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

August 29, 2024

EA-24-091

Cleve Reasoner, Chief Executive Officer
and Chief Nuclear Officer
Wolf Creek Nuclear Operating Corp.
P.O. Box 411
Burlington, KS 66839

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR WOLF CREEK GENERATING STATION

Dear Cleve Reasoner,

By letter (Agencywide Documents Access and Management System [ADAMS] Accession No. ML24240A264) dated August 27, 2024, Wolf Creek Nuclear Operating Corporation requested that the U.S. Nuclear Regulatory Commission (NRC) exercise discretion to not enforce compliance with the actions required by Wolf Creek Generating Station Technical Specification (TS) Limiting Condition for Operation (LCO) 3.7.5, “Auxiliary Feedwater (AFW) System,” Action C.

This letter documents information previously discussed with the NRC in a telephone conference on August 23, 2024, at 12:00 a.m. CDT. The principal NRC staff members who participated in the telephone conference are listed in the Enclosure. The NRC staff determined that the information contained in your letter requesting the Notice of Enforcement Discretion (NOED) was consistent with your oral request. The NRC first became aware of the potential for this NOED request on August 22, 2024, at approximately 3:00 p.m. CDT through communication with the NRC Wolf Creek senior resident inspector.

Without enforcement discretion, TS LCO 3.7.5 would have required that Wolf Creek Generating Station enter Mode 3 by 11:00 a.m. CDT on August 23, 2024, with subsequent entry into Modes 4. The licensee requested that a NOED be granted pursuant to the NRC’s policy regarding exercise of discretion for an operating power reactor, set out in the NRC Enforcement Manual, Appendix F, “Notices of Enforcement Discretion,” and that the NOED be effective for an additional 36 hours (until 11:00 p.m. CDT on August 24, 2024, for entering Mode 3) with subsequent entry into Mode 4 extended as well. This letter documents the event and our telephone conversation on August 23, 2024, when we orally granted this NOED request as of 1:05 a.m. CDT, August 23, 2024.

Subsequent to the NRC verbal approval of the NOED request, and prior to entering the period of enforcement discretion, the licensee discovered an additional issue, not related to the NOED, with the AFW system that would require extensive troubleshooting to determine the cause and effect repairs. Thus, following the expiration of the 72-hour TS 3.7.5 LCO at 5:00 a.m. CDT, the licensee entered T.S 3.7.5, Condition D, requiring the plant to be in Mode 3 within 6 hours and Mode 4 within 12 hours. Operators initiated a TS required shutdown at 8:00 a.m. CDT on August 23, 2024, as required by Action D of TS 3.7.5 LCO. The licensee completed the shutdown to Mode 3 at 10:24 a.m. CDT and Mode 4 at 4:51 pm CDT on August 23, 2024.

Summary

On August 20, 2024, at 5:00 a.m. CDT, the licensee entered a planned maintenance outage of the turbine driven AFW (TDAFW) pump, under TS LCO 3.7.5 Action C, which requires the licensee to return the pump to operable status within 72 hours or be in Mode 3 within the next 6 hours. While conducting AFW testing, valve AL-HV-10, the AFW flow control for steam generator B, did not respond as expected. The licensee calibrated the valve controller and completed diagnostic valve testing and no issues were identified, so the licensee concluded that valve AL-HV-10 was operating correctly. On August 22, 2024, at 3:16 a.m. CDT during post-maintenance testing activities on valve AL-HV-10, with the TDAFW pump running, the turbine tripped on electronic overspeed. The licensee commenced troubleshooting activities for the turbine trip. The licensee was able to identify that the cause of the turbine trip as a faulty actuator on the turbine speed governing valve, FV-313. The licensee determined that the repairs to correct the condition with the TDAFW pump would exceed the TS 3.7.5 LCO completion time and initiated the NOED process with the NRC by contacting the senior resident inspector.

The licensee indicated that the repairs would take approximately 16 hours to complete. The restoration, post-maintenance testing, and in-service test runs would require an additional 14 hours to complete. Thus, to have margin for contingencies, the licensee determined it was prudent to request 36 additional hours to restore the TDAFW pump to operable status.

The licensee performed a risk assessment for the period of enforcement discretion. The licensee indicated that the calculated increase in the incremental conditional core damage probability (ICCDP), using the zero-maintenance probability model, for the requested 36-hour enforcement discretion period, was 2.78E-08. The licensee also indicated that the increase in incremental conditional large early release probability (ICLERP) was 5.38E-11. These values were less than the 5E-7 ICCDP and 5E-8 ICLERP guidance thresholds specified in the NRC Enforcement Manual, Appendix F.

During the requested period of enforcement discretion, the licensee stated they would implement risk management actions for the period of enforcement discretion during repairs/testing of the TDAFW pump. The licensee proposed to implement the following compensatory risk management measures to reduce the likelihood of risk significant initiating events and protect risk significant equipment:

- The full response team will remain in place throughout the evolution and the remaining maintenance activities will be completed utilizing 24-hour coverage.

- Limiting or prohibiting operation or maintenance of plant equipment. For the duration of the TDAFW pump inoperability, avoid testing and maintenance impacting availability of the “A” train safety bus, including but not limited to, the essential service water system, motor driven AFW pumps, component cooling water system, residual heat removal system, air conditioning units, and all 125 Volt DC system (NK) batteries and the associated emergency diesel generators to maximize the mitigative response to a station blackout event.

- Ensuring no switchyard work is allowed. This includes XMR01 (startup transformer) as well as the rest of the offsite power sources.

- Posting protected train signs for both A and B trains of spent fuel pool cooling, component cooling water, emergency diesel generators, essential service water, class IE switchgear NB buses, 125-volt DC system NK buses and both motor driven AFW pumps. Additionally, the protected equipment signs will be extended to all service water pumps, including their electrical power supplies SL31/41.

- Enhanced operator sensitivity to safety bus electrical power supply issues to recognize and respond expeditiously to a station blackout event or loss of offsite power event (e.g., posting of protected train signage to NK rooms).

- Control room staff were trained on procedure EMG FR-H1, “Response to Loss of Secondary Heat Sink” for alternate AFW supply via the fourth (non-safety) AFW pump, during Training Cycle 23-4 which took place during July and August of 2023. This training increases the likelihood for success in response to initiating events.

- Every crew prior to taking the watch will review the alarm response to loss of service water and alarm response to loss of heat sink.

- Continual monitoring by the grid operator regarding grid conditions to anticipate challenges to offsite power availability, and availability of the station blackout diesels.

- During this maintenance window the station will not allow or authorize any burn permits. All hot work has been suspended.

- During this maintenance window, no additional surveillance testing, or maintenance shall be performed that is not related to the specified equipment.

- Fire Areas A-22 (train A control room HVAC), C-27 (control room), C-9 (train A engineered safety features switchgear room), and C-10 (train B engineered safety features switchgear room) were posted as protected fire risk areas with an hourly fire watch per procedure AP 22C-003, “On-Line Nuclear Safety and Generation Risk Assessment”, and procedure AI 22C-013, “Protected Equipment Program.” Permission to cross posted fire risk significant component areas must be authorized by the work control center senior reactor operator (or designee, i.e. control room supervisor or shift manager).

The licensee’s Plant Safety Review Committee approved submission of the NOED request on August 22, 2024, prior to the verbal request for a NOED.

Based on the NRC staff's evaluation of the licensee's request, the staff determined that granting this NOED was consistent with the NRC's Enforcement Policy and staff guidance. NRC staff independently evaluated the risk insights associated with the requested NOED condition and obtained results consistent with the licensee's assertions relative to satisfying the ICCDP and ICLERP criteria referenced above. The NOED request met the criteria specified in NRC's Enforcement Manual, Appendix F, Sections 2.2 and 2.5. Therefore, as communicated orally to the licensee at 1:05 a.m. CDT on August 23, 2024, the NRC exercised discretion to not enforce compliance with TS LCO 3.7.5 requirements that Wolf Creek Generating Station be in Mode 3 by 11:00 a.m. CDT on August 23, 2024. The NRC extended the Wolf Creek Generating Station Mode 3 entry by 36 hours to 11:00 p.m. CDT on August 24, 2024, and subsequent mode changes required by TS 3.7.5 were extended as well.

As stated in the NRC Enforcement Policy, enforcement action may be taken to the extent that violations were involved for the root cause that led to the noncompliance for which this NOED was necessary.

This letter, its enclosure, and its enclosures 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 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,


Signed by Miller, Geoffrey
on 08/28/24

Geoffrey B. Miller, Director
Division of Operational Reactor Safety

Docket No. 05000482
License No. NPF-42

Enclosure:
List of Key NRC Personnel

cc w/ encl: Distribution via LISTSERV

NOTICE OF ENFORCEMENT DISCRETION FOR WOLF CREEK GENERATING STATION – DATED AUGUST 29, 2024

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ADAMS ACCESSION NUMBER: **ML24241A221**

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LIST OF KEY NRC PERSONNEL

NRC Region IV

Geoffrey Miller, Director, Division of Operating Reactor Safety
Gregory Werner, Branch Chief, Reactor Projects Branch B
Cale Young, Senior Reactor Analyst
Christopher Henderson, Senior Resident Inspector
David Proulx, Senior Project Engineer

NRC Office of Nuclear Reactor Regulation

Aida Rivera-Varona, Deputy Director Division of Operating Reactor Licensing (DORL)
John Klos, Senior Project Manager, DORL, NOED Process Owner
Qin Pan, Reliability and Risk Analyst, Division of Risk Assessment
Jennie Rankin, Chief, DORL Plant Licensing Branch 4 (LPL4)
Jason Drake, Acting Chief, DORL LPL4
Samson Lee, Senior Project Manager, DORL LPL4
Milton Valentin, Chief, Containment and Plant Systems Branch (SCPB)
Rao Karipineni, Safety and Plant Systems Engineer, SCPB
Gordon Curran, Safety and Plant Systems Engineer, SCPB
Stew Bailey, Chief, Mechanical Engineering and Inservice Testing Branch (EMIB)
Tom Scarbrough, Senior Mechanical Engineer, EMIB
Rob Elliot, Acting Chief, Technical Specifications Branch (STSB)
Khadijah West, Safety and Plant Systems Engineer (STSB)
Josh Wilson, Reactor Systems Engineer (STSB)