



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

August 8, 2018

Mr. Adam C. Heflin, President and  
Chief Executive Officer  
Wolf Creek Nuclear Operating Corporation  
P.O. Box 411  
Burlington, KS 66839

SUBJECT: WOLF CREEK GENERATING STATION – NRC PROBLEM IDENTIFICATION  
AND RESOLUTION INSPECTION REPORT 05000482/2018007

Dear Mr. Heflin:

On June 28, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution inspection at your Wolf Creek Generating Station. The NRC inspection team discussed the results of this inspection with Mr. J. H. McCoy, Vice President, Engineering, and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program. The team assessed the program's effectiveness in identifying, prioritizing, evaluating, and correcting problems, and whether the station was complying with NRC regulations and licensee standards. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews, your employees appeared willing to raise nuclear safety concerns through at least one of the several means available. However, the team found evidence of continued challenges to your organization's safety-conscious work environment in the maintenance support group, similar to those identified in NRC Integrated Inspection Report 05000482/2017003. (ADAMS Accession No. ML17311B223). In reviewing your corrective actions to address the 2017 maintenance support challenges, the team concluded that your actions appeared minimal. Your management stated that other actions had been taken, but were unable to provide any documentation of those actions or any evidence of whether they had been successful. Further, while your station had initiated corrective actions following the NRC's identification of a safety-conscious work environment cross-cutting theme in our 2017 assessment letter (ADAMS

Accession No. ML18052A345), no actions were taken or planned to evaluate whether the work environment had improved following completion of the corrective actions taken.

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV), consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement; and the NRC resident inspector at the Wolf Creek Generating Station.

If you disagree with the cross-cutting aspect in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; and the NRC resident inspector at the Wolf Creek Generating Station.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

*/RA/*

Gerond A. George, Team Leader  
Inspection Programs and Assessment Team  
Division of Reactor Safety

Docket No. 50-482  
License No. NPF-42

Enclosure:  
Inspection Report 05000482/2018007  
w/ Attachment: Information Request

**U.S. NUCLEAR REGULATORY COMMISSION  
Inspection Report**

Docket Number: 05000482

License Number: NPF-42

Report Number: 05000482/2018007

Enterprise Identifier: I-2018-007-0007

Licensee: Wolf Creek Nuclear Operating Corporation

Facility: Wolf Creek Generating Station

Location: Burlington, Kansas

Inspection Dates: June 11, 2018, to June 28, 2018

Inspectors: R. Azua, Senior Reactor Inspector, DRS (Team Lead)  
E. Ruesch, Senior Reactor Inspector, DRS  
M. Stafford, Resident Inspector, Cooper Nuclear Station, DRP  
F. Thomas, Resident Inspector, Wolf Creek Generating Station, DRP

Approved By: G. George, Team Leader  
Inspection Program and Assessment Team  
Division of Reactor Safety

## SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee’s performance by conducting a Problem Identification and Resolution inspection at the Wolf Creek Generating Station, Unit 1, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC’s program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. NRC and self-revealed findings, violations, and additional items are summarized in the table below.

### List of Findings and Violations

Failure to Provide Adequate Work Instructions for Preventive Maintenance on Safety-Related Equipment			
Cornerstone	Significance	Cross-cutting Aspect	Inspection Procedure
Mitigating Systems	Green NCV 05000482/2018007-01 Closed	[P.2] Problem Identification and Resolution	71152 - Problem Identification and Resolution
The team reviewed a Green, self-revealed non-cited violation of Technical Specification 5.4.1.a to establish, implement, and maintain written procedures recommended by Regulatory Guide 1.33, Appendix A, Revision 2. Specifically, work instructions for the preventive maintenance for the train B Class 1E electrical equipment A/C unit SGK05B, lacked adequate guidance for preventive maintenance and calibration of the associated thermostat. This resulted in the loss of cooling failure of the A/C unit SGK05B, on February 12, 2018.			

## **OTHER ACTIVITIES – BASELINE**

### 71152—Problem Identification and Resolution

#### Biennial Team Inspection (1 Sample)

The inspectors performed a biennial assessment of the licensee's corrective action program, use of operating experience, self-assessments and audits, and safety-conscious work environment. The assessment is documented below.

- (1) Corrective Action Program Effectiveness: Problem Identification, Problem Prioritization and Evaluation, and Corrective Actions – The inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems. The team also evaluated the station's compliance with NRC regulations and licensee standards for corrective action programs. The sample included approximately 170 condition reports (CR) with associated root and apparent cause evaluations. This included an in-depth 5-year review of CR's associated with the licensee's safety-related A/C units with a focus on the associated chillers.
- (2) Operating Experience, Self-Assessments, and Audits – The team evaluated the station's processes for use of industry and NRC operating experience. The team also evaluated the effectiveness of the station's audits and self-assessments program. The sample included industry operating experience communications including Part 21 notifications and other vendor correspondence, NRC generic communications, and publications from various industry groups including Institute of Nuclear Power Operations (INPO) and Electric Power Research Institute, plus associated site evaluations.
- (3) Safety-Conscious Work Environment – The team evaluated the station's safety-conscious work environment. The team interviewed approximately fifty individuals in eight group interviews. The purpose of these interviews was: (1) to evaluate the willingness of the licensee staff to raise nuclear safety issues, either by initiating a CR or by another method; (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems; and (3) to evaluate their safety-conscious work environment. The focus group participants included personnel from the mechanical and electrical maintenance, instrumentation and controls, engineering, and maintenance support. The team also interviewed the employee concerns program manager, reviewed employee concerns files, and reviewed the results of the most recent safety culture survey. The team reviewed the licensee's actions taken in response to the significant work environment challenges identified by the NRC in a June 2017 inspection, which were documented in Inspection Report 2017003 (ADAMS Accession No. ML17311B223), and the safety-conscious work environment cross-cutting theme identified in the NRC's 2017 Annual Assessment Letter (ADAMS Accession No. ML18052A345).

## INSPECTION RESULTS

Corrective Action Program Assessment	71152—Problem Identification and Resolution
<p>Corrective Action Program: Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.</p> <p>Effectiveness of Problem Identification: Overall, the team found that the licensee's identification and documentation of problems were adequate to support nuclear safety.</p> <p>Effectiveness of Prioritization and Evaluation of Issues: Overall, the team found that the licensee's prioritization and evaluation of issues were adequate to support nuclear safety.</p> <p>Effectiveness of Corrective Actions: Overall, the team concluded that the licensee's corrective actions generally supported nuclear safety.</p>	

Operating Experience, Self-Assessments, and Audits Assessment	71152—Problem Identification and Resolution
<p>Operating Experience, Self-Assessments and Audits: Based on the samples reviewed, the team determined that the licensee's performance in each of these areas adequately supported nuclear safety. In the area of operating experience, the team found that information was being appropriately used at the Wolf Creek Generating Station to ensure potential issues were promptly identified and corrected. Having said that, the team noted some indications that screening of operating experience information could be improved. One example was identified where the licensee failed to promptly identify and correct a condition adverse to quality in the area of operating experience. This issue is further documented in this report as a minor violation.</p>	

Safety-Conscious Work Environment Assessment	71152—Problem Identification and Resolution
<p>Safety-Conscious Work Environment: In most work groups, the team found no evidence of challenges to the safety-conscious work environment. Individuals in these groups expressed a willingness to raise nuclear safety concerns and other issues through at least one of the several means available.</p> <p>However, the team found continued work environment challenges in the maintenance support group, similar to those identified during the June 2017 inspection. In reviewing corrective actions taken by the licensee following the previous inspection activities, the team noted other than a personnel move, the licensee had not documented any actions taken to correct the work environment challenges. Further, the licensee had taken no action to evaluate whether the work environment had improved as a result of the personnel move or of any undocumented actions taken. Neither had the licensee documented the identified issues in the corrective action program or any other formal action tracking process. Following identification by the team, the employee concerns program coordinator briefed the station's nuclear safety culture monitoring panel and conducted a "pulse survey" that confirmed the team's conclusions that the work environment challenges had not been corrected. The team determined that presently, the maintenance support group would raise nuclear safety</p>	

concerns; however, concern arises if the work environment challenges are allowed to continue. The licensee documented the issue in CR 124460.

Following receipt of the NRC’s 2017 annual assessment letter, the licensee performed an apparent cause evaluation to evaluate circumstances that led to the safety-conscious work environment cross-cutting issue and to develop actions to correct any adverse conditions and their causes (CR 119954). These planned actions include benchmarking, process changes, and leadership training. The licensee also developed an action to evaluate the effectiveness of these actions approximately 6 months after they are complete. This planned effectiveness review includes surveys of and interviews with station leadership, validation of corrective action program process outputs, and review of the results of a planned third-party assessment. The team reviewed the licensee’s actions and determined that the success criteria, which were approved by Corrective Action Review Board on June 20, 2018, do not include validation through interviews or surveys with individual contributors to verify that any underlying safety-conscious work environment challenges have been corrected. The team noted that the licensee’s effectiveness measures may validate that the planned actions have been accomplished, but not whether they have been successful at correcting the deficiency they are intended to correct. The licensee documented this observation in CR 124660.

Overall, the team concluded that most work groups at the Wolf Creek Generating Station maintained a healthy safety-conscious work environment. However, the lack of tracking mechanisms or effectiveness reviews for actions taken to improve the work environment, in those groups with challenges, appears to have hindered timely resolution of those challenges.

**INSPECTION RESULTS – ISSUES/FINDINGS**

Minor Violation	71152—Problem Identification and Resolution
<p>Performance Deficiency: Failure to promptly identify and correct known-defective switches in inservice safety-related breakers, or to control nonconforming breakers accepted into warehouse stores, as required by 10 CFR 50 Appendix B Criteria XV and XVI.</p> <p>In February 2008, the licensee received a notification from GE Hitachi of reduced reliability of some safety-related circuit breakers due to defective cutoff switches internal to the breakers. The licensee incorrectly screened this information as not applicable to the Wolf Creek Generating Station. In August 2011, after licensee engineers received the information again from industry peers, the licensee screened the information as applicable. The licensee then added steps to its overhaul and pre-install test procedures to check for the defective subcomponent. These steps were performed during subsequent regularly scheduled overhaul or pre-install tests, with the last affected switches being replaced in June 2014 and the last potentially susceptible safety-related breaker being inspected in March 2015. The team determined that because the station had information on the defect in February 2008, but did not correct the condition until 2014 and did not confirm that it was corrected until 2015, the licensee had failed to promptly identify and correct a condition adverse to quality. Further, the licensee failed to inspect or place administrative controls on potentially affected spare breakers that had been accepted into warehouse stores, though the added steps in the pre-install procedure likely would have prevented a defective component from being installed. However, by failing to segregate the potentially affected components until they were inspected, the licensee failed to comply with quality assurance requirements for control of nonconforming components. On June 26, 2018, the licensee put a hold on four potentially</p>	

affected breakers that were in warehouse stores. The licensee documented this performance deficiency in CR 124693.

Screening: The performance deficiency was minor because the licensee did not experience an inservice failure as a result of the defect during the 6 years they remained in service and had a procedure in place that would likely have prevented a defective spare from being issued for installation. Therefore, there was no adverse effect on the mitigating systems cornerstone objective and there was no potential to create a more significant safety concern.

Enforcement: This failure to comply with 10 CFR 50 Appendix B Criteria XV and XVI constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

**Failure to Provide Adequate Work Instructions for Preventive Maintenance on Safety-Related Equipment**

Cornerstone	Significance	Cross-cutting Aspect	Inspection Procedure
Mitigating Systems	Green NCV 05000482/2018007-01 Closed	[P.2] – Problem Identification and Resolution	71152—Problem Identification and Resolution

The inspectors reviewed a Green, self-revealed non-cited violation of Technical Specification 5.4.1.a to establish, implement, and maintain written procedures recommended by Regulatory Guide 1.33, Appendix A, Revision 2. Specifically, work instructions for the preventive maintenance for the train B Class 1E electrical equipment A/C unit SGK05B, lacked adequate guidance for preventive maintenance and calibration of the associated thermostat. This resulted in the loss of cooling failure of the A/C unit SGK05B, on February 12, 2018.

Description:

On February 12, 2018, the licensee made an unplanned entry into action statements associated with Technical Specifications 3.0.3, "Limiting Condition for Operation Applicability," (which requires initiation of actions within 1 hour, to be in Mode 3 within 7 hours); 3.8.9, Conditions C and D, "Electrical Power Systems - Distribution Systems;" 3.8.7, Condition A, "Electrical Power Systems - Inverters – Operating;" and 3.8.4, Condition A, "Electrical Power Systems - DC Sources." This unplanned entry was made as a result of the train B Class 1E electrical equipment A/C unit SGK05B not operating in accordance with design requirements.

The safety-related function of the A/C unit SGK05B is to provide suitable environment for Class 1E electrical equipment during normal and accident conditions. By not cooling properly, the A/C unit SGK05B would not be able to meet the required room temperatures needed to support train B engineering safety feature equipment. The failure was identified as a result of a security officer performing rounds having noticed an increase in temperature on the 2016 foot elevation in the Control Building. According to the operations logs, the highest affected room temperature was recorded at approximately 80 degrees Fahrenheit.

According to Condition Report (CR) 119446, initial troubleshooting performed by the fix-it now team led the licensee to suspect that the step controller associated with the A/C unit was not functioning properly due to a potentially loose set screw on the micro-switch. The CR also indicated that this set screw coming loose had been an issue in the past. The step controller



and thermostat were replaced on February 13, 2018, as a part of further troubleshooting efforts. Past maintenance records indicate that the A/C unit SGK05B step controller, according to Work Order 15-402910-004, had last been replaced on October 1, 2016. Before then, it had been replaced on March 28, 2014, per Work Order 14-385255-001. The thermostat had not been replaced until February 13, 2018.

As indicated in the basic cause evaluation, the licensee determined that this failure constituted a maintenance preventable functional failure. In accordance with the Maintenance Rule Database Function GK-01, the function of A/C unit SGK05B is to provide a suitable environment for Class 1E electrical equipment during normal and accident conditions. Any equipment failure that results in the system being incapable of maintaining room temperature below a temperature of 90 degrees F is considered a high safety significant functional failure. Demand failures that do not result in the room temperature reaching 90 degrees F are considered functional failures, but are not considered high safety significant functional failures. The A/C unit SGK05B would not have performed its function to provide a suitable environment for Class 1E electrical equipment due to the failure of the thermostat.

The licensee's basic cause evaluation identified the probable cause of the failure as having been the failure of the GKTC0005B thermostat for the A/C unit SGK05B, resulting in anomalous operation of the associated controller and subsequent lack of temperature control for supported equipment rooms. The conclusion in the basic cause evaluation indicated that the failure of the thermostat resulted in the inability of the A/C unit SGK05B to cool supported equipment rooms. This was based on the results of a hardware failure analysis performed by a third party, which showed signs of erratic and unexpected operation from the thermostat. Furthermore, the basic cause evaluation indicated that the lack of available calibration, preventive maintenance, or replacement records on the thermostat contributed to the failure.

Furthermore, the basic cause evaluation for the February 12, 2018, event stated that a review of the stock transaction for the Honeywell thermostat showed four prior replacements of the component between the four air conditioning units which utilize it. The units which utilize these components are the train A and B Control Room A/C units (SGK04A and SGK04B), and the train A and B Class 1E electrical equipment A/C units (SGK05A and SGK05B). None of the replacements were on the A/C unit SGK05B. The basic cause evaluation also stated that a review of the IQ Review database showed that the calibration template task had been disregarded during the 2014 preventive maintenance optimization effort based on it being considered, "determined by driving asset or program." The basic cause analysis also indicated, that without preventive maintenance in place to periodically check their condition, it is likely only a self-revealing failure would be identified within the corrective action program.

Several months before, at 5:24 AM, on November 7, 2017, the licensee had taken the train B Class 1E electrical equipment A/C unit SGK05B out of service for a planned maintenance outage. At 4:50 AM, on November 8, 2017, an operations log entry was made by the night-shift manager indicating that the A/C unit SGK05B was not responding to adjustments on the thermostat assembly during post-maintenance testing activities. Condition Report CR 117283 was initiated for troubleshooting. The troubleshooting activities were implemented under Work Order 17-423314-007. As a part of their troubleshooting activities, the electricians took voltage readings at the step controller and adjusted the thermostat setting to approximately 50 degrees F. The step controller did not move. Electricians then took voltage readings at the terminal board on the step controller and it started to operate. While observing the movement of internal step controller components, the technician notes indicated that a small

arc was seen on the potentiometer. Also, at some point during the troubleshooting, the electricians “lightly tapped” on the step controller assembly until the balance relay contacts inside of the step controller changed state and drove the controller to energize liquid line solenoids. These solenoids regulate the flow of refrigerant into the air-handling unit for air cooling. The fix-it now team electricians concluded that the problem was with the feedback potentiometer. According to technician notes in the aforementioned work order, the contacts for the feedback potentiometer were burnished and the associated disc assembly was cleaned. The electricians also adjusted the contact tension on the feedback potentiometer. According to work order information, the electricians were eventually able to adjust the thermostat, and observe expected pick-up and drop-out load response from A/C unit SGK05B. The unit was returned to service at 9:19 PM, on November 8, 2017. The troubleshooting work order did not contain or indicate that any calibration or resistance checks were performed specifically on the thermostat.

On September 29, 2015, troubleshooting work was performed on the train A control room A/C unit SGK04A during a planned maintenance outage (under Work Order 14-396140-000), due to excessive cycling having been observed on the unit on December 14, 2014. According to the work order, electrical maintenance personnel recommended that the Honeywell T991A thermostat be calibrated during the next maintenance outage, in accordance with Procedure INC C-1000, “Calibration of Miscellaneous Components.” According to the work order, the as-found condition notes indicated that the resistance measurements for the thermostat were not balanced. Maintenance technicians adjusted the thermostat calibration accordingly and the unit was later returned to service on October 30, 2015.

The licensee wrote CR 117283 for issues observed during the November 7, 2017, maintenance outage. In CR 117283 it indicated that the defect in the A/C unit SGK05B was a lack of control of the A/C unit with varying thermostatic input, because the unit was not responding to changing thermostatic inputs and cycled off multiple times following restoration from preventive maintenance activities. The cause of the failure identified in the basic cause evaluation was the loss of contact or high resistance at the feedback potentiometer, which resulted in the step controller “stalling” at a singular position which resulted in a lack of response from the A/C unit SGK05B.

Considering troubleshooting work performed on the A/C unit SGK04A back on September 29, 2015, where the same model Honeywell T991A thermostat is used and specific steps were taken to troubleshoot the thermostat, it is possible that the same troubleshooting steps should have been performed on the A/C unit SGK05B thermostat during the November 7 – 8, 2017, planned maintenance outage. While there was no documented loss of cooling or equipment failure on the A/C unit SGK04A between December 14, 2014, and September 30, 2015, there was an indication of a degraded condition on the Honeywell T991A thermostat. Thus, there was an opportunity to have identified a degraded condition on the Honeywell T991A thermostat on the A/C unit SGK05B during the November 7 – 8, 2017, planned maintenance outage.

Corrective Actions: The licensee took the immediate corrective actions to: (1) implement compensatory measures for having one of two Class 1E electrical equipment A/C units out of service, as described in Procedure SYS GK-200, Non-Functional Class 1E A/C Unit; (2) perform troubleshooting as required by Work Order 18436340-002; and (3) replace both the step controller and thermostats.

Performance Assessment:

Performance Deficiency: The failure to provide adequate work instructions for preventive maintenance on safety-related equipment is a performance deficiency.

Screening: The performance deficiency is more than minor, and therefore a finding, because it is associated with the equipment 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). Specifically, work instructions for preventive maintenance on the train B Class 1E electrical equipment A/C unit SGK05B, lacked preventive maintenance and calibration instruction for the A/C unit thermostat, which led to the failure of the A/C unit thermostat, resulting in the loss of cooling failure of the A/C unit SKG05B, on February 12, 2018.

Significance: 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," issued June 19, 2012, and determined this finding is not a deficiency affecting the design or qualification of a mitigating structure, system, or component that maintained its operability or functionality; 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; 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. Therefore, the inspectors determined the finding was of very low safety significance (Green).

Cross-cutting Aspect: The inspectors determined that the finding has a cross-cutting aspect in the area of Problem Identification and Resolution associated with evaluation, because the organization did not take effective corrective actions to thoroughly evaluate issues to ensure that resolutions address cause and extent of conditions commensurate with their safety significance. Specifically, the licensee failed to ensure that issues with the A/C unit SGK05B were thoroughly investigated according to their safety significance [P.2].

Enforcement:

Violation: Technical Specification 5.4.1.a, requires, in part, that procedures shall be established, implemented, and maintained covering the applicable procedures recommended by Regulatory Guide 1.33, Appendix A, Revision 2. Section 9.a of Appendix A of Regulatory Guide 1.33, Revision 2, states, in part, that "maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances." The licensee established Procedure AP 16B-003, "Planning and Scheduling Preventive Maintenance," which provides direction for implementing the preventive maintenance program to meet the Regulatory Guide 1.33 requirement. Section 6.2 of Procedure AP 16B-003 requires, in part, that preventive maintenance activities be developed by considering, in part, equipment history and component functional importance.

Contrary to the above requirement, on November 8, 2018, the licensee failed to implement written procedures recommended by Regulatory Guide 1.33, Appendix A, Revision 2. Specifically, preventive maintenance activities were developed without adequately considering equipment history and component functional importance in accordance with

Procedure AP 16B-003. Preventive maintenance Work Orders 17-428613-000 and 17-423314-007 did not require preventive maintenance and calibration testing of the thermostat associated with A/C unit SGK05B.

Disposition: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

### **EXIT MEETINGS AND DEBRIEFS**

On June 28, 2018, the inspectors presented the Problem Identification and Resolution inspection results to Mr. J. H. McCoy, Vice President, Engineering, and other members of the licensee staff. The inspectors verified no proprietary information was retained or documented in this report.

## DOCUMENTS REVIEWED

### 71152—Problem Identification and Resolution

#### Condition Reports

42461	46173	53586	70482	73241	73863	75337	78108
80172	81711	84848	86032	90162	90879	92274	95378
96307	96397	100328	100902	101706	101867	102322	103395
104266	105186	105558	105559	105771	105865	105901	105929
106016	106064	106165	106183	106289	106292	106328	106417
106668	106725	106867	107732	107743	108163	108416	108493
108529	108553	108699	108800	108996	110399	111210	111751
111818	111939	111941	112136	112244	112339	112363	112436
112497	112503	112588	112689	112964	113061	113304	113485
113913	114245	114437	114850	114885	114886	114887	114933
114947	115001	115103	115127	115326	115471	115642	115667
116175	116176	116178	116179	116180	116181	116489	116786
116792	116831	116852	116893	117124	117238	117283	117389
117408	118665	118885	118894	118994	119173	119275	119297
119298	119446	119487	119593	119954	119981	120045	120056
120064	120091	120112	120125	120151	120287	120331	120484
120519	120628	120674	120780	120822	121443	121762	122076
122359	122375	122411	122598	123038	123276	123708	123900
124153	124187	124238	124242	124288	124373	124380	124381
124382	124383	124386	124460	124490	124520	124661	124662
124667	124669						

#### Work Orders

05-273192-000	14-107802-000	14-385255-001	14-392578-001
14-396140-000	15-402910-002	15-402910-004	15-406675-022
16-412247-000	16-418672-001	16-418672-002	16-418672-003
17-122291-000	17-423314-005	17-423314-007	17-423314-008
17-423325-000	17-428613-000	18-436340-003	18-439562-000

#### Procedures

Number	Title	Revision
AI 23O-001	Functional Importance Determination	7
AI 28A-010	Screening Condition Reports	28
AI 28A-010	Screening Condition Reports	29A
AI 28A-017	Effectiveness Follow-up	4
AI 28A-018	Corrective Action Review Board	6
AI 28A-023	Evaluation of Maintenance Rule Functional Failure Condition Reports	4

Procedures Number	Title	Revision
AI 28A-100	Condition Report Resolution	13
AI 28A-101	Non-Condition Adverse to Quality	2
AI 28B-005	Evidence and Action Matrix	4
AI 36-001	Nuclear Safety Culture Panel	5
AP 14A-003	Scaffold Construction and Use	25
AP 16B-003	Planning and Scheduling Preventive Maintenance	8A
AP 16C-006	MPAC [Maintenance Planning and Controls] Work Request/Work Order Process Controls	23
AP 20A-010	Conduct of Performance Assessment	4
AP 21-001	Conduct of Operations	81
AP 23M-001	WCGS [Wolf Creek Generating Station] Maintenance Rule Program	12
AP 24E-003	Warehouse Material Storage, Handling, Packaging, Shipping, and Maintenance	11
AP 26C-004	Operability Determination and Functionality Assessment	35
AP 28-011	Resolving Degraded or Nonconforming Conditions Impacting Structures, Systems, and Components	7
AP 28A-100	Corrective Action Program	23
AP 36-001	Nuclear Safety Culture	5
INC C-1000	Calibration of Miscellaneous Components	7A
MGE TL-001	Wiring Termination and Lug/Connector Installation	25
MPE E017Q-04	Circuit Breaker Test for AKR 50 and AKR 30 Breakers	25

Drawing Number	Title	Revision
M-650A-00054	Control Building Electrical Chases – Wet Pipe System El. 1974-0 through 2073-6	W05

Miscellaneous Documents Number	Title	Revision
BG-16-006	Operability Evaluation	0
CKL ZL-004	Turbine Building Reading Sheets	161
CKL ZL-005A	An Emergency Diesel Generator (EDG) Operation Log	6
FL-08	Control Building Flooding (Calculation)	3
OE EF-16-002	Operability Evaluation	1
OE EP-16-007	Operability Evaluation	0
OE GM-17-001	Operability Evaluation	0
OE KJ-16-005	Operability Evaluation	0
OE NB-16-004	Operability Evaluation	0
OE NE-17-002	Operability Evaluation	0
OE SF-16-003	Operability Evaluation	1
Specification 10466-A-086	Technical Specification for Rolling Doors for the Standardized Nuclear Unit Power Plant System (SNUPPS)	6
SA-2017-0128	FLEX Program Self-Assessment	
STS KJ-011A	EDG NE01 24 Hour Run	6
QA-2016-0270	CR 84848 Problem Identification and Resolution Condition Brought Up by NRC Inspector on Breach Procedure	0
QH-2017-1566	Engineering Life Cycle Management	
QH-2017-1600	2018 Design Basis Assurance Inspection (DBAI) Self-Assessment	
QH-2018-1652	RF22 Steam Generator Readiness for NRC ISI Inspection	
QH-2018-1653	RF22 ISI Inspection	
QS-2016-1804	Review of Engineering CRs Non-LTCA Over 365 Days Old for Escalation	
WCRE-35	Boundary Matrix	3
	Control Rod Parking Schedule, Cycle 23	6
	Problem Identification (PI) Desktop Cause Evaluation Users Guide	0
	Wolf Creek Generating Station Cycle 23, Core Operating Limits Report	0

**Information Request**  
**Biennial Problem Identification and Resolution**  
**Inspection Wolf Creek Generating Station**  
**April 4, 2018**

**Inspection Report: 50-482/2018007**  
**On-site Inspection Dates: June 11-15 & June 25-29, 2018**

This inspection will cover the period from July 1, 2016, through June 29, 2018. All requested information is limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

Lists of documents ("summary lists") should be provided in Microsoft Excel or a similar sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. As used in this request, "corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to the Wolf Creek Generating Station.

Please provide the following information no later than May 28, 2018:

1. Document Lists

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies (1) currently open and (2) that were evaluated and/or closed during the period
- f. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability
- g. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information should be made



available during the team's first week on site—do not provide electronically)

- h. Summary list of all Apparent Cause Evaluations completed during the period

2. Full Documents with Attachments

- a. Root Cause Evaluations completed during the period; include a list of any planned or in progress
- b. Quality Assurance audits performed during the period
- c. Audits/surveillances performed during the period on the Corrective Action Program, of individual corrective actions, or of cause evaluations
- d. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- e. Any assessments of the safety-conscious work environment at the Wolf Creek Generating Station
- f. Corrective action documents generated during the period associated with the following:
  - i. NRC findings and/or violations issued to the Wolf Creek Generating Station
  - ii. Licensee Event Reports issued by the Wolf Creek Generating Station
- g. Corrective action documents generated for the following, if they were determined to be applicable to the Wolf Creek Generating Station (for those that were evaluated but determined not to be applicable, provide a summary list):
  - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
  - ii. Part 21 reports issued or evaluated during the period
  - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
  - iv. Other external events and/or operating experience evaluated for applicability during the period
- h. Corrective action documents generated for the following:

- i. Emergency planning drills and tabletop exercises performed during the period
- ii. Maintenance preventable functional failures which occurred or were evaluated during the period
- iii. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period
- iv. Action items generated or addressed by offsite review committees during the period

3. Logs and Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.c, it need not be provided separately)
- b. Corrective action effectiveness review reports generated during the period
- c. Current system health reports, Management Review Meeting (MRM) package, or similar information; provide past reports as necessary to include ≥12 months of metric/trending data
- d. Radiation protection event logs during the period
- e. Security event logs and security incidents during the period (sensitive information should be made available during the team's first week on site—do not provide electronically)
- f. Employee Concern Program (or equivalent) logs (sensitive information should be made available during the team's first week on site—do not provide electronically)
- g. List of training deficiencies, requests for training improvements, and simulator deficiencies for the period

Note: For items 3.d–3.g, if there is no log or report maintained separate from the corrective action program, please provide a summary list of corrective action program items for the category described.

4. Procedures

Note: For these procedures, please include all revisions that were in effect at any time during the period.

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that implement the corrective action program at the Wolf Creek Generating Station

- b. Quality Assurance program procedures (specific audit procedures are not necessary)
- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a safety-conscious work environment
- 5. Other
  - a. List of risk-significant components and systems, ranked by risk worth
  - b. Organization charts for plant staff and long-term/permanent contractors
  - c. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
  - d. Table showing the number of corrective action documents (or equivalent) initiated during each month of the inspection period, by screened significance
  - e. For each day the team is on site,
    - i. Planned work/maintenance schedule for the station
    - ii. Schedule of management or corrective action review meetings (e.g. operations focus meetings, condition report screening meetings, Corrective Action Review Boards, MRMs, challenge meetings for cause evaluations, etc.)
    - iii. Agendas for these meetings

Note: The items listed in 5.d may be provided on a weekly or daily basis after the team arrives on site.

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector office at the Wolf Creek Generating Station; three additional copies should be provided to the team lead, to arrive no later than May 28, 2018:

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 Inspection Program and Assessment Team  
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WOLF CREEK GENERATING STATION – NRC PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT 05000482/2018007 – AUGUST 8, 2018

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NAME	RAzua	ERuesch	MStafford	FThomas	NTaylor	GGeorge
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/	/RA/
DATE	07/19/2018	07/26/2018	07/25/2018	07/26/2018	08/02/2018	08/08/2018

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