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Wolf Creek – Quarterly Plant Inspection Findings

4Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Jun 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Declare Train A Component Cooling Water Inoperable

The inspectors identified a Green non-cited violation of Technical Specification Limiting Condition for Operation 3.7.7 for the licensee's failure to place the unit in MODE 3 within 78 hours with the train A component cooling water system inoperable. Specifically, the essential service water emergency make-up to component cooling water train A valve was not declared inoperable when it was out of service, and as a result, train A component cooling water was out of service for longer than its Technical Specification allowed outage time. The licensee's planned actions include revising Technical Specification Bases 3.7.7 and training operators on the proposed Technical Specification Bases revisions, and the licensee issued an "Essential Reading" document for operators to review. The licensee entered the issue into the corrective action program as Condition Report 111808.

The failure to declare train A component cooling water inoperable is a performance deficiency. This performance deficiency is more than minor, and therefore a finding, because it is associated with the human performance 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 (i.e., core damage). The inspectors evaluated the finding using Exhibit 2, "Mitigating Systems Screening Questions," of Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process (SDP) for Findings At-Power," and determined the finding was of very low safety significance (Green). The inspectors determined that the finding has a human performance cross-cutting aspect in the area of challenge the unknown because individuals did not stop when faced with uncertain conditions, and risks were not evaluated and managed before proceeding. This issue is indicative of current performance because the creation and implementation of the subject clearance order occurred in the last three

years.

Inspection Report# : 2017002 (*pdf*)

Significance: G Mar 31, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Provide Adequate Work Instructions for Preventive Maintenance

Inspection Report# : 2017001 (*pdf*)

Significance: G Dec 31, 2015

Identified By: NRC

Item Type: VIO Violation

Inadequate Measures to Assure SGK05A Issues Were Promptly Corrected

The inspectors identified a Green cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's inadequate measures to assure that corrective action was taken to preclude repetition of a significant condition adverse to quality. Specifically, measures to correct train A Class 1E electrical equipment air conditioning system (SGK05A) issues following two trips of the unit on October 18, 2013, failed to preclude repetition, which resulted in the SGK05A unit tripping twice on May 15, 2015; the train A safety-related batteries, inverters, and alternating and direct current buses being declared inoperable due to the loss of area cooling; two separate Technical Specification 3.0.3 entries; and separate technical specification required reactor power reductions to 93 and 94.7 percent. The licensee's immediate corrective actions included troubleshooting to determine the direct cause of the compressor trips, stationing a dedicated operator following the second trip on May 15, 2015, and subsequently implementing Temporary Modification 15-013-GK-00, which restored compliance. Actions to prevent recurrence following the May 15, 2015, SGK05A trips, documented in apparent cause evaluation 96392, included conducting a seminar with station managers to review lessons learned from the event, completing a change package to replace the SGK05A compressor that has been the source of residual contamination that has led to numerous trips of the unit, and tracking of the timely replacement of the SGK05A compressor with a due date of December 15, 2016. Wolf Creek entered this issue into its corrective action program as Condition Reports 96392 and 96397.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the train A safety-related batteries, inverters, and alternating and direct current buses became inoperable and their capability to respond to initiating events to prevent undesirable consequences was impacted as a result of the SGK05A unit tripping. In accordance with Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and Exhibit 3 of Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012, and April 29, 2015, respectively, the performance deficiency affects a mitigating structure, system, and component. The performance deficiency does not affect the design or qualification of a mitigating structure, system, and component, and the structure, system, and component did not maintain its functionality. Additionally, the finding does not represent a loss of system and/or function, the finding does not represent an actual loss of function of at least a single train for greater than its technical specification allowed outage time or two separate safety systems out-of-service for greater than their technical specification allowed outage time, and the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. Therefore, the inspectors determined that this finding is of very low safety significance (Green). In accordance with Inspection Manual Chapter 0310, "Aspects Within The Cross-Cutting Areas," issued December 4, 2014, the finding has a cross cutting aspect in the area of human performance, resources, because the licensee did not

ensure that personnel, equipment, procedures, and other resources were available and adequate to support nuclear safety. Specifically, senior managers did not ensure successful completion of the replacement of the SGK05A compressor in Refueling Outage 20, which was a missed opportunity that resulted in the SGK05A unit tripping twice on May 15, 2015, as a result of the same direct cause [H.1].

Inspection Report# : 2015004 (*pdf*)

Inspection Report# : 2016009 (*pdf*)

Barrier Integrity

Significance: G Jun 30, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Ensure Safety-Related Valves were Adequately Protected from Internal Flooding Hazards

The inspectors identified a Green non-cited violation of 10 Code of Federal Regulations Part 50, Appendix B, Criterion III, Design Control, for the licensee's failure to establish adequate measures to ensure that safety-related components remained capable of performing their functions. Specifically, the licensee did not have adequate preventive maintenance or testing tasks established to provide reasonable assurance that floor drains would not become clogged and impact the ability of train A safety-related components to perform their expected functions. As a result, a containment isolation valve was not adequately protected. The station's immediate corrective actions included entering the condition into the corrective action program, declaring the subject valves inoperable, and cleaning the debris from the clogged floor drains. The licensee created Work Order 17-429068-000 to evaluate and establish new preventive maintenance tasks for floor drains, and the licensee is continuing with, but had not yet completed, the remainder of the floor drain inspections for other safety-related areas.

The failure to establish adequate measures to ensure that floor drains in safety-related areas remained free of debris and safety-related components remained capable of performing their function is a performance deficiency. This performance deficiency is more than minor, and therefore a finding, because it is associated with the structure, system, and component and barrier performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding using Exhibit 3, "Barrier Integrity Screening Questions," of Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process (SDP) for Findings At-Power," and determined this finding was of very low safety significance (Green). The inspectors determined that the finding has a problem identification and resolution cross-cutting aspect in the area of identification because individuals did not identify issues completely, accurately, and in a timely manner in accordance with the program. Condition Report 90879, documented in January 2015, was an opportunity for the licensee to identify the inadequacy of the floor drain preventive maintenance and testing strategy and reflects current performance.

Inspection Report# : 2017002 (*pdf*)

Emergency Preparedness

Significance: G Jul 12, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Effectiveness of the Emergency Plan upon Loss of Containment High Radiation Monitoring

Green. The inspectors identified a Green, non-cited violation of 10 CFR 50.54(q)(2) which requires that a holder of a nuclear power plant operating license follow and maintain the effectiveness of an emergency plan that meets the requirements in Appendix E of this part and the risk significant planning standards of 10 CFR 50.47(b). Specifically, from March 7, 2017, to July 12, 2017, Wolf Creek Generating Station's response to the loss of containment high

radiation monitors failed to restore capability to classify emergency action levels during a loss-of-coolant accident or main-steam-line-break accident. In response to this issue, the licensee provided additional radiation survey monitoring measures and correlations to monitor radiation in the containment building. This finding was entered into the licensee's corrective action program as Condition Report CR 114274.

The inspectors determined that the failure to maintain the effectiveness of the emergency action levels by providing adequate preplanned methods and compensatory measures for the loss of the containment high range radiation monitors, in accordance with 50.54 (q)(2), was a performance deficiency. This finding was determined to be more than minor because it was associated with emergency response organization performance attribute of the Emergency Preparedness cornerstone and adversely affected the cornerstone objective. Specifically, the failure to maintain the effectiveness using appropriate compensatory measures adversely affected the 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. The finding was evaluated in accordance with Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," dated September 22, 2015, because the finding was a failure to comply with risk significant planning standard 10 CFR 50.47(b)(4), "Emergency Classification System." The finding was compared to the finding examples in Section 5.4 of Inspection Manual Chapter 0609, Appendix B. The finding was determined to be of very low safety significance (Green) because emergency action levels were rendered ineffective such that any Site Area Emergency would not be declared for a particular off-normal event; however, because of other emergency action levels, an appropriate declaration could be made in a degraded manner. This finding had a cross-cutting aspect in the area of human performance associated with conservative bias because the licensee failed to use decision making-practices that emphasized prudent choices over those that are simply allowable. [H.14]

Inspection Report# : 2017007 (*pdf*)

Occupational Radiation Safety

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

Current data as of : January 09, 2018

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