



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 – SUPPLEMENTAL INFORMATION NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION RE: SECTION 50.55a OF 10 CFR REQUEST NO. I4R-08 FOR THE FOURTH INSERVICE INSPECTION PROGRAM INTERVAL, RELIEF FOR EXTENSION OF FOLLOW UP EXAMINATION AND VISUAL EXAMINATION REQUIREMENTS FOR REACTOR PRESSURE VESSEL HEAD PENETRATION NOZZLES WITH MITIGATED ALLOY 600/82/182 PEENED SURFACE (EPID L-2022-LLR-0039)

Dear Mr. Reasoner:

By letter dated April 4, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22095A252), Wolf Creek Nuclear Operating Corporation (the licensee) submitted a proposed alternative to the requirements regarding the follow-up volumetric examination frequency and bare metal visual examination requirements.

The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of the application. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Pursuant to Sections 50.55a(z)(1) and 50.55a(z)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR), the applicant shall demonstrate that the proposed alternatives would provide an acceptable level of quality and safety, or that compliance with the specified requirements of Section 50.55a would result in hardship or unusual difficulty without a compensating increase in the level of quality or safety.

The NRC staff has reviewed the application and concluded that the information delineated in the enclosure to this letter is necessary to enable the NRC staff to make an independent assessment regarding the acceptability of the application in terms of regulatory requirements for the protection of public health and safety and the environment.

In order to make the application complete, the NRC staff requests that the licensee supplement the application to address the information requested in the enclosure by June 6, 2022. This will enable the NRC staff to assess the acceptability of the application for its detailed review. If the information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its

activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the NRC staff's detailed technical review by separate correspondence.

The information requested and associated timeframe in this letter were discussed with the licensee's staff on a May 18, 2022, clarification call.

If you have any questions, please contact me at 301-415-3168 or via email at Samson.Lee@nrc.gov.

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

Enclosure
Supplemental Information Needed

cc: Listserv

SUPPLEMENTAL INFORMATION NEEDED

PROPOSED ALTERNATIVE TO

10 CFR 50.55a(g)(6)(ii)(D)(5)

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION, UNIT 1

DOCKET NO. 50-482

By letter dated April 4, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22095A252), Wolf Creek Nuclear Operating Corporation (the licensee) submitted a proposed alternative to the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.55a(g)(6)(ii)(D)(5), "Peening," regarding the follow-up volumetric examination frequency and bare metal visual examination requirements. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the U.S. Nuclear Regulatory Commission (NRC) staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant. Pursuant to 10 CFR 50.55a(z)(1), the licensee shall demonstrate that the proposed alternatives would provide an acceptable level of quality and safety.

The NRC staff has reviewed your alternative and concluded that it did not provide technical information in sufficient detail to enable the NRC staff to complete its detailed review and make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements for the protection of public health and safety and the environment.

REGULATORY BASIS

Pursuant to 10 CFR 50.55a(g)(6)(ii), "Augmented ISI [inservice inspection] program," the NRC may require the licensee to follow an augmented ISI program for systems and components for which the NRC deems that added assurance of structural reliability is necessary.

Paragraph 50.55a(g)(6)(ii)(D) of 10 CFR, "Augmented ISI requirements: Reactor Vessel Head Inspections," requires licensees of pressurized water reactors (PWRs) to augment their ISI of the reactor vessel head with the American Society of Mechanical Engineers (ASME) Code Case N-729-6, "Alternative Examination Requirements for PWR Reactor Vessel Upper Heads With Nozzles Having Pressure-Retaining Partial-Penetration Welds, Section XI, Division 1," with conditions.

INFORMATION INSUFFICIENCIES

During its acceptance review of the proposed alternative, the NRC staff noted that the licensee's reason for the request was that the warranty from the vendor, which provided the peening service, specified that the follow-up inspection be conducted in the third refueling outage after the peening. However, the submittal did not include the technical basis for why the follow-up examination should be extended to the third refueling outage, and that the examination in

Enclosure

accordance with the current NRC regulation would not be acceptable. Additionally, the basis for not performing a bare metal visual examination, during outages when volumetric/surface examinations are being performed, was limited to a hardship basis associated with radiological dose and expense.

SUPPLEMENTAL INFORMATION NEEDED

To support the continuation of the acceptance review for this application, the NRC staff requests the licensee to supplement the submittal with the following information:

1. Technical basis to support extending the first follow-up volumetric/surface examination to three refueling outages after peening in accordance with the peening vendor's warranty provision. At a minimum, the technical basis should address the change in stresses due to the application in peening, the potential effect on any missed flaws during the application cycle examinations, and potential unacceptable flaw growth that could occur during the proposed extended frequency of the examination.
2. Technical basis to remove the defense-in-depth bare metal visual examination requirement when performing a volumetric examination during the first follow-up examination, specifically, and then follow-up examinations for the duration of the proposed alternative. Consideration should be given to the effect of the change in stress profile by the surface application of peening on the J-groove weld, the potential to open up fabrication defects due to the application of peening, the non-destructive examinations applied, and the inability to volumetrically inspect the weld.
3. The licensee submitted the relief request under 10 CFR 50.55a(z)(1). However, Section 4, "Reason for Request," of the attachment to the submittal discusses "hardships." In order for the NRC staff to consider hardship as a basis, the licensee should also submit the relief request under 10 CFR 50.55a(z)(2) and provide additional estimates of radiological dose savings with the extended examination frequency.

SUBJECT: WOLF CREEK GENERATING STATION, UNIT 1 – SUPPLEMENTAL INFORMATION NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION RE: SECTION 50.55a OF 10 CFR REQUEST NO. I4R-08 FOR THE FOURTH INSERVICE INSPECTION PROGRAM INTERVAL, RELIEF FOR EXTENSION OF FOLLOW UP EXAMINATION AND VISUAL EXAMINATION REQUIREMENTS FOR REACTOR PRESSURE VESSEL HEAD PENETRATION NOZZLES WITH MITIGATED ALLOY 600/82/182 PEENED SURFACE (EPID L-2022-LLR-0039) DATED MAY 18, 2022

DISTRIBUTION:

PUBLIC
 PM File Copy
 RidsACRS_MailCTR Resource
 RidsNrrDorlLpl4 Resource
 RidsNrrDnrINphp Resource

RidsNrrPMWolfCreek Resource
 RidsNrrLAPBlechman Resource
 RidsRgn4MailCenter Resource
 JCollins, NRR

ADAMS Accession No.: ML22119A217

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DNRL/NPHP/BC
NAME	SLee	PBlechman	MMitchell
DATE	4/28/2022	5/2/2022	4/21/2022
OFFICE	NRR/DORL/LPL4/BC	NRR/DORL/LPL4/PM	
NAME	JDixon-Herrity	SLee	
DATE	5/5/2022	5/18/2022	

OFFICIAL RECORD COPY