

December 17, 2013

Russell A. Smith Site Vice President and Chief Nuclear Operating Officer

WO 13-0089

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

> Subject: Docket No. 50-482: Plant Specific Adoption of Technical Specification Task Force Traveler TSTF-522-A, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 Hours per Month" Using the Consolidated Line Item Improvement Process

Gentlemen:

Pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Wolf Creek Nuclear Operating Corporation (WCNOC) hereby requests an amendment to Renewed Facility Operating License No. NPF-42 for the Wolf Creek Generating Station (WCGS). The proposed amendment revises Technical Specification (TS) Surveillance Requirement (SR) 3.7.10.1 and SR 3.7.13.1 to reduce the required run time for periodic operation of the control room pressurization system filter trains and emergency exhaust system filter trains, with heaters on, from 10 hours to 15 minutes. The proposed amendment is consistent with plant-specific options provided in the Nuclear Regulatory Commission's (NRC) model safety evaluation of Technical Specifications Task Force (TSTF) Traveler TSTF-522-A, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month."

Attachment I provides a description of the proposed change and the supporting assessment of applicability and plant-specific variations. Attachment II provides the existing TS pages marked up to show the proposed change. Attachment III provides revised (clean) TS page. Attachment IV provides the existing TS Bases pages marked up to show the proposed changes and is for information only. Final TS Bases changes will be implemented pursuant to TS 5.5.14, "Technical Specification (TS) Bases Control Program," at the time the amendment is implemented.

It has been determined that this amendment application does not involve a significant hazard consideration as determined per 10 CFR 50.92, "Issuance of amendment." Pursuant to 10 CFR 51.22, "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review," Section (b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of this amendment.

WO 13-0089 Page 2 of 3

The Plant Safety Review Committee reviewed this amendment application. In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," a copy of this amendment application, with attachments, is being provided to the designated Kansas State official.

WCNOC requests approval of the proposed amendment prior to November 20, 2014. It is anticipated that the license amendment, as approved, will be effective upon issuance and will be implemented within 90 days of NRC issuance.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4156, or Mr. Michael J. Westman at (620) 364-4009.

Sincerely,

Russell A. Smith

RAS/rlt

Attachments: I Description and Assessment

- II Proposed Technical Specification Change (Markup)
- III Revised Technical Specification Pages
- IV Proposed Technical Specification Bases Changes (For Information Only)
- cc: C. F. Lyon (NRC), w/a T. A. Conley (KDHE), w/a M. L. Dapas (NRC), w/a N. F. O'Keefe (NRC), w/a Senior Resident Inspector (NRC), w/a

STATE OF KANSAS SS COUNTY OF COFFEY)

Russell A. Smith, of lawful age, being first duly sworn upon oath says that he is Site Vice President and Chief Nuclear Operating Officer of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By

Russell A. Smith Site Vice President and Chief Nuclear Operating Officer

17th day of December, 2013. SUBSCRIBED and sworn to before me this

RHONDA L. TIEMEYER MY COMMISSION EXPIRES

(<u>Khonda L. Jiemeyes</u> Notary Public Expiration Date J<u>ANUOSY</u> 11, 2014

DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

The proposed change revises Surveillance Requirements (SRs) 3.7.10.1 and 3.7.13.1 which currently require operating certain ventilation systems (the Control Room Emergency Ventilation System (CREVS) in Technical Specification (TS) 3.7.10 and the Emergency Exhaust System (EES) in TS 3.7.13) with the heaters operating for a continuous 10-hour period every 31 days. For the CREVS at the Wolf Creek Generating Station (WCGS) this applies only to the pressurization trains. Proposed revisions to these SRs would require operation of these systems, with the applicable heaters operating, for 15 continuous minutes every 31 days.

The proposed amendment is consistent with Technical Specifications Task Force (TSTF) Traveler TSTF-522-A, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month."

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

Wolf Creek Nuclear Operating Corporation (WCNOC) has reviewed the proposed model safety evaluation in the Federal Register Notice for Comment (77 FR 16869 dated March 22, 2012). WCNOC also reviewed the Nuclear Regulatory Commission (NRC) staffs final model safety evaluation dated September 13, 2012, included with the Federal Register Notice of Availability (77 FR 58421 dated September 20, 2012, ADAMS Accession Number ML12163A421), as well as the information provided in TSTF-522-A.

WCNOC has concluded that the justifications presented in TSTF-522-A and the model safety evaluation prepared by the NRC staff are applicable to Wolf Creek Generating Station and justify this amendment for the incorporation of the changes to the WCGS Technical Specifications.

2.2 Optional Changes and Variations

WCNOC is proposing only minor variations from the TS changes described in TSTF-522-A, Revision 0, and the applicable parts of the NRC staffs model safety evaluation dated September 13, 2012. Consistent with the bracketed, plant-specific options in the NRC's model safety evaluation, the proposed amendment retains the requirement for applicable ventilation system heaters to be operating during the surveillances. As acknowledged in the NRC's review of License Amendment 123 (i.e., WCNOC's amendment for conversion to the Improved Technical Specifications (ITS)), the CREVS at WCGS includes two pressurization system trains with heaters and two filtration system trains without heaters.

It should also be noted that the WCGS TSs use different system titles than the Standard Technical Specifications (STS) on which TSTF-522-A was based. Specifically, STS 3.7.10 in NUREG-1431 covers the Control Room Emergency Filtration System (CREFS) whereas WCGS TS 3.7.10 covers the Control Room Emergency Ventilation System (CREVS). STS 3.7.13 in NUREG-1431 covers the Fuel Building Air Cleanup System (FBACS) whereas WCGS TS

Attachment I to WO 13-0089 Page 2 of 3

3.7.13 covers the Emergency Exhaust System (EES). These differences are administrative and do not affect the applicability of TSTF-522-A to the WCGS TSs.

3.0 REGULATORY ANALYSIS

3.1 <u>No Significant Hazards Consideration Determination</u>

WCNOC requests adoption of an approved change to the Standard Technical Specifications in order to revise WCGS Technical Specification (TS) 3.7.10, "Control Room Emergency Ventilation System (CREVS)," and TS 3.7.13, "Emergency Exhaust System (EES)." This amendment would revise Surveillance Requirements 3.7.10.1 and 3.7.13.1 that require these ventilation systems with the CREVS pressurization train heaters and EES train heaters operating for a continuous 10-hour period every 31 days. These Surveillance Requirements would be revised to require operation of these systems with the CREVS pressurization train heaters and EES train heaters operating for 15 continuous minutes every 31 days.

As required by 10 CFR 50.91(a), an analysis for concluding that the proposed change involves no significant hazards consideration is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change replaces existing Surveillance Requirements to operate the Control Room Emergency Ventilation System (CREVS) and the Emergency Exhaust System (EES) for a continuous 10 hour period with applicable heaters operating every 31 days, with requirements to operate these systems for 15 continuous minutes with applicable heaters operating every 31 days.

These systems are not accident initiators (i.e., their malfunction cannot initiate an accident or transient) and therefore, these changes do not involve a significant increase in the probability of an accident. The proposed system and filter testing changes are consistent with current regulatory guidance for these systems and will continue to assure that these systems perform their design function which may include mitigating accidents. Therefore, the change does not involve a significant increase in the consequences of an accident.

Therefore, it is concluded that this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The change proposed for these ventilation systems does not change any system operations or maintenance activities. Testing requirements will be revised and will continue to demonstrate that the Limiting Conditions for Operation are met and the system components are capable of performing their intended safety functions. The change does not create new failure modes or mechanisms and no new accident precursors are generated.

Therefore, it is concluded that this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The design basis for the ventilation system heaters in the EES and in the pressurization trains of the CREVS includes the capability to heat the incoming air, reducing the relative humidity (and thereby increasing adsorber efficiency). The heater testing change proposed will continue to demonstrate that the heaters are capable of heating the air and will thus perform their design function. The proposed change is consistent with regulatory guidance.

Therefore, it is concluded that this change does not involve a significant reduction in a margin of safety.

Based on the above, WCNOC concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.0 ENVIRONMENTAL EVALUATION

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

.

Proposed Technical Specification Change (Markup)

ACTIONS (continued)

	CONDITION		REQUIRED ACTION	COMPLETION TIME
F.	Two CREVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

		FREQUENCY	
(15 c	SR 3.7.10.1	Operate each CREVS train pressurization filter unit for \geq 10 continuous hours with the heaters operating and each CREVS train filtration filter unit for \geq 15 minutes.	31 days
	SR 3.7.10.2	Perform required CREVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
	SR 3.7.10.3 Verify each CREVS train actuates on an actual or simulated actuation signal.		18 months
	SR 3.7.10.4	Perform required unfiltered air inleakage testing of the CRE and CBE boundaries in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Habitability Program

.

ACTIONS (continued)

CONDITION		REQUIRED ACTION		COMPLETION TIME
F.	Required Action and associated Completion Time of Condition E not met.	F.1	Suspend movement of irradiated fuel assemblies in the fuel building.	Immediately
	OR Two EES trains inoperable during movement of irradiated fuel assemblies in the fuel building for reasons other than Condition E.			

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.13.1	Operate each EES train for \geq (O continuous bours) with the heaters operating.	31 days 15 continuous minutes
SR 3.7.13.2	Perform required EES filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each EES train actuates on an actual or simulated actuation signal.	18 months
	· · · · · · · · · · · · · · · · · · ·	(continued)

.

.

Revised Technical Specification Pages

ACTIONS (continued)

	CONDITION		REQUIRED ACTION	COMPLETION TIME
F.	Two CREVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.10.1	Operate each CREVS train pressurization filter unit for \ge 15 continuous minutes with the heaters operating and each CREVS train filtration filter unit for \ge 15 continuous minutes.	31 days
SR 3.7.10.2	Perform required CREVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.10.3	Verify each CREVS train actuates on an actual or simulated actuation signal.	18 months
SR 3.7.10.4	Perform required unfiltered air inleakage testing of the CRE and CBE boundaries in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Habitability Program

ACTIONS (continued)

•

CONDITION		REQUIRED ACTION		COMPLETION TIME
F.	Required Action and associated Completion Time of Condition E not met. OR Two EES trains inoperable during movement of irradiated fuel assemblies in the fuel building for reasons other than Condition E	F.1	Suspend movement of irradiated fuel assemblies in the fuel building.	Immediately
	Condition L.			

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.13.1	Operate each EES train for \geq 15 continuous minutes with the heaters operating.	31 days
SR 3.7.13.2	Perform required EES filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each EES train actuates on an actual or simulated actuation signal.	18 months
		(continued)

Wolf Creek - Unit 1

Attachment IV to WO 13-0089 Page 1 of 7

.

Proposed Technical Specification Bases Changes (For Information Only)

B 3.7 PLANT SYSTEMS

B 3.7.10 Control Room Emergency Ventilation System (CREVS)

BASES

BACKGROUND

The CREVS provides a protected, controlled temperature environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke.

The CREVS consists of two independent, redundant trains that recirculate, cool, pressurize, and filter the air in the control room envelope (CRE) and control building envelope (CBE) that limits the inleakage of unfiltered air. Each CREVS train consists of a recirculation system train and a pressurization system train. The air conditioning portion of each train consists of a fan, a self-contained refrigeration system, and a prefilter. The filtration portion of each system consists of a high efficiency particulate air (HEPA) filter, an activated charcoal absorber section for removal of gaseous activity (principally iodines), and a second HEPA follows the absorber section to collect carbon fines. Each pressurization system train consists of ductwork to bring air from outside the building, a moisture separator, an electric heater, a HEPA, an activated charcoal adsorber, and a second HEPA. Ductwork, valves or dampers, doors, barriers, and instrumentation also form part of the system.

The CREVS is an emergency system which may also operate during normal unit operations. Upon receipt of the actuating signal, normal air supply and exhaust to the CRE is isolated, and a portion of the ventilation air is recirculated through the filtration system train(s), and the pressurization system is started. The filtration system prefilters remove any large particles in the air, and the pressurization system moisture separator removes any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. Continuous operation of each pressurization train for at least to hours per month, with the heaters functioning, reduces moisture buildup on the HEPA filters and adsorbers. The heaters are important to the effectiveness of the charcoal adsorbers.

Actuation of the CREVS by a Control Room Ventilation Isolation Signal (CRVIS), places the system in the emergency mode of operation. Actuation of the system to the emergency mode of operation closes the unfiltered outside air intake and unfiltered exhaust dampers, and aligns the system for recirculation. A portion of the recirculation of the air within the CRE flows through the redundant filtration system trains of HEPA and the charcoal adsorbers. The CRVIS also initiates pressurization and filtered ventilation of the air supply to the CRE.

Wolf Creek - Unit 1

•

.

ļ

ACTIONS	D.1, D.2.1, and D.2.2 (continued)	
	An alternative to Required Action D.1 is to immediately suspend activities that could result in a release of radioactivity that might require isolation of the CRE. This places the unit in a condition that minimizes the accident risk. This does not preclude the movement of fuel to a safe position.	•
	E.1 and E.2	
	During movement of irradiated fuel assemblies, with two CREVS trains inoperable or with one or more CREVS trains inoperable due to an inoperable CRE or CBE boundary, action must be taken immediately to suspend activities that could result in a release of radioactivity that might require isolation of the CRE. This places the unit in a condition that minimizes the accident risk. This does not preclude the movement of fuel to a safe position.	1
	<u>F.1</u>	
	If both CREVS trains are inoperable in MODE 1, 2, 3, or 4, for reasons other than an inoperable CRE and CBE boundary (i.e., Condition B), the CREVS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.	
SURVEILLANCE	<u>SR 3.7.10.1</u>	
nequirements	Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not too severe, testing each train once every month, by initiating from the control room, flow through the HEPA filters and charcoal adsorber of both the filtration and pressurization systems, provides an adequate check of this system. Monthly heater operations dry out any moisture accumulated in the charcoal from humidity in the ambient air. Each pressurization system train must be operated for ≥to continuous bours with the heaters energized. Each filtration system train need only be operated for ≥ 15 minutes to demonstrate the function of the system.	(<u>u</u>)

Wolf Creek - Unit 1

Revision 57

BASES

÷

SURVEILLANCE	<u>SR 3.7.10.4</u> (continued)			
	boundary to OPERABLE status provided mitigating actions can ensure that the CRE remains within the licensing basis habitability limits for the occupants following an accident. Compensatory measures are discussed in Regulatory Guide 1.196, Section C.2.7.3, (Ref. 4) which endorses, with exceptions, NEI 99-03, Section 8.4 and Appendix F (Ref. 5). These compensatory measures may also be used as mitigating actions as required by Required Action B.2. Temporary analytical methods may also be used as compensatory measures to restore OPERABILITY (Ref. 6). Options for restoring the CRE or CBE boundary to OPERABLE status include changing the licensing basis DBA consequence analysis, repairing the boundary, or a combination of these actions. Depending upon the nature of the problem and the corrective action, a full scope inleakage test may not be necessary to establish that the envelope boundary has been restored to OPERABLE status.			
REFERENCES	1.	USAR, Section 6.4 and 9.4.		
	2.	USAR, Chapter 15, Appendix 15A.		
	3.	Regulatory Guide 1.52, Rev. 2.		
	4.	Regulatory Guide 1.196.		
	5.	NEI 99-03, "Control Room Habitability Assessment," June 2001.		
6.		Letter from Eric J. Leeds (NRC) to James W. Davis (NEI) dated January 30, 2004, "NEI Draft White Paper, Use of Generic Letter 91-18 Process and Alternative Source Terms in the Context of Control Room Habitability." (ADAMS Accession No. ML040300694).		
	7.	USAR Section 2.2.		
	Regulatory Guide 1.78, Rev. 0.			
(
ĺ	9.1	Regulatory Guide 1.52, Rev. 3.		

Revision 41

٠

.

۰.

je 5 of 7	EES D 2 7 12
BASES	No changes this page, for information only
ACTIONS	D.1 and D.2
	When Required Action A.1 cannot be completed within the associated Completion Time during movement of irradiated fuel assemblies in the fuel building, the OPERABLE Emergency Exhaust System train must be started in the FBVIS mode immediately or fuel movement suspended. This action ensures that the remaining train is OPERABLE, that no undetected failures preventing system operation will occur, and that any active failure will be readily detected.
	If the system is not placed in operation, this action requires suspension of fuel movement, which precludes a fuel handling accident. This does not preclude the movement of fuel assemblies to a safe position.
	<u>E.1</u>
	If the fuel building boundary is inoperable such that a train of the Emergency Exhaust System operating in the FBVIS mode cannot establish or maintain the required negative pressure, action must be taken to restore an OPERABLE fuel building boundary within 24 hours. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period and the availability of the Emergency Exhaust System to provide a filtered release (albeit with potential for some unfiltered fuel building leakage).
	<u>F.1</u>
	During movement of irradiated fuel assemblies in the fuel building, when two trains of the Emergency Exhaust System are inoperable for reasons other than an inoperable fuel building boundary (i.e., Condition E), or if Required Action E.1 cannot be completed within the associated Completion Time action must be taken to place the unit in a condition in which the LCO does not apply. Action must be taken immediately to suspend movement of irradiated fuel assemblies in the fuel building. This does not preclude the movement of fuel to a safe position.
SURVEILLANCE REQUIREMENTS	<u>SR_3.7.13.1</u> Standby systems should be checked periodically to ensure that they function properly. As the environmental and normal operating conditions on this system are not severe, testing each train once every month, by initiating from the control room flow through the HEPA filters and charcoal adsorbers, provides an adequate check on this system.

Wolf Creek - Unit 1

(minutes

BASES

15 minutes

SURVEILLANCE REQUIREMENTS

15

<u>SR 3.7.13.1</u> (continued)

Monthly heater operation dries out any moisture accumulated in the charcoal from humidity in the ambient air. Systems with heaters must be operated for ≥ (b) continuous bours) with the heaters energized. Operating heaters would not necessarily have the heating elements energized continuously for (D tours) but will cycle depending on the temperature. The 31 day Frequency is based on the known reliability of the equipment and the two train redundancy available. This SR can be satisfied with the Emergency Exhaust System in the SIS or FBVIS lineup during testing. ◄

This SR verifies that the required Emergency Exhaust System filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The Emergency Exhaust System filter tests are based on the guidance in References 6 and 7 in accordance with the VFTP. The VFTP includes testing HEPA filter performance, charcoal absorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal. Specific test frequencies and additional information are discussed in detail in the VFTP.

<u>SR 3.7.13.3</u>

This SR verifies that each Emergency Exhaust System train starts and operates on an actual or simulated actuation signal. The 18 month Frequency is consistent with References 6 and 7. Proper completion of this SR requires testing the system in both the SIS (auxiliary building exhaust) and the FBVIS (fuel building exhaust) modes of operation.

During emergency operations the Emergency Exhaust System will automatically start in either the SIS or FBVIS lineup depending on the initiating signal. In the SIS lineup, the fans operate with dampers aligned to exhaust from the auxiliary building and prevent unfiltered leakage. In this SIS lineup, each train is capable of maintaining the auxiliary building at a negative pressure at least 0.25 inches water gauge relative to the outside atmosphere. In the FBVIS lineup, which is initiated upon detection of high radioactivity by the fuel building exhaust gaseous radioactivity monitors, the fans operate with the dampers aligned to exhaust from the fuel building to prevent unfiltered leakage. In the FBVIS lineup, each train is capable of maintaining the fuel building at a negative pressure at least 0.25 inches water gauge relative to the outside atmosphere. Normal exhaust air from the fuel building is continuously monitored by radiation detectors. One detector output will automatically align the Emergency Exhaust System in the FBVIS mode of operation.

BASES

REFERENCES	1.	USAR, Section 6.5.1.
		•

- 2. USAR, Section 9.4.2 and 9.4.3.
- 3. USAR, Section 15.7.4.
- 4. Regulatory Guide 1.25, Rev. 0 (Safety Guide 25).
- 5. 10 CFR 100.
- 6. ASTM D 3803-1989.
- 7. ANSI N510-1980.
- 8. NUREG-0800, Section 6.5.1, Rev. 2, July 1981.
- 9. Regulatory Guide 1.52 (Rev. 2) , Rev. 2.

10. Regulatory Guide 1.52, Rev. 3.)