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Summer – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Dec 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Accomplish Procedure for Foreign Material Exclusion Control Involving Failure of a Safety-Related Breaker

Green. The inspectors identified a Green, non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," involving the failure to accomplish safety-related (SR) station administrative procedure, SAP-0363, "Foreign Material and Debris Control," Revision 8H, for foreign material exclusion (FME) control during a SR breaker refurbishment. A subsequent breaker failure occurred due to foreign material. The licensee immediately initiated corrective actions to repair the breaker, and the licensee entered condition report, CR-16-03099, in their CAP.

The inspectors reviewed IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, and determined that the PD was more than minor and therefore a finding because it impacted the Mitigating Systems Cornerstone by adversely affecting the cornerstone objective to ensure in part the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the equipment reliability attribute was impacted because foreign material rendered the SR breaker nonfunctional causing inoperability of the pressurizer backup group 2 heaters for greater than the Technical Specification limiting condition for operation. The inspectors used IMC 0609, "Significant Determination Process," Attachment 4, dated October 7, 2016, and Appendix A - Exhibit 2, dated July 1, 2012, and determined that the finding required a detailed risk evaluation. A regional senior risk analyst performed a bounding risk evaluation in accordance with NRC IMC 0609 Appendix A using the VC Summer SPAR model. The finding was modelled as a transient initiator with a loss of the B EDG as a surrogate for the group 2 pressurizer heaters for a 94 hour exposure interval. The dominant sequence was a transient initiator with a consequential loss of offsite power without recovery, failure of the A EDG without recovery leading to a station blackout and loss of core heat removal

after battery depletion. The risk was mitigated by the available normal and group 1 pressurizer heaters. The bounding assessment determined that the performance deficiency represented an increase in core damage frequency of $< 1.0 \text{ E-}6/\text{year}$, a GREEN finding of very low safety significance. The inspectors reviewed IMC 0310, "Aspects Within Cross Cutting Areas," dated December 4, 2014, and determined the cause of this finding involved the cross-cutting area of Problem Identification and Resolution and the aspect of work management, H.5, because the licensee failed to ensure the planning and execution of the respective work order for breaker refurbishment followed SAP-0363 for FME control to support nuclear safety-related work. (Section 40A3.2)

Inspection Report# : 2016004 (*pdf*)

Significance:  Oct 27, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Promptly Identify and Correct a Condition Adverse to Quality for 'B' Emergency Diesel Generator Exhaust Manifold Weld Indications

Green. A self-revealing, Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to promptly identify and correct a condition adverse to quality (CAQ) involving welded joint indications in the 'B' emergency diesel generator (EDG) exhaust manifold. The licensee immediately removed the EDG from service to perform repairs, and the issue was entered into the licensee's CAP as Condition Report CR-16-05421.

The inspectors reviewed Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, and determined the PD was more than minor and therefore a finding, because it affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences and the respective attribute of equipment performance. Specifically, the 'B' EDG was declared operable but degraded or nonconforming due to a circumferential weld failure and resulting separation of an exhaust manifold joint causing a small reduction in EDG power. The inspectors used IMC 0609, "Significant Determination Process," Attachment 4, dated October 7, 2016, and Appendix A - Exhibit 2, dated July 1, 2012, and determined the finding was of very low safety significance or Green because the finding was not a design deficiency or loss of function. The inspectors reviewed IMC 0310, "Aspects Within Cross Cutting Areas," dated December 4, 2014, and determined the cause of this finding involved the cross-cutting area of problem identification and resolution and the aspect of resolution, P.3, because the licensee failed to take effective corrective actions commensurate with an issue's safety significance in that they failed to promptly identify and correct a CAQ involving welded joint indications in the 'B' EDG exhaust manifold. (Section 1R15)

Inspection Report# : 2016004 (*pdf*)

Significance:  Oct 21, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to identify unsealed cabinet Specified by NFPA 805 Section 3.3.1.2(1) (Section 1RO5.15)

Green. The NRC identified a Green, non-cited violation (NCV) of the 10 CFR 50.54(hh)(2) requirements. Specifically, the team identified aspects of the implementation strategy that were inconsistent to support the stated commitments.

The licensee's failure to ensure that credited components needed to implement the strategy were adequate for circumstances consistent with the stated commitments was a performance deficiency (PD). This PD was determined to be more than minor because of the adverse impact to the Mitigating Systems cornerstone objective. Specifically, the PD had the ability of impacting the availability and reliability of the credited strategy in response

to conditions postulated to meet the 10 CFR 50.54hh requirements. The team screened the issue as Green using IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, and determined that further screening was necessary consistent with IMC 0612, Appendix L, "B.5.b Significance Determination Process." Dated December 24, 2009. In this instance, the finding was determined to be of Green significance since no additional strategies were impacted. The licensee initiated CR-16-05266 to address the NRC concerns. (Section 1R05.16)

Inspection Report# : 2016010 (*pdf*)

Significance:  Oct 21, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to ensure credited equipment to support the 50 54hh requirements were adequate (Section 1R05.16)

Green. The NRC identified a Green, non-cited violation (NCV) for the failure to include potentially high-risk fire scenarios in the current fire protection program. In this instance, the team identified unsealed electrical cabinets credited as being sealed.

The licensee's failure to identify and assess the applicable electrical cabinet as a fire scenario in its FSA database was a performance deficiency (PD). This PD was determined to be more than minor because of the adverse impact to the Mitigating Systems cornerstone objective. Specifically, the PD resulted in an incomplete fire risk model. The licensee performed an analysis of the performance deficiency using their fire probabilistic model and the results were that the PD represented a risk increase of $<1.0E-6$ /year in core damage frequency and $<1.0E-7$ /year in large early release fraction. The licensee's results were reviewed by a regional senior reactor analyst (SRA). Additionally, a bounding analysis was performed by the regional SRA in accordance with NRC IMC 0609 Appendix F which concluded that the core damage frequency risk increase due to the PD was $<1.0 E-6$ /year, a GREEN finding of very low safety significance.

The team assessed the issue consistent with IMC 0310, "Aspects Within Cross Cutting Areas," dated December 4, 2014, and determined the finding to have a cross-cutting aspect of Field Presence (H.2) in the Human Performance area because the licensee did not ensure that senior managers and supervisory staff maintained the proper amount of oversight of contractors and supplemental personnel in the performance work activities relevant to fire protection program implementation. The licensee has fire watches in place as a compensatory measure and has entered this issue into their corrective action program as CR-16-05287. (Section 1R05.15)

Inspection Report# : 2016010 (*pdf*)

Significance:  Oct 21, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to meet corrective action requirements consistent with NFPA 805 Section 2.6.3) (Section 40A2)

Green. The NRC identified a Green non-cited violation (NCV) of the V.C Summer Nuclear Station, Unit 1, Renewed Facility Operating License (FOL) Condition 2.C.18 requiring the licensee to implement and maintain in effect all provisions of the approved FPP that complied with 10 CFR 50.48 (c), "National Fire Protection Association Standard NFPA 805." The NRC safety evaluation report (SER) dated February 11, 2015, relied upon an adequate corrective action program to implement the NFPA 805 requirements. NFPA 805 Section 2.6.3, Corrective actions. Specifically, the team identified a failure to adequately classify and

correct conditions adverse to quality (CAQ) in a timely manner.

The licensee's failure to properly assign an action level commensurate to ensure corrective actions were addressed consistent with the NFPA 805, Section 2.6.3 was a PD. The PD was more than minor because, if left uncorrected, it could lead to more significant safety concern. Specifically, the inadequate application of the corrective action program can lead to deficiencies degrading SSCs which can adversely impact the FPP requirements and lead to a more significant safety concern. The finding was screened in accordance with IMC 0612, Appendix B, Issue Screening, dated September 7, 2012, and IMC 0609, Attachment 4, "Characterization of Findings" dated October 7, 2016. A determination was made using IMC 0609, "Significance Determination Process," dated April 29, 2015. Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012 was applicable since the administrative controls in this instance were not associated with transient or hot work activities. Using IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the finding was determined to be of very low safety significance (Green) because it did not represent an actual loss of safety function. The team assessed the finding against the IMC 0310, "Cross-cutting Aspects," dated December 4, 2014, requirements and determined that cross-cutting was applicable. In this instance, the cause of this finding was determined by the team to have a cross-cutting aspect of the Resolution component (P.3) of the Problem Identification and Resolution (PI&R) area. This was selected based upon the inability organization to adequately identify and take effective corrective actions to address issues in a timely manner commensurate administrative procedures to meet the NFPA 805, Section 2.6.3 requirements. The licensee initiated CR-16-05306 and CR-16-05160, Action 1 related to this issue. (Section 40A2) Inspection Report# : 2016010 (*pdf*)

Significance: N/A Oct 21, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet the Quality Requirements Specified By NFPA 805 (Section 1RO5.06)

SL IV. The NRC identified a SL IV, non-cited violation (NCV) of the 10 CFR 50.48(c), "National Fire Protection Association Standard (NFPA) 805," requirements. Specifically, the team identified the licensee's inability to ensure licensing basis information was maintained consistent with administrative procedures to support the NFPA 805 Section 2.2(j) and NFPA 805, Section 2.7 requirements.

The licensee's failure to meet the quality requirements specified by NFPA 805 Section 2.2. (j) and NFPA 805, Section 2.7, Program Documentation, Configuration Control and Quality was a performance deficiency (PD). This PD was determined to be more than minor because it affected the regulatory process. In this instance, the licensee failed to ensure information to support the NFPA 805 licensing commitments was controlled in the manner specified by the requirement. This information served as the basis for the NRC to perform its regulatory function and had the ability to impact the credited analysis relied upon to reach and maintain safe and stable conditions in case of a fire. As a result, the team evaluated the finding using the traditional enforcement (TE) process based upon the guidance in NRC Enforcement Policy and NRC Enforcement Guidance. The team reviewed the NRC Enforcement Guidance, Part II, Section 2.2, "Actions Involving Fire Protection," to aid assessing the significance of the issue and determined the issue to be a SL IV. A cross cutting aspect was not assigned based upon the TE determination. The licensee initiated CR-16-05060, CR-16-05074, CR-16-05160, CR-16-05276, and CR-16-05278 to address the

NRC concerns. (Section 1R05.06)
Inspection Report# : 2016010 (*pdf*)

Significance: N/A Oct 21, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to seek or gain approval for risk-informed changes constituted a self-approved change which is inconsistent with the NFPA 805 requirements (Section 1R17)

SL IV. The NRC identified a SL IV, non-cited violation (NCV) of the 10 CFR 50.48(c), "NFPA 805," requirements. Specifically, a Risk Informed Change was made that was inconsistent with Transition License Condition 2.C.18.(c).1 which stated in part: "Before achieving full compliance with 10 CFR 50.48(c), □risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval." In this instance, the team identified the licensee failed to seek or gain NRC approval for riskinformed changes that had a more than minimal risk impact to the fire protection program during the post-safety evaluation issuance period date of February 11, 2015.

The licensee's failure to obtain NRC approval prior to making any changes to the 2.C.18 license requirements was a performance deficiency (PD). This PD was determined to be more than minor because it impacted the regulatory process. Specifically, the team determined that risk-informed changes made to a commitment specified by license condition 2.C.18.(c).1, which was based upon docketed correspondence from the licensee, required NRC approval. The licensee deviated from the stated commitments without NRC approval which formed the basis for the team decision to evaluate the finding using traditional enforcement (TE) based upon the guidance in NRC Enforcement Policy. The team reviewed NRC Enforcement Guidance, Part II, Section 2.2, Actions Involving Fire Protection, to assess the significance of the issue and determined the issue to be a SL IV. The licensee initiated CR-16-01490 and CR-16-05291. (Section 1R17)

Inspection Report# : 2016010 (*pdf*)

Significance:  Oct 12, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish Procedures for Corrective Actions to Address Conditions Adverse to Fire Protection

Green. The inspectors identified a Green, non-cited violation (NCV) of the V.C. Summer Nuclear Station Operating License, Condition 2.C (18), "Fire Protection Program," for the failure to establish procedures requiring corrective action for conditions, including significant and repetitive, adverse to fire protection. The licensee immediately notified the corrective action program (CAP) supervisor and entered the problem into their CAP as condition report CR-16-05270.

The inspectors reviewed Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, and determined the performance deficiency (PD) was more than minor and therefore a finding because it impacted the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and the related attribute of protection against external factors such as fire. Specifically, the failure to establish corrective action program requirements specific to fire protection with appropriate definitions for significant and repetitive would result in corrective actions not commensurate with the significance of the adverse condition. The inspectors used IMC 0609, "Significant Determination Process," Appendix F, "Fire Protection Significance Determination Process," Attachment 1, dated September 20, 2013, to perform a Phase 1 analysis and determined that the reactor oversight process (ROP) finding was of very low safety significance (Green) based on the response for Question 1.3.1A, in which the reactor was able to

reach and maintain safe shutdown. While the licensee does not have the required corrective actions defined, they have generally addressed conditions adverse to fire protection within the existing corrective action program. The inspectors reviewed IMC 0310, "Aspects Within Cross Cutting Areas," dated December 4, 2014, and determined the cause of this finding involved the cross-cutting area of human performance and the aspect of resources, H.1, because the licensee leadership failed to ensure that adequate procedures were in place to address significant and repetitive conditions adverse to fire protection. (Section 1R05)

Inspection Report# : 2016004 (*pdf*)

Significance:  Sep 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Prescribe Work Instructions for a Temporary Repair on a Safety-Related Component

Green. The inspectors identified a Green, non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," involving the failure to prescribe instructions for a temporary repair of the safety-related 'C' component cooling water (CCW) pump outboard bearing. The licensee entered condition report, CR-16-04576, in their corrective action program for appropriate response.

The inspectors determined that the failure to prescribe documented work instructions of a type appropriate to the circumstances for the temporary repair of the 'C' CCW pump outboard bearing was a performance deficiency (PD). The inspectors reviewed IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, and determined that the PD was more than minor and therefore a finding because it impacted the Mitigating Systems Cornerstone by adversely affecting the cornerstone objective to ensure in part the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the design control attribute was impacted because not prescribing instructions that follow vendor instructions for temporary repairs on the safety-related pump resulted in improper repairs causing reasonable doubt in operability. The inspectors evaluated the finding in accordance with IMC 0609, "Significant Determination Process," Attachment 4 and Appendix A, and determined that the finding was of very low safety significance, Green, because it did not represent an actual loss of a safety-related train since the 'C' CCW pump was operable but degraded. The inspectors reviewed IMC 0310, "Aspects Within Cross Cutting Areas," dated December 4, 2014, and determined the cause of this finding involved the cross-cutting area of Human Performance and the aspect of resources, H.1, because the licensee failed to ensure instructions were adequate and available to support nuclear safety-related work. (Section 4OA2.2)

Inspection Report# : 2016003 (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Sep 30, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Meet HRA Entry Requirements (Two Examples)

Green. The inspectors identified two examples of a Green, self-revealing, non-cited violation (NCV) of Technical Specification (TS) 6.12.1, "High Radiation Area." TS 6.12.1 requires that entries into high radiation areas (HRAs) be controlled with issuance of a radiation work permit (RWP) and that individuals entering these areas be made knowledgeable of the dose rates. Contrary to that, on two separate occasions, workers made entries into HRAs without being issued an appropriate RWP and without being knowledgeable of area dose rates. Specifically, on March 28, 2016, a worker tagging a pump on the auxiliary building (AB) 400-01 slab entered a HRA without the

required radiological briefing and appropriate RWP. Also, on April 18, 2016, a worker performing dry cask welding operations in the fuel handling building entered a HRA without the required radiological briefing and appropriate RWP. The licensee entered these events into their corrective action program as condition reports CR-16-01528 and CR-16-01863.

This finding was more than minor because it is associated with the Occupational Radiation Safety Cornerstone attribute of Human Performance and adversely affects the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The finding was not related to As Low As Reasonably Achievable planning, nor did it involve an overexposure or substantial potential for overexposure and the ability to assess dose was not compromised. Therefore, the finding was determined to be of very low safety significance (Green). This finding involved the cross-cutting aspect of Avoid Complacency (H.12) because in both examples there were repostings, radiation areas were upgraded to HRAs due to changing radiological conditions, and prior to entry the workers failed to stop and get updated conditions and to adhere to the postings.

Inspection Report# : 2016003 (*pdf*)

Public Radiation Safety Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Significance:  Oct 14, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Correct a Condition Adverse to Quality Associated with a Previously Issued NCV (Section 40A1.C.2)

Green. The inspectors identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to correct a condition adverse to quality associated with a previously issued NCV, 05000395/2012004-02, Inadequate Installation of Unit 1 Service Water Piping and Related Pipe Support. The licensee entered the issue in the correction action program as condition report (CR)-16-04621.

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The PD is more than minor because if left uncorrected, the reduction in design margin of the pipe support could affect the Unit 1 SW system's ability to mitigate a seismic event. Specifically, Unit 1 service water (SW) piping and support had been impacted by the reduction in design margin and without formally updating the associated drawings and calculations or restoring to the original design, future modifications to the system could impact the system's ability to mitigate a seismic event. Using Manual Chapter 0609 Attachment 04, "Initial Characterization of Findings," Table 2, dated October 07, 2016, the finding was determined to adversely affect the External Event Mitigating Systems. The inspectors screened the finding using Inspection Manual Chapter (IMC) 0609, Appendix A, "Significance Determination Process (SDP) for Findings at-Power," dated June 19, 2012, and determined that it screened as Green (very low safety significance) because the service water system maintained its functionality to mitigate a seismic event. The inspectors determined that the finding had a cross-cutting aspect in the area of PI&R because the licensee did not

take effective corrective actions to address this issue in a timely manner [P.3]. (Section 40A2)

Inspection Report# : 2016007 (*pdf*)

Current data as of : August 03, 2017

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