

Perry 1

3Q/2016 Plant Inspection Findings

Initiating Events

Significance: G May 27, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Comply with ASME Code Requirements for Repair on Code Class 1 Component (Section 40A2.1)

A finding of very-low safety significance (Green) and associated NCV of 10 CFR 50.55a(g)(4) was identified by the inspectors for the licensee's failure to maintain the American Society of Mechanical Engineers (ASME) Code Class 1 component in accordance with ASME Code Section XI requirements. Specifically, the licensee failed to measure and document the method of measuring the cavity created after removal of indications on the reactor water clean-up line prior to return to service.

The inspectors determined that the licensee's failure to maintain the ASME Code Class 1 component in accordance with ASME Code Section XI requirements was a performance deficiency. This performance deficiency was found to be more-than-minor, and a finding, because the performance deficiency, if left uncorrected could become a more significant safety concern. Specifically, absent NRC identification, the licensee would not have questioned the potential challenge to component functionality since the cavity measurements were not performed. This condition could potentially lead to the failure of the reactor water clean-up bottom head drain, which in turn, could lead to a potential loss of reactor coolant. The inspectors reviewed the finding using Attachment 0609.04, "Initial Characterization of Findings," Table 3 – SDP Appendix Router. The inspectors answered 'No' to the question in Section A of Table 3 and therefore the finding was evaluated using the SDP in accordance with IMC 0609, "The Significance Determination Process (SDP) for At-Power Operations," Appendix A, Exhibit 1, "Initiating Events Screening Questions". The inspectors answered "No" to the questions in Exhibit 1 and determined this finding to have a very-low safety significance (Green). The inspectors determined that this finding has a cross-cutting aspect in the area of Human Performance, Design Margin, for the licensee's failure to maintain equipment within design margins. Specifically, the licensee staff failed to ensure that metal removal performed on an ASME Code Class 1 component did not result in a condition where the minimum design wall thickness of the component was compromised, and therefore, failed to ensure design margin was maintained. [H.6]

Inspection Report# : [2016007](#) (*pdf*)

Significance: G Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Properly Implement System Operating Instructions to Maintain Control of Reactor Pressure Vessel Level

A finding of very low safety significance and an associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1., "Procedures," was self-revealed on January 24, 2016, when an unplanned automatic reactor protection system (RPS) actuation occurred as a result of the licensee's failure to correctly implement the steps outlined in procedure SOI-C34, "Feedwater Control System," Section 4.2.12.c to balance inservice flow controller outputs. Specifically, while in the process of reducing power to allow for a drywell entry to determine the location of an unidentified leak into the drywell floor drain sump, the operators failed to control reactor pressure vessel water level during shifting of

feedwater pumps from a turbine-driven reactor feed pump to the motor-driven reactor feed pump, resulting in a RPS actuation initiated on reactor vessel water Level 8, shutting down the reactor. Following the reactor scram, the licensee took immediate actions to restore and maintain RPV water level in accordance with procedure ONI-C71-1, "Reactor Scram," Revision 20. The issue was entered into the licensee's corrective action program as CR 2016-01063.

The licensee's failure to properly implement the steps in the procedure was a performance deficiency that was determined to be more than minor and thus a finding, because it was associated with the Initiating Events cornerstone attribute of human performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was determined to be of very low safety significance because it did not result in the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. This finding has a cross-cutting aspect in the area of human performance, resources, because the licensee failed to ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. Specifically, the licensee failed to provide adequate, procedural guidance on when to conduct the feedwater pump shift.

Inspection Report# : [2016001](#) (*pdf*)

Significance: G Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Control Welding and Inspection Activities to Maintain Reactor Coolant System Integrity

A finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion IX, "Control of Special Processes," was self-revealed on January 24, 2016, for the licensee's failure to control welding and inspection activities during the replacement of the reactor recirculation loop 'A' pump discharge valve vent line during the 2015 refueling outage. When identified as the source of reactor boundary leakage in January 2016, the licensee determined that the weld did not meet the requirements on the design drawing and that the quality control (QC) inspection should have identified the non-conforming weld. The issue was entered into the licensee's corrective action program as CR 2016-01071. Corrective actions included installation of an alternative pipe and cap to replace the failed vent line appendage, plugging and capping of the reactor recirculation loop 'A' flow control valve vent line appendage and performed a weld build up on the reactor recirculation loop 'B' flow control valve vent appendage line.

The inspectors determined that the licensee's failure to control welding and inspection activities was a performance deficiency that was determined to be more than minor and thus a finding, because it was associated with the Initiating Events cornerstone attribute of human performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was determined to be of very low safety significance because it was determined that after a reasonable assessment of degradation, the leak would not have exceeded the reactor coolant system leak rate for a small-break loss of coolant accident (LOCA) and the leak would not have affected other systems used to mitigate a LOCA (e.g., an interfacing system LOCA). This finding has a cross-cutting aspect in the area of human performance, resources, because the licensee failed to ensure that personnel, equipment, procedures, and other resources were available and adequate to support nuclear safety. Specifically, the licensee failed to provide additional precautions, controls, and oversight for the personnel performing the welding activities, inspection activities, and supervisory activities, such that the welder, QC inspector, and supervisor were able to complete a weld that met the requirements of the design drawing and to perform an adequate inspection of the weld to determine that it met the acceptance criteria established by the design drawing.

Inspection Report# : [2016001](#) (*pdf*)

Significance: G Mar 28, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Provide Instructions to Completely Vent Reference Legs

A self-revealed finding and an associated NCV of Title 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified for the licensee’s failure to prescribe instructions appropriate to the circumstance into procedures for an activity affecting quality. Specifically, the licensee failed to incorporate instructions into procedures to fill and vent all portions of the reactor water level reference leg purge system. This issue has been entered the issue into the CAP as CR 2016–02716 to provide a process for the activities.

The failure to prescribe instructions appropriate to the circumstance into procedures for an activity affecting quality was a performance deficiency. The performance deficiency was more than minor because it was associated with the configuration control performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenged critical safety functions during shutdown as well as power operations and was therefore a finding. Specifically, gas left in the reactor water level instrument reference leg purge system during maintenance equipment alignment was known to have the potential to interfere with the proper operation of pressure and level indicators relied upon for safety functions, as documented in Generic Letter 93–03. The finding was determined to be of very low safety significance (Green) because the finding did not result in exceeding the reactor coolant system leak rate for a small loss of coolant accident (LOCA), cause a reactor trip, involve the complete or partial loss of a support system that contributes to the likelihood of, or caused, an initiating event and did not affect mitigation equipment. The inspectors determined this finding had a cross-cutting aspect of challenge the unknown in the human performance area where individuals stop when faced with uncertain conditions and risks are evaluated and managed before proceeding. Specifically, the technicians involved in the April 18, 2015, system recovery activities did not stop when faced with an uncertain condition, communicate with supervisors, nor consult system experts to resolve the condition prior to continuing work activities. Since this condition was not placed into the corrective action process at the time, no further consideration was given to venting the reference leg portion of the reactor water level reference leg purge system.

Inspection Report# : [2016008](#) (*pdf*)

Significance: G Mar 28, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Hardcard Development Failed to Follow Procedure Change Process

The inspectors identified a finding of very low safety significance and an associated non-cited violation (NCV) of Title 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” for the licensee’s failure to follow fleet procedure NOP–SS–3001, “Procedure Review and Approval,” and to ensure that a newly developed hardcard was properly reviewed and approved prior to implementation. Specifically, the licensee characterized the hardcard development and implementation as only an administrative change, and was thereby exempted from the fleet procedure review process for new procedures. The licensee entered this finding into the corrective action program (CAP) as condition report (CR) 2016–03033 and planned to perform a causal review to ensure that actions taken in response to information provided in operations administrative instruction, OAI–1703, “Hardcards,” have received appropriate review under 10 CFR 50.59.

The inspectors determined that the failure to follow the licensee’s fleet and site-specific procedures to ensure that a newly developed hardcard was properly reviewed and approved prior to implementation was a performance deficiency. The performance deficiency was more than minor because, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, by not performing review and approval activities in accordance with established procedures, the licensee might unintentionally challenge the operators by

requiring equipment manipulation that impose unnecessary plant transients, which would result in unwarranted challenges to safety related equipment. Additionally, the performance deficiency was more than minor because it was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown, as well as power operations, and was therefore a finding. The finding was determined to be of very low safety significance because the finding did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors determined this finding had a cross-cutting aspect of conservative bias in the human performance area where individuals use decision making-practices that emphasize prudent choices over those that are simply allowable and a proposed action is determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, when the licensee determined to develop the hardcard procedure as an administrative change, the decision precluded the opportunity for the licensee to properly evaluate that the procedure actions did not adversely impact existing station procedures and equipment.

Inspection Report# : [2016008](#) (*pdf*)

Significance:  Oct 23, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure that Systems, Structures, and Components Necessary to Achieve and Maintain Hot Shutdown Conditions were Free of Fire Damage without Repair Actions (Section 1R05.1b)

The inspectors identified a finding of very low safety significance and an associated NCV of Technical Specifications (TS) Section 5.4.1.a for the licensee's failure to perform fire watches in two fire areas for a non-functional fire barrier. Specifically, the licensee failed to perform fire watches as required by Section 16.D(1)a.(1) of Attachment 3 to procedure PAP-1910, "Fire Protection Program." The licensee entered the issue into their Corrective Action Program (CAP), and added the two fire areas to the fire watch list.

The inspectors determined that the performance deficiency was more than minor because the finding, if left uncorrected, would become a more significant safety concern. Specifically, by failing to perform fire watches the licensee may not have been able to identify transient combustible materials that could have impacted the unprotected circuits associated with this deficiency in the event of a fire. This finding was of very low safety significance because it only impacted one train of equipment important to safety. This finding has a cross-cutting aspect in the area of Human Performance, Documentation because the licensee did not create and maintain complete, accurate, and up-to-date documentation. Specifically, when the licensee developed the fire watch list they did not include all impacted fire zones as listed in the initial impairment. [H.7]

Inspection Report# : [2015008](#) (*pdf*)

Mitigating Systems

Significance:  Aug 12, 2016

Identified By: NRC

Item Type: FIN Finding

Failure to Implement a Periodic Replacement Program for FLEX Hoses

- Green. A finding of very low safety significance was identified by the inspectors for failing to establish a periodic replacement program for the high-temperature rated hoses used during a mitigating strategy for suppression pool cooling. Specifically, the licensee failed to create a periodic replacement program for high temperature FLEX hoses based on the vendor recommendation of a six year shelf-life or justify deviation from the recommendation. The licensee entered this issue into the corrective action program as CR-2016-09776 with an action to generate the

appropriate repetitive task for periodic replacement of the high-temperature rated hose. No violation of NRC requirements were identified.

This performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects 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), and is therefore a finding. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," appendix M, "Significance Determination Process using Qualitative Criteria," informed by draft appendix O, "Significance Determination Process for Mitigating Strategies and Spent Fuel Pool Instrumentation (Orders EA-12-049 and EA-12-051)." The finding screened as very low safety significance, Green, because the inspectors answered no to all Appendix O questions. This finding had a cross-cutting aspect of Procedure Adherence in the area of Human Performance because the licensee failed to follow procedural guidance to replace hoses based on vendor recommendations. (H.8)

Inspection Report# : [2016009](#) (pdf)

Significance:  May 27, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Document 50.59 Evaluation for Replacement of a Manual Action with an Automatic Action (Section 1R17.1.b)

The inspectors identified a Severity Level IV, NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50.59, "Changes, Tests, and Experiments," having very low safety significance (Green) for failure to document the basis for performing a plant modification where a manual operator action was replaced with an automatic action. Specifically, the licensee did not evaluate whether adding a safety related function to a nonsafety-related component was within the licensing basis of the facility.

The inspectors determined that the failure to perform a 10 CFR 50.59 evaluation for Plant Modification 11-0794 was contrary to 10 CFR 50.59(d)(1) and was a performance deficiency. The performance deficiency was determined to be more-than-minor and a finding, because the finding impacted mitigating systems cornerstone attribute of Design Control and adversely affected the Cornerstone Objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, this plan modification added a Safety Related function to a Nonsafety-Related component and, therefore, impacted the availability, reliability, and capability of the Safety-Related Battery Room ventilation system and the Safety-Related Motor Control Center, Switchgear, and Miscellaneous Electrical Equipment Area ventilation system. In addition, the associated violation was determined to be more-than-minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The inspectors determined that finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process." Using Attachment 0609.04, "Initial Characterization of Findings," Table 2 the inspectors determined that the finding affected the Mitigating Systems cornerstone. As a result, the inspectors evaluated the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, for the Mitigating Systems cornerstone. The inspectors answered "No" to question A.4 in Exhibit 2 – Mitigating System Screening Questions. Specifically, the inspectors determined the finding did not represent an actual loss of the Battery Room ventilation system or Motor Control Center, Switchgear, and Miscellaneous Electrical Equipment Area ventilation system because the automatic action had not been implemented at the time of the finding. Therefore, the inspectors determined the significance of this finding to be of very-low safety significance (Green). In accordance with Section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very-low safety significance (i.e., green finding). The inspectors determined the finding was associated with the cross-cutting aspect of Procedure Adherence in the area of Human Performance, because the licensee failed to follow the screening criteria in Attachment 2 of Procedure NOBP-LP-4003A, FENOC 10 CFR 50.59 User Guidelines. [H.8]

Inspection Report# : [2016007](#) (pdf)

Significance: G May 27, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Use of Unapproved Standard for Site Flooding Modifications of Analysis (Section 1R17.2.b)

The inspectors identified a Severity Level IV, NCV of 10 CFR 50.59, “Changes, Tests, and Experiments,” having very-low safety significance (Green) for the licensee’s failure to conclude that site flooding modifications and associated analysis included a standard that resulted in a departure from the method of evaluation as described in the Updated Final Safety Analysis Report. Specifically, the licensee used a new method for evaluation of design basis flooding at Perry Nuclear Power Plant that is different from the method described in the Updated Final Safety Analysis Report and not approved by the NRC.

The inspectors determined that the licensee’s use of an unapproved methodology for site flooding modifications and associated analysis that constituted a departure from a method of evaluation was contrary to 10 CFR 50.59(c)(2)(8) and was a performance deficiency. Specifically, the licensee used a new method for evaluation of design basis flooding at Perry Nuclear Power Plant that is different from the method described in the Updated Final Safety Analysis Report and not approved by the NRC. The performance deficiency was determined to be more-than-minor, and a finding, because it affected the cornerstone attribute of protection against external factors and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. In addition, the associated violation was determined to be more-than-minor because the inspectors determined that there was a reasonable likelihood that the changes would have required prior NRC approval. The inspectors determined that finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process”. Using Attachment 0609.04, “Initial Characterization of Findings,” Table 2 the inspectors determined that the finding affected the Mitigating Systems cornerstone. As a result, the inspectors evaluated the finding using Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, for the Mitigating Systems cornerstone. The inspectors answered “Yes” to question A.1 in Exhibit 2 – Mitigating Systems Screening Questions. Specifically, the inspectors determined the finding did not result in systems, structures, and components not being able to maintain their operability or functionality. Therefore, the inspectors determined the significance of this finding to be of very-low safety significance (Green). In accordance with Section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very-low safety significance (i.e., green finding). The inspectors determined that this finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Problem Identification, for the licensee’s failure to identify issues completely, accurately, and in a timely manner. Specifically, the licensee’s 50.59 review committee failed to accurately identify the methodology change concern in Evaluation 14-01234 during a review documented in CR2015-14025. [P.1]

Inspection Report# : [2016007](#) (pdf)

Significance: G Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Take Actions to Prevent a Loss of Safety Function during Reactor Recirculation Pump Downshift

A finding of very low safety significance and an associated NCV of TS 5.4.1, “Procedures,” was self-revealed on January 24, 2016, when a loss of safety system function occurred as a result of the operators failing to take steps to prevent all operable average power range monitors (APRMs) from becoming out of specification in the non-conservative direction after a recirculation pump shift to slow speed. Specifically, while in the process of reducing power to allow for a drywell entry at low power, the recirculation pumps were shifted and all operable APRMs went

out of specification low, which is the non-conservative direction. The operators immediately declared the APRMs inoperable and took actions to restore the operability of at least one APRM in each channel. The issue was entered into the licensee's CAP as CR 2016-01058.

The licensee's failure to take action to prevent all operable APRMs from going out of calibration low, despite understanding the cause, was determined to be more than minor and thus a finding, because it was associated with the Mitigating Systems cornerstone attribute of human performance 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 finding was determined to be of very low safety significance because it did not result in the loss of reactivity control systems beyond a single trip signal function and did not result in a mismanagement of reactivity by the operators. This finding has a cross-cutting aspect in the area of human performance, avoid complacency, for knowing that the APRMs would go out of calibration because of the pump shift but without regard for the inherent risk while expecting the successful outcome that at least one would stay in calibration without any consideration of potential actions that could have been taken to prevent the loss of safety function and reportable condition.

Inspection Report# : [2016001](#) (*pdf*)

Significance:  Mar 28, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Traceability of Safety Related Fuses

The inspectors identified a finding of very low safety significance and an associated NCV of Title 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts, and Components," for the licensee's failure to assure that identification of items was maintained by appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. Specifically, the licensee failed to maintain traceability of safety related fuses installed in safety related systems. The licensee has entered this issue into the CAP as CR 2016-02048 and CR 2016-02258. Corrective actions being performed by the licensee include evaluating implementation of procedure

NOP-WM-4300 for documenting use of parts in safety related systems and issuing work orders to determine where the potentially defective fuses were installed in the Division 2 and 3 safety related buses for replacement.

The inspectors determined that the failure to assure that identification of items was maintained by appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item was a performance deficiency. Specifically, the licensee failed to maintain traceability of safety related fuses installed in safety related systems. The performance deficiency was more than minor because, if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, identification and control measures are designed to prevent the use of incorrect or defective materials, parts or components which could render safety systems inoperable. Additionally, the performance deficiency was more than minor because it is associated with the equipment 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 and was, therefore, a finding. The finding was determined to be of very low safety significance because the finding was not a deficiency affecting the design or qualification of a mitigating structure system or component, did not represent a loss of system safety function, did not represent an actual loss of function of a single train or two separate trains for greater than its allowed outage time, and did not represent an actual loss of safety function of one or more non-technical specifications trains of equipment during shutdown for equipment designated as high safety significant for greater than 24 hours. The inspectors determined this finding had a cross-cutting aspect of documentation in the human performance area where the organization creates and maintains complete, accurate and up-to-date documentation. Specifically, a review by the licensee of existing work orders that may have utilized the fuses did not clearly document if the fuses were installed, returned to the warehouse or scrapped.

Inspection Report# : [2016008](#) (pdf)

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure Required 3 Hour Fire Barriers Were In-Place

The inspectors identified a finding of very low safety significance and an associated NCV of Perry Operating License Condition 2.C(6), Fire Protection, for the licensee's failure to maintain a three-hour fire barriers as required by the Updated Safety Analysis Report (USAR). Specifically, the inspectors identified a through-wall hole, approximately two feet wide and two feet tall in the common wall between the Unit 2, Division 1 and Division 2, direct current (DC) switchgear rooms and another hole, approximately one foot wide and one foot tall between the Unit 2, Division 2 DC switchgear room and the outside hallway.

The two through-wall holes were determined to be a performance deficiency associated with compliance to the licensee's fire protection program because the walls are described in the USAR as three-hour fire barriers for the rooms in question. The performance deficiency was more than minor; and thus a finding, because it was associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone 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 that the finding was of very low safety significance through analysis of the issue as a fire confinement problem and the fact that the reactor would still be able to reach and maintain safe shutdown despite the deficiency. The inspectors identified no cross-cutting issues associated with this finding because the condition has existed since at least July 2011, and therefore, is not indicative of current plant performance.

Inspection Report# : [2015004](#) (pdf)

Significance:  Dec 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Properly Implement the System Operating Instruction to Restore RHR "B" to Service

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.4.1, "Procedures," was self-revealed on November 4, 2015 when operators failed to follow procedures and caused an increase in level of the suppression pool. Specifically, during the process of recovering the "B" RHR system in accordance with system operating instruction SOI-E12, "Residual Heat Removal System," the operators failed to follow an "If/Then" statement and did not isolate the alternate keep-fill system prior to starting the RHR pump to sweep voids into the suppression pool. This resulted in the condensate transfer system remaining lined up to "B" RHR train and transfer of an estimated 15,000 gallons of condensate water to the suppression pool. The resultant increasing suppression pool level caused a suction swaps for both HPCS and RCIC to the suppression pool. The licensee took immediate actions to suspend the evolution, restored the suppression pool level to the middle of the acceptable band, and restored the suction sources for HPCS and RCIC to the condensate storage tank. A human performance event response investigation was conducted and the operating crew was remediated. The issue was entered into the licensee's CAP as

CR 2015-15089.

The operator's failure to follow the procedure was a performance deficiency that was determined to be more than minor; and thus a finding, because it was associated with the Mitigating Systems Cornerstone attribute of equipment performance 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 finding was determined to be of

very low safety significance because it did not represent an actual loss of function of one or more non-TS trains of equipment designated as high safety-significance in accordance with the licensee's Maintenance Rule Program for greater than 24 hours. This finding has a cross-cutting aspect in the area of problem identification and resolution, problem resolution, because the licensee had not solved a similar issue in third quarter of 2015 that involved the same contributing factors of poor maintenance supervision, inadequate pre-job briefs and poor shift management oversight. [P.3]

Inspection Report# : [2015004](#) (pdf)

Significance:  Oct 23, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Inspect Penetration Seals Within the Required Time Frequency (Section 1R05.2b)

The inspectors identified a finding of very low safety significance (Green), and associated NCV of license condition 2.C(6) for the licensee's failure to ensure that systems, structures, and components necessary to achieve and maintain hot shutdown conditions were free of fire damage. Specifically, the licensee did not ensure that circuits associated with the emergency closed cooling (ECC) heat exchanger 'A' temperature control valve 1P42-F665A were free of fire damage for a fire in the control room and instead relied on lifting leads and replacing fuses to take manual control of the valve. The licensee entered the issue into their CAP, and credited the existing repair activities in the procedure. The inspectors determined that the performance deficiency was more than minor because a fire in the control room could result in the licensee losing the ability to remotely control the ECC heat exchanger 'A' temperature control valve and needing to take manual control of the valve. The finding was of very low safety significance because it did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event. The finding did not have a cross-cutting aspect associated with it because it was not reflective of current performance

Inspection Report# : [2015008](#) (pdf)

Significance:  Oct 23, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Provide Adequate Guidance to Override Spurious CO2 Initiation Signal in the Diesel Generator Rooms (Section 1R05.6b)

The inspectors identified a finding of very low safety significance (Green), and an associated NCV of license condition 2.C(6) for the licensee's failure to adequately implement and maintain surveillance procedures and work processes associated with fire barrier and penetration seal inspections. Specifically, the licensee failed to perform fire barrier penetration seal inspections for 42 penetration seals at least once per 15 years (plus an additional 25 percent grace period) as required by the Fire Protection Program. The licensee entered the issue into their CAP, and will inspect the accessible portions of the barriers and will perform a full inspection at the next available opportunity. The inspectors determined that the performance deficiency was more than minor because the licensee's failure to inspect the fire barrier penetrations could result in not identifying degraded seals which could affect their ability to prevent a fire from spreading from one fire area to another. The finding was of very low safety significance because the failure to inspect a portion of fire barrier penetration seals did not impact the plant's ability to reach and maintain safe shutdown. The finding has a cross-cutting aspect in the area of Human Performance, Work Management because the licensee improperly closed a notification to track the inspection of fire barrier penetrations without creating a work order. [H.5]

Inspection Report# : [2015008](#) (pdf)

Significance:  Oct 23, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Fire Watches (Section 1R05.10b)

The inspectors identified a finding of very low safety significance (Green), and an associated NCV of TS Section 5.4.1.a for the licensee's failure to have adequate procedural guidance in their fire response procedure. Specifically, Procedure ONI-P54, "Fire," Revision 19 did not list all the fire areas where a potential fire induced spurious carbon dioxide (CO2) initiation in the emergency diesel generator (EDG) room could occur. The licensee entered this issue into their CAP, and established hourly fire watches for the affected areas.

The inspectors determined that the performance deficiency was more than minor because a fire in any of the affected fire zones could damage circuits for the nonsafety related CO2 systems for the EDG rooms causing a potential spurious CO2 initiation in the diesel rooms and affecting the operation of the ventilation fans and dampers in the diesel rooms. The finding was of very low safety significance because it did not affect the ability to reach and maintain a stable plant condition within the first 24 hours of a fire event. The finding did not have a cross-cutting aspect associated with it because it was not reflective of current performance.

Inspection Report# : [2015008](#) (pdf)

Barrier Integrity

Emergency Preparedness

Significance:  Aug 12, 2016

Identified By: NRC

Item Type: FIN Finding

Failure to Establish a Periodic Maintenance Program for Communications Equipment Associated with FLEX

• Green. A finding of very low safety significance was identified by the inspectors for failing to establish period tasks to check the operation of recently installed FLEX related communications equipment in accordance with the Perry Nuclear Power Plant FLEX Final Integrated Plan Report. The licensee entered this issue into the corrective action program as CR-2016-09746 and 2016-09747 to develop the appropriate periodic maintenance tasks.

The finding was determined to be more than minor because it was associated with the Emergency Preparedness Cornerstone Attribute of Facilities and Equipment which includes Maintenance Surveillance and Testing of Facilities, Equipment and Communications Systems. Specifically, communications equipment, particularly batteries, degrade over time and without periodic checks to verify functionality, the equipment might not be available for response to a potential accident. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," appendix M, "Significance Determination Process using Qualitative Criteria," informed by draft appendix O, "Significance Determination Process for Mitigating Strategies and Spent Fuel Pool Instrumentation (Orders EA-12-049 and EA-12-051)." The finding screened as very low safety significance, Green, because the inspectors answered no to all Appendix O questions. This finding has a cross-cutting aspect in the area of Human Performance, Work Management because a task to create the activities was initiated, but the completion date was postponed well past the date at which the licensee declared compliance with mitigating systems orders. (H.5)

Inspection Report# : [2016009](#) (pdf)

Occupational Radiation Safety

Significance:  Dec 18, 2015

Identified By: NRC

Item Type: VIO Violation

Unqualified Radiation Protection Manager

Green. The inspectors identified a finding of very low safety significance, and an associated violation of Technical Specification (TS) 5.3.1 when an unqualified individual was designated and performed the duties of the Radiation Protection Manager since early 2015. Specifically, the individual did not have the required experience and background necessary to provide sound judgement for safe and successful operation of the plant. This designation occurred after an April 29, 2015 report documented an internal review by the licensee's Fleet Oversight group that concluded that the candidate did not meet qualifications of TS 5.3.1. The NRC determined that this violation did not meet the criteria to be treated as a Non-Cited Violation because this issue was not documented in the licensee's Corrective Action Program. In addition, the licensee's staff communicated to the inspector that no violation of TS had taken place.

The inspectors determined that the performance deficiency was more than minor in accordance with IMC 0612 because it was associated with the human performance attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that the lack of experience and background necessary to provide sound judgement for the Radiation Protection Program affects the licensee's ability to control and limit radiation exposures. The finding was determined to be of very low safety significance (Green) in accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," because it was not an as-low-as-reasonably-achievable planning issue, there was neither an overexposure nor a substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The inspectors concluded that the cause of the issue involved a cross-cutting aspect in the area of Human Performance, change management, because the licensee did not use a systematic process for evaluating and implementing change so that nuclear safety remains the overriding priority. (Section 40A2) (H.3)

Inspection Report# : [2015010](#) (*pdf*)

Public Radiation Safety

Significance:  Jun 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Comply with ODCM during Liquid Effluent Discharge

A finding of very low safety significance, and an associated NCV of Technical Specification (TS) 5.5.1 was identified by the NRC inspectors for the failure to follow Offsite Dose Calculation Manual (ODCM) requirements during the execution of a liquid effluent discharge. The license entered this event into their CAP as CR-2016-07572 and the individual was coached regarding procedure compliance.

The inspectors determined that the performance deficiency was more than minor because the issue impacted the program and process attribute of the Public Radiation Safety cornerstone, and adversely affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. Specifically, on February 1, 2016, a liquid effluent discharge was performed with the radwaste to essential service water discharge monitor inoperable and without the required independent verification of release rate calculations. The finding was determined to be of very low safety significance (Green) because it was not a failure to implement the Effluent Program, nor did public dose exceed Appendix I or Title 10 of the Code of Federal Regulations (CFR), Part 20.1301(e) criteria. The inspectors

concluded that the finding had a cross-cutting aspect in the human performance area of procedure adherence because procedures for this task were not followed.

Inspection Report# : [2016002](#) (*pdf*)

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.

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Miscellaneous

Last modified : December 08, 2016