Wolf Creek
Nuclear Operating Corporation

Robert J. Bayer
Plant Manager

July 2, 2024
000523

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Docket No. 50-482: Licensee Event Report 2024-001-00, "Mode 3 Entry with One Auxiliary Feedwater Pump Train Inoperable due to Missed Post-Maintenance Testing"

Commissioners and Staff:

The enclosed Licensee Event Report (LER) 2024-001-00 is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) regarding an operation or condition prohibited by Wolf Creek Generating Station's Technical Specifications.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4015, or Dustin Hamman at (620) 364-4204.

Sincerely,

Robert J. Bayer

RJB/nwl

Enclosure: LER 2024-001-00

cc: S. S. Lee (NRC), w/e
J. D. Monninger (NRC), w/e
G. E. Werner (NRC), w/e
Senior Resident Inspector (NRC), w/e
WC Licensing Correspondence, w/e – WO 24-000523

NRC FORM 366 (04-02-2024) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 04/30/2027

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. Facility Name		2. Docket Number	3. Page
Wolf Creek Generating Station	■ 050 ☐ 052	00482	1 OF 3

4. Title

Mode 3 Entry with One Auxiliary Feedwater Pump Train Inoperable due to Missed Post-Maintenance Testing

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved		
Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year	Facility Name	☐ 050	Docket Number
05	09	2024	2024	- 001 -	00	07	02	2024	Facility Name	☐ 052	Docket Number

9. Operating Mode	10. Power Level
3	00

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*

10 CFR Part 20	☐ 20.2203(a)(2)(vi)	**10 CFR Part 50**	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)	☐ 73.1200(a)
☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	☐ 73.1200(b)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	☐ 73.1200(c)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)	☐ 73.1200(d)
☐ 20.2203(a)(2)(i)	**10 CFR Part 21**	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(A)	**10 CFR Part 73**	☐ 73.1200(e)
☐ 20.2203(a)(2)(ii)	☐ 21.2(c)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(B)	☐ 73.77(a)(1)	☐ 73.1200(f)
☐ 20.2203(a)(2)(iii)		☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(2)(i)	☐ 73.1200(g)
☐ 20.2203(a)(2)(iv)		☑ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(ii)	☐ 73.1200(h)
☐ 20.2203(a)(2)(v)		☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)		

☐ **OTHER** (Specify here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact	Phone Number (Include area code)
Jason Knust, Lead Licensing Engineer	620-364-8831

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to IRIS		Cause	System	Component	Manufacturer	Reportable to IRIS

14. Supplemental Report Expected		15. Expected Submission Date	Month	Day	Year
☐ No	☑ Yes (If yes, complete 15. Expected Submission Date)		09	12	2024

16. Abstract (Limit to 1326 spaces, i.e., approximately 13 single-spaced typewritten lines)

At 2330 Central Daylight Time (CDT) on 5/9/2024, during mode ascension coming out of Refueling Outage 26 (RF26), it was discovered that no post-maintenance testing had been performed on three air operated discharge valves which had maintenance performed on them during RF26. These valves provide flow from the turbine driven auxiliary feedwater pump to the steam generators. This discovery was made after the unit had gone from Mode 4 to Mode 3. With no post-maintenance testing performed on these three valves, they would have to be declared out of service which would cause the turbine driven AFW pump train to be inoperable in Mode 3. Because one required train of AFW was inoperable, LCO 3.7.5 was not met when the unit entered into Mode 3. Immediately following discovery, WCGS personnel began the process of testing the three valves. By 0215 CDT on 5/10/2024, testing was finished with all three valves having passed satisfactorily. The valves were returned to service at this time and the turbine driven AFW pump train was declared operable. TS LCO 3.0.4 only allows entry into a Mode of applicability for an unmet LCO when certain requirements are met. However, none of these requirements were met. Therefore, upon entry into Mode 3, WCGS violated TS LCO 3.0.4. This event is therefore reportable per 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by TS.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. FACILITY NAME		2. DOCKET NUMBER	3. LER NUMBER		
			YEAR	SEQUENTIAL NUMBER	REV NO.
Wolf Creek Generating Station	■ 050 ☐ 052	00482	2024	- 001	- 00

NARRATIVE

PLANT CONDITION PRIOR TO EVENTS

At the time of the event Wolf Creek Generating Station (WCGS) was being taken from Mode 4 to Mode 3 during mode ascension from Refueling Outage 26 (RF26).

DESCRIPTION OF STRUCTURE(S), SYSTEM(S), AND COMPONENT(S)

Energy Industry Identification System (EIIS) codes and component codes are identified in the text as [XX].

The auxiliary feedwater (AFW) system [BA] automatically supplies feedwater to the four steam generators (SGs) [AB] to remove decay heat from the reactor coolant system upon the loss of normal feedwater supply [SJ]. There are three safety-related AFW pumps, two motor driven and one turbine driven which are configured into three trains.

ALHV0006, ALHV0008, ALHV0010, and ALHV0012 are the air operated discharge valves [FCV] from the turbine driven auxiliary feedwater (AFW) pump to SGs D, A, B, and C respectively. These valves have a safety function to open to provide a flow path from the turbine driven AFW pump to the SGs during emergency cooldown of the reactor coolant system (RCS). These valves are normally open and manually throttled, remotely, based on the measured flow rate of AFW being routed to their respective SGs. In addition, they also have a safety function to close to be able to isolate a faulted SG to prevent loss of inventory during emergency cool down of the RCS.

EVENT DESCRIPTION

During RF26, valves ALHV0006, ALHV0008, and ALHV0012 all had maintenance performed on them. (The fourth valve, ALHV0010, had already had this work done while the unit was online.) The unit then entered Mode 3 at 0741 Central Daylight Time (CDT) on 5/8/2024. However, it was subsequently discovered that there was no post-maintenance testing performed on these valves upon completion of the maintenance activities. This testing is required to restore the valves to operable status. This means that as of the time the unit entered Mode 3, these valves would have been inoperable. The time of discovery of this condition was 2330 CDT on 5/9/2024. Personnel immediately began the process of preparing for testing. The testing was successfully completed at 0215 CDT on 5/10/2024 and the valves were returned to service and declared operable at this time.

WCGS Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.7.5, “Auxiliary Feedwater (AFW) System,” requires that three AFW trains be operable and is applicable in Modes 1, 2, and 3. Condition C of LCO 3.7.5 is entered when one AFW train is inoperable for reasons other than Condition A or B (i.e., conditions other than one steam supply or one ESW supply to the turbine driven AFW pump being inoperable). Required Action C.1 is to restore the AFW train to operable status with a Completion Time of 72 hours. Condition C would have existed at the time the unit entered Mode 3. This is because with the three valves being out of service, the turbine driven AFW pump train would have been inoperable.

TS LCO 3.0.4 requires that when an LCO is not met, entry into a Mode or other specified condition in the Applicability shall only be made:

a. When the associated actions to be entered permit continued operation in the Mode or other specified condition in the Applicability for an unlimited period of time;

b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the Mode or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; or

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NARRATIVE

EVENT DESCRIPTION (cont.)
c. When an allowance is stated in the individual value, parameter, or other Specification.

Required Action C.1 of LCO 3.7.5 has a 72-hour Completion Time, so continued operation in this Condition is time limited; no specific risk assessment was performed for entry into Mode 3 with the turbine driven AFW pump train inoperable; and there are no allowances in LCO 3.7.5 (or any other Specification) for entry into Mode 3 with the turbine driven AFW pump train inoperable. Therefore, none of the requirements of LCO 3.0.4 were met when WCGS entered Mode 3 with LCO 3.7.5 not met.

BASIS FOR REPORTABILITY

From the time the unit entered Mode 3 until the testing was completed and the valves restored to service, the unit would have been in Condition C for approximately 42 ½ hours. This is less than the 72-hour Completion Time to restore the turbine driven AFW pump train to operable status. As such, LCO 3.7.5 was not violated. However, the unit did enter Mode 3 while not meeting LCO 3.7.5. None of the requirements stated in LCO 3.0.4 were met during this time so WCGS was in violation of LCO 3.0.4. Therefore, this event is reportable per 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by TS.

CAUSE

The cause investigation is still ongoing. The cause will be documented in the supplement to this licensee event report (LER).

CORRECTIVE ACTIONS

Immediate corrective actions included performing the missed post-maintenance testing, and once completed satisfactorily, declaring the turbine driven AFW pump train operable. Additional corrective actions will be documented in the supplement to this LER.

SAFETY SIGNIFICANCE

The safety significance of this event was low. All three valves successfully passed their post-maintenance testing the first time. Therefore, had there been an event that would have required the AFW system to operate during the time the unit was in Mode 3 prior to testing the valves, all three trains of the system would have been capable of performing their intended functions. In addition, both motor driven AFW pump trains were verified to be operable prior to entering Mode 3.

OPERATING EXPERIENCE/PREVIOUS EVENTS

A search of the corrective action program revealed that there have been no occurrences of making a Mode change not allowed by LCO 3.0.4 at WCGS in the past three years.