



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 18, 2022

Mr. Cleveland Reasoner
Chief Executive Officer and
Chief Nuclear Officer
Wolf Creek Nuclear Operating Corporation
P.O. Box 411
Burlington, KS 66839

SUBJECT: WOLF CREEK GENERATING STATION, UNIT 1 - ISSUANCE OF
AMENDMENT NO. 232 REGARDING REVISION TO THE EMERGENCY PLAN
RELATED TO ON-SHIFT STAFFING (EPID L-2021-LLA-0089)

Dear Mr. Reasoner:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 232 to Renewed Facility Operating License No. NPF-42 for the Wolf Creek Generating Station, Unit 1 (Wolf Creek). The amendment consists of changes to the Wolf Creek Emergency Plan in response to your application dated May 25, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21145A238). The amendment revises the Wolf Creek Radiological Emergency Response Plan to change the on-shift staffing composition.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's monthly *Federal Register* notice.

Sincerely,

/RA/

Samson S. Lee, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosures:

1. Amendment No. 232 to NPF-42
2. Safety Evaluation

cc: Listserv



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WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION, UNIT 1

DOCKET NO. 50-482

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 232
License No. NPF-42

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Wolf Creek Generating Station, Unit 1 (the facility) Renewed Facility Operating License No. NPF-42 filed by the Wolf Creek Nuclear Operating Corporation (the Corporation), dated May 25, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, by Amendment No. 232, Renewed Facility Operating License No. NPF-42 is hereby amended to authorize revision to the Wolf Creek Radiological Emergency Response Plan as set forth in the Wolf Creek Nuclear Operating Corporation's application dated May 25, 2021, and evaluated in the NRC staff safety evaluation for this amendment.
3. The license amendment is effective as of its date of issuance and shall be implemented within 180 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Andrea D. Veil, Director
Office of Nuclear Reactor Regulation

Date of Issuance: May 18, 2022



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 232 TO

RENEWED FACILITY OPERATING LICENSE NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

1.0 INTRODUCTION

By application dated May 25, 2021 (Reference 1), Wolf Creek Nuclear Operating Corporation (the licensee) submitted a license amendment request (LAR) for U.S. Nuclear Regulatory Commission (NRC or the Commission) review and approval of the Wolf Creek Generating Station, Unit 1 (Wolf Creek) emergency plan. The licensee's LAR proposes changes to the Wolf Creek Radiological Emergency Response Plan (RERP) on-shift staffing, pursuant to Section 50.54(q) of Title 10 of the *Code of Federal Regulations* (10 CFR), to:

- Eliminate a dedicated shift technical advisor (STA) position by allowing the STA functions to be combined with one or more of the required licensed senior reactor operator (SRO) positions (a dual-role SRO/STA); and
- Remove one Nuclear Station Operator (NSO).

The licensee stated that the proposed Wolf Creek RERP changes to the total number of required on-shift personnel reduces the number of required on-shift personnel and is considered a reduction in the effectiveness of the Wolf Creek emergency plan that requires NRC approval pursuant to 10 CFR 50.54(q)(4). Therefore, as required under 10 CFR 50.54(q)(4), the licensee is submitting these proposed Wolf Creek RERP changes for NRC approval prior to implementation. The licensee stated that once the proposed RERP changes and revisions are approved, the approved amendment will be implemented within 180 days from the date of issuance.

2.0 REGULATORY EVALUATION

Following the accident at Three Mile Island (TMI) Unit 2 in March 1979, the NRC identified the need for power reactor licensees to assign an on-shift technical advisor who could provide engineering and accident assessment expertise to the shift supervisor in the event of abnormal or accident conditions. This position was designated as the STA. The qualifications for the person occupying the STA position are contained in Item I.A.1.1 of NUREG-0737, "Clarification

of TMI Action Plan Requirements,” dated November 1980 (Reference 2), Generic Letter (GL) 86-04, “Policy Statement on Engineering Expertise on Shift,” dated February 13, 1986 (Reference 3), and Regulatory Guide (RG) 1.8, Revision 3, “Qualification and Training of Personnel for Nuclear Power Plants,” dated May 2000 (Reference 4). The Commission’s Policy Statement on Engineering Expertise on Shift, as published in the *Federal Register* (FR) on October 28, 1985 (50 FR 43621), provided two options for meeting the staffing requirements in 10 CFR 50.54(m)(2) and guidance in NUREG-0737, Item I.A.1.1. It allows for either an on-shift dedicated STA, who meets the STA criteria of NUREG-0737, Item I.A.1.1, or an individual assigned to each operating shift crew who is a licensed SRO on the nuclear power unit(s) to which he or she is assigned and meets the STA criteria of NUREG-0737, Item I.A.1.1. The STA qualifications should include a bachelor’s degree in engineering or equivalent, plus specific training in plant design, layout, and controls.

The planning standards in 10 CFR 50.47(b) establish the requirements that the onsite and offsite emergency response plans must meet for the NRC staff to make a finding that there is reasonable assurance that the licensee can, and will, take adequate protective measures in the event of a radiological emergency. Specifically, on-shift and augmented emergency response organization staffing is addressed under 10 CFR 50.47(b)(2), which states:

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

Appendix E to 10 CFR Part 50, “Emergency Planning and Preparedness for Production and Utilization Facilities,” Section IV, Part A, “Organization,” states, in part:

The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee’s emergency organization....

The regulations at 10 CFR 50.54, “Conditions of licenses,” contains the regulation 10 CFR 50.54(q)(4), which requires prior NRC approval for changes to a licensee’s emergency plan that reduces the effectiveness of the plan.

RG 1.101, Revision 2, “Emergency Planning and Preparedness for Nuclear Power Reactors,” dated October 1981 (Reference 5), provides guidance on methods acceptable to the NRC staff for implementing specific parts of the NRC’s regulations (i.e., 10 CFR 50.47(b)(2) and Appendix E to 10 CFR Part 50, Section IV, Part A). RG 1.101 endorses NUREG-0654/FEMA-REP-1, Revision 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” dated November 1980 (Reference 6) (hereafter referred to as NUREG-0654), which provides evaluation criteria, which serve as an acceptable means of complying with the planning standards set forth in 10 CFR 50.47(b). These evaluation criteria also provide a basis for NRC licensees, and State and local governments to develop acceptable radiological emergency preparedness plans.

NUREG-0654, Section II, “Planning Standards and Evaluation Criteria,” Evaluation Criteria II.B.1 and II.B.5, specifically address planning standard 10 CFR 50.47(b)(2).

Evaluation Criterion II.B.1 states:

Each licensee shall specify the onsite emergency organization of plant staff personnel for all shifts and its relation to the responsibilities and duties of the normal shift complement.

Evaluation Criterion II.B.5 states, in part:

Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The minimum on-shift staffing levels shall be as indicated in Table B-1. The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.

Office of Nuclear Security and Incident Response (NSIR)/Division of Preparedness and Response (DPR) Interim Staff Guidance (ISG), NSIR/DPR-ISG-01, Revision 0, "Interim Staff Guidance, Emergency Planning for Nuclear Power Plants," dated November 2011 (Reference 7), provides updated guidance for addressing emergency planning requirements for nuclear power plants, based on changes to emergency preparedness regulations in 10 CFR 50.47 and Appendix E to 10 CFR Part 50, which was published on November 23, 2011 (76 FR 72560). ISG NSIR/DPR-ISG-01 provides guidance for a detailed staffing analysis, which the NRC requires each nuclear power reactor licensee to perform, pursuant to Section IV.A.9 of Appendix E to 10 CFR Part 50, to determine if on-shift staff may have been assigned responsibilities that would prevent the timely performance of emergency response functions delineated in the licensee's emergency plan. Staffing analyses are required to be part of the emergency plan. As such, ISG NSIR/DPR-ISG-01 also endorsed the staffing analysis methodology contained in Nuclear Energy Institute (NEI) 10-05, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities," Revision 0, dated June 2011 (Reference 8) and found it to be an acceptable methodology for a licensee to perform the required staffing analysis.

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of the proposed changes to the Wolf Creek emergency plan described in the licensee's LAR dated May 25, 2021. The NRC staff's technical evaluation is detailed below.

3.1 Evaluation of Proposed Wolf Creek RERP Change to Eliminate Dedicated STA Position

The licensee proposed to change the current Wolf Creek RERP such that the STA tasks could be assigned to an STA-qualified licensed SRO filling one of the required SRO positions and no longer performed by a dedicated individual. The licensee provided a justification for the proposed changes to the Wolf Creek RERP that included a technical evaluation of the STA tasks in support of the Plant System Engineering, Repair and Corrective Actions Major Functional Area described in NUREG-0654, Table B-1.

The licensee provided that an on-shift individual will continue to be available to provide advisory technical support to the Operations shift crews and that this individual will meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

The licensee performed an on-shift staffing analysis (OSA) in accordance with the NRC endorsed methodology contained in NEI 10-05 to validate that this change to a dual role SRO/STA would not result in on-shift personnel being assigned responsibilities that would prevent the timely performance of the assigned functions. This analysis determined that the plant system engineering, repair, and corrective action functions were not adversely impacted by the proposed changes. Core thermal hydraulics and repair and corrective action major tasks will continue to be performed by qualified on-shift and augmented personnel.

With the continued use of an on-shift individual, who meets the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift, to provide technical support to the Operations shift crew, and the results of the OSA report validating that the on-shift personnel are not being assigned responsibilities that would prevent the timely performance of the assigned functions, the NRC staff concludes that the proposed change will not result in a loss of function or impact the timing for the Plant System Engineering, Repair and Corrective Actions Major Functional Area and is, therefore, acceptable.

3.2 Evaluation of Major Functional Areas for Proposed Removal of One NSO

The licensee proposes to remove one on-shift NSO staff, decreasing the number of on-shift NSOs from seven to six. The licensee states that one NSO is used to fill the dedicated Emergency Notification System and Off-Site Communicator (ENS/OSC Communicator) position in the current Wolf Creek RERP. The current Wolf Creek RERP requires a single dedicated on-shift communicator, which addresses the minimum staffing requirements of NUREG-0654 Table B-1.

The licensee states that the creation of a dual role SRO/STA would allow the Work Control Senior Reactor Operator (WCSRO) to now be assigned as the ENS/OSC Communicator. This reassignment of the dedicated ENS/OSC Communicator duties allows the NSO presently filling this position to perform the accident mitigation duties currently assigned to other NSOs. The licensee states that an analysis was performed using the WCSRO as the dedicated on-shift ENS/OSC Communicator and that the analysis did validate that on-shift personnel were not assigned responsibilities that would prevent the timely performance of the assigned functions.

With the continued use of an on-shift individual as the dedicated on-shift ENS/OSC Communicator, and the results of the OSA report validating that the on-shift personnel are not being assigned responsibilities that would prevent the timely performance of the assigned functions, the NRC staff concludes that the proposed change will not result in a loss of function or impact the timing for the Notification/Communication Functional Area Major Functional Area and is, therefore, acceptable.

3.3 Technical Summary

Based on the above, the NRC staff finds that the proposed changes to the Wolf Creek RERP continue to meet planning standard 10 CFR 50.47(b)(2) and the requirements in Section IV.A of Appendix E to 10 CFR Part 50, and as such, provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Therefore,

the NRC staff concludes that the proposed changes to the Wolf Creek RERP, as described in the application dated May 25, 2021, are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of Kansas official was notified of the proposed issuance of the amendments on January 20, 2022. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, published in the *Federal Register* on August 10, 2021 (86 FR 43691), and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. McCoy, J. H., Wolf Creek Nuclear Operating Corporation, letter to U.S. Nuclear Regulatory Commission, "Docket No. 50-482: License Amendment Request (LAR) for Revision to the Emergency Plan," dated May 25, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21145A238).
2. U.S. Nuclear Regulatory Commission, "Clarification of TMI Action Plan Requirements," NUREG-0737, dated November 1980 (ADAMS Accession No. ML051400209).
3. U.S. Nuclear Regulatory Commission, "Policy Statement on Engineering Expertise on Shift," Generic Letter 86-04, dated February 13, 1986 (ADAMS Accession No. ML031150270).
4. U.S. Nuclear Regulatory Commission, "Qualification and Training of Personnel for Nuclear Power Plants," Regulatory Guide 1.8, Revision 3, dated May 2000 (ADAMS Accession No. ML003706932).

5. U.S. Nuclear Regulatory Commission, "Emergency Planning and Preparedness for Nuclear Power Reactors," Regulatory Guide 1.101, Revision 2, dated October 1981 (ADAMS Accession No. ML090440294).
6. U.S. Nuclear Regulatory Commission/Federal Emergency Management Agency, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0654/FEMA-REP-1, Revision 1, dated November 1980 (ADAMS Accession No. ML040420012).
7. U.S. Nuclear Regulatory Commission, Interim Staff Guidance (ISG) NSIR/DPR/ISG-01, Revision 0, "Emergency Planning for Nuclear Power Plants," dated November 2011 (ADAMS Accession No. ML113010523).
8. Nuclear Energy Institute, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities," NEI 10-05, Revision 0, dated June 2011 (ADAMS Accession No. ML111751698).

Principal Contributor: K. Mott, NSIR

Date: May 18, 2022

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