



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

December 6, 2019

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 – REGULATORY AUDIT  
SUMMARY REGARDING LICENSE AMENDMENT REQUEST TO REVISE  
TECHNICAL SPECIFICATION 3.3.5, "LOSS OF POWER (LOP) DIESEL  
GENERATOR (DG) START INSTRUMENTATION" (EPID L-2019-LLA-0062)**

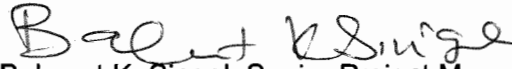
Dear Mr. Reasoner:

By letter dated March 18, 2019, as supplemented by letters dated August 22, September 10, and November 13, 2019, Wolf Creek Nuclear Operating Corporation submitted a license amendment request (LAR) for Wolf Creek Generating Station, Unit 1 regarding revision to Technical Specification 3.3.5, "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation." Specifically, the amendment proposes to revise the degraded voltage and loss of voltage relays allowable values and nominal trip setpoints (voltage and time delays) specified in Surveillance Requirement 3.3.5.3.

To support its review of the LAR, the U.S. Nuclear Regulatory Commission staff conducted a regulatory audit via internet-based portal from June 17 to November 20, 2019, to verify information submitted by the licensee and the supporting documentation. The regulatory audit summary is enclosed with this letter.

If you have any questions, please contact me at 301-415-3016 or via e-mail at [Balwant.Singal@nrc.gov](mailto:Balwant.Singal@nrc.gov).

Sincerely,



Balwant K. Singal, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosure:  
Regulatory Audit Summary

cc: Listserv

REGULATORY AUDIT SUMMARY FOR JUNE 17 – NOVEMBER 20, 2019  
AUDIT IN SUPPORT OF THE REVIEW OF LICENSE AMENDMENT REQUEST  
FOR REVISION TO TECHNICAL SPECIFICATION 3.3.5, "LOSS OF POWER (LOP)  
DIESEL GENERATOR (DG) START INSTRUMENTATION"  
WOLF CREEK NUCLEAR OPERATING CORPORATION  
WOLF CREEK GENERATING STATION, UNIT 1  
DOCKET NO. 50-482

**1.0    BACKGROUND**

By letter dated March 18, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19086A111), as supplemented by letters dated August 22, September 10, and November 13, 2019 (ADAMS Accession Nos. ML19239A112, ML19260D630, and ML19326A162, respectively), Wolf Creek Nuclear Operating Corporation (the licensee) submitted a license amendment request (LAR) for Wolf Creek Generating Station, Unit 1, regarding revision to Technical Specification 3.3.5, "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation." Specifically, the amendment proposes to revise the degraded voltage (DV) and loss of voltage (LOV) relays allowable values and nominal trip setpoints (voltage and time delays) specified in Surveillance Requirement 3.3.5.3.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the calculations prepared/revised by the licensee in support of the LAR and referenced in the licensee's evaluation via an internet-based portal. The scope of the audit was primarily focused on the review of the licensee's calculations/analyses related to the proposed change. The calculations were reviewed to determine if the licensee needs to submit any additional information contained in the analyses performed in support of the requested change and to develop conclusions for the staff's safety evaluation. An audit plan was issued by the NRC staff by letter dated June 13, 2019 (ADAMS Accession No. ML19162A106).

**2.0    AUDIT DATES AND LOCATION**

The regulatory audit was conducted via internet portal from June 17 to November 20, 2019.

**3.0    AUDIT TEAM MEMBERS**

The NRC audit team members consisted of:

- Mr. Vijay Goel, Electrical Engineering Operating Reactor Branch, Office of Nuclear Reactor Regulation (NRR) (Technical Team Lead)
- Mr. Stephen Wyman, Electrical Engineering Operating Reactor Branch, NRR
- Mr. Balwant Singal, NRR (Project Manager)

#### 4.0 DOCUMENTS AUDITED

The following documents prepared by the licensee in support of the LAR were reviewed during the audit:

- Analysis/Calculation related to "Establish DV Relay Dropout Setting (Minimum Operating Voltage Limit)," as described in LAR, Attachment I, Section 3.1.1. [Calculation No. XX-E-009-001-CN006, "System NB, NG, PG Undervoltage/Degraded Voltage."]
- Analysis/Calculation related to "Confirm Adequacy of DV Relay Dropout Setting for Motor Starting," as described in LAR, Attachment I, Section 3.1.2. [Calculation No. XX-E-009-001-CN006, "System NB, NG, PG Undervoltage/Degraded Voltage."]
- Analysis/Calculation related to "Establish DV Relay Time Delay (with accident signal)," as described in LAR, Attachment I, Section 3.1.3. [Calculation No. XX-E-009-001-CN006, "System NB, NG, PG Undervoltage/Degraded Voltage."]
- Analysis/Calculation related to "Confirm Reset of DV Relay with Minimum Required Grid Voltage," as described in LAR, Attachment I, Section 3.1.4. [Calculation No. XX-E-009-001-CN006, "System NB, NG, PG Undervoltage/Degraded Voltage," and Calculation No. XX-E-006, Revision 8, "AC System Analysis."]
- Analysis/Calculation related to "Confirm LOV Relay Setpoint Prevents Motor Stalling," as described in LAR, Attachment I, Section 3.1.5. [Calculation No. XX-E-009-001-CN006, "System NB, NG, PG Undervoltage/Degraded Voltage."]
- Analysis/Calculation related to "Determine the setting of DV time delay relay with and without safety injection signal," as described in LAR, Attachment I, Section 3.3. [Calculation No. XX-E-009-001-CN006, "System NB, NG, PG Undervoltage/Degraded Voltage."]

#### 5.0 AUDIT ACTIVITIES

The audit was conducted by review of the relevant portions of calculations listed in Section 4.0, via internet-based portal. The focus of the audit was to review the licensee's calculations performed in support of the requested change.

Initial part of the audit was conducted from June 17 to July 12, 2019. The final Request for additional information (RAI) response was provided on November 13, 2019. Hence, the audit was extended by e-mail dated September 18, 2019 (ADAMS Accession No. ML19261A227), to facilitate the review of the RAI responses and an additional calculation was performed in support of the RAI responses. The audit was formally concluded on November 20, 2019.

#### 6.0 AUDIT SUMMARY

Based on the review of the calculations/analyses performed in support of the proposed technical specification changes and provided for the NRC staff review via the internet portal, the NRC staff identified the need for additional information by e-mail dated August 12, 2019 (ADAMS Accession No. ML19224A524). The additional information was provided by the licensee by letters dated August 22 and September 10, 2019.

The review of the responses to RAls 1, 2, 3, and 4, resulted in additional NRC staff questions. The NRC staff held a clarification call with the licensee on October 8, 2019. The following NRC and WCNO staff participated during the call:

**NRC/NRR**

Vijay Goel, Donna Williams, Steve Wyman, and Balwant K. Singal.

**WCNO**

Jason Knust, Nicole Good, Brad Kever, Saed Almajdoubah, and Ismail Boussag.

The licensee agreed to supplement the responses to the NRC staff Questions 1, 2, 3, and 4 to address additional NRC staff concerns<sup>1</sup>. The supplemental response to the NRC staff questions was provided by WCNO letter dated November 13, 2019.

The NRC staff verified that the information provided in the LAR and supplements agreed with the information provided in the calculations/analyses on the internet-based portal.

**7.0 EXIT BRIEFING**

The audit was performed via internet-based portal. After the review of the information provided by the licensee by letter dated November 13, 2019, the licensee was informed via phone that the NRC staff did not require any additional information to complete the review of the application.

---

<sup>1</sup> Refer to WCNO letter dated November 13, 2019 for the description of the NRC staff questions.

SUBJECT: WOLF CREEK GENERATING STATION, UNIT 1 – REGULATORY AUDIT  
SUMMARY REGARDING LICENSE AMENDMENT REQUEST TO REVISE  
TECHNICAL SPECIFICATION 3.3.5, "LOSS OF POWER (LOP) DIESEL  
GENERATOR (DG) START INSTRUMENTATION" (EPID L-2019-LLA-0062)  
DATED DECEMBER 6, 2019

DISTRIBUTION:

PUBLIC

PM File Copy

RidsACRS\_MailCTR Resource

RidsNrrDorLp4 Resource

RidsNrrDexEeob Resource

RidsNrrDexEica Resource

VGoel, NRR

SWyman, NRR

CHeung, NRR

RidsNrrLAPBlechman Resource

RidsNrrPMWolfCreek Resource

RidsRgn4MailCenter Resource

**ADAMS Accession No.: ML19330F863**

via email dated

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DEX/EEOB/BC
NAME	BSingal	PBlechman	BTitus
DATE	12/02/19	12/02/19	12/04/19
OFFICE	NRR/DORL/LPL4/BC	NRR/DORL/LPL4/PM	
NAME	JDixon-Herrity	BSingal	
DATE	12/06/19	12/06/19	

**OFFICIAL RECORD COPY**