RP Technicians. This issue was placed in the licensee's Corrective Action Program and was corrected by revising the Emergency Plan to the approved augmented staffing minimum.

The finding was of more than minor significance because it was associated with the Emergency Preparedness Cornerstone attribute of Procedure Quality, and affected the cornerstone objective of ensuring the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, a failure to evaluate changes to the Emergency Plan as required by 10 CFR 50.54(q)(3) resulted in unacceptable changes made to the plan that decreased its effectiveness without prior NRC approval as required by 10 CFR 50.54(q)(4) and reduced the licensee's capability to perform an emergency planning function in the event of a radiological emergency. The finding was of very low safety significance because it was a failure to comply that did not result in a loss of the planning standard function. In accordance with Section 6.6.d of the NRC Enforcement Policy, this violation was categorized as SL IV because it involved the licensee's ability to meet or implement a regulatory requirement not related to assessment or notification such that the effectiveness of the Emergency Plan decreases. The inspectors concluded that because the performance deficiency involved a change to

the licensee's Emergency Plan in March 2004, this issue would not be reflective of current licensee performance and no cross cutting aspect was identified.

Inspection Report# : 2015003 *(pdf)*

Occupational Radiation Safety

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

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