

# WOLF CREEK

NUCLEAR OPERATING CORPORATION

Bart D. Withers  
President and  
Chief Executive Officer

February 26, 1988

WM 88-0056

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

Subject: Docket No. 50-482: Revision to Emergency  
Ventilation/Exhaust Systems Technical Specifications

Gentlemen:

The purpose of this letter is to transmit an application for amendment to Facility Operating License No. NPP-42 for Wolf Creek Generating Station (WCGS), Unit No. 1. This license amendment request proposes revising Technical Specifications 3/4.7.6, 3/4.7.7 and 3/4.9.13, which address the Emergency Ventilation/Exhaust Systems at WCGS.

This application for amendment revises these Technical Specifications to optimize their associated surveillances. A complete Safety Evaluation and Significant Hazards Consideration are provided as Attachment I. The proposed changes to the Technical Specifications are provided in Attachment II (marked-up) and Attachment III (typed).

In accordance with 10 CFR 50.91, a copy of this application, with attachments is being provided to the designated Kansas state official. Enclosed is a check (No. 10061) for the \$150.00 application fee required by 10 CFR 170.21.

The proposed revision to the Wolf Creek Generating Station Technical Specifications will be fully implemented upon Nuclear Regulatory Commission approval and after the necessary procedure revisions have been completed and implemented.

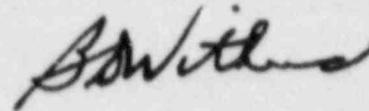
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If you have any questions concerning this matter, please contact me or Mr. O. L. Maynard of my staff.

Very truly yours,



Bart D. Withers  
President and  
Chief Executive Officer

BDW/jad

Enclosure

Attachments:     I - Safety Evaluation and Significant Hazards Consideration  
                  II - Proposed Technical Specification Change (marked-up)  
                  III - Proposed Technical Specification Change (typed)

cc: G. Allen (KDHE), w/a  
     B. L. Bartlett (NRC), w/a  
     R. D. Martin (NRC), w/a  
     P. W. O'Connor (NRC), 2 w/a

STATE OF KANSAS     )  
                              ) SS  
COUNTY OF COPPER    )

Bart D. Withers, of lawful age, being first duly sworn upon oath says that he is President and Chief Executive Officer of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the content thereof; that he has executed that 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 *B. D. Withers*  
Bart D. Withers  
President and Chief Executive Officer

SUBSCRIBED and sworn to before me this 26 day of February, 1988.

*Marlene Heathner*  
Notary Public

Expiration Date August 4, 1990



ATTACHMENT I

## PROPOSED LICENSE AMENDMENT

### Description of Content

This proposed amendment affects three Technical Specifications; 3/4.7.6 (Control Room Emergency Ventilation System), 3/4.7.7 (Emergency Exhaust System), and 3/4.9.13 (Emergency Exhaust System). Operability of these systems ensures: 1) adequate cooling for Control Room equipment and instrumentation (3.7.6); 2) Control Room will remain habitable during and following all credible accident conditions (3.7.6); 3) radioactive materials leaking from ECCS equipment in the Auxiliary Building following a LOCA are filtered prior to reaching the environment, (3.7.7); and 4) radioactive material released from an irradiated fuel assembly will be filtered prior to discharge to the environment (3.9.13).

### Description of Proposed Changes

The changes in Technical Specification 3/4.7.6 consist of: 1) increasing the Control Room Pressurization System flow from 500 cfm +10% to 750 cfm +10% in all applicable portions of 4.7.6; 2) changing the Pressurization System dirty filter dp from 3.8" W.G. to 3.6" W.G. in all applicable portions of 4.7.6; 3) deleting the dirty filter dp requirements in 4.7.6.c.1; 4) adding a maximum allowable dp for the Pressurization System filter unit in 4.7.6.e.1; 5) deleting the 0.05% in place penetration and bypass leakage test for charcoal filters in 4.7.6.f which tests HEPA filter integrity; and 6) deleting the 1% in place penetration and bypass leakage test for HEPA filters in 4.7.6.g. which tests charcoal filter integrity.

The changes in Technical Specification 3/4.7.7 consist of: 1) adding Auxiliary Building in the identification title; 2) deleting all sections of 4.7.7 dealing with testing of the adsorber unit and fan flow rates and replacing with requirements to perform the same adsorber unit testing at the appropriate flow rates per 4.9.13; 3) in renumbered paragraph 4.7.7.b.1 changing "fuel" to "auxiliary" to correctly identify the appropriate building; and 4) renumbering as necessary due to deleted/transferred testing requirements.

The changes in Technical Specification 3/4.9.13 consist of: 1) adding Fuel Building in the identification title; 2) reducing the required fan flow from 9000 cfm +10% to 6500 cfm +10% for all applicable sections of 4.9.13; 3) changing the dirty filter dp from 7.2" W.G. to 4.7" W.G. in all applicable sections of 4.9.13; 4) deleting dirty filter requirement in 4.9.13.b.1; 5) transferring 4.9.13.d.2 and 4.9.13.d.3 to new section 4.9.13.g as 4.9.13.g.1 and 4.9.13.g.2 and renumbering 4.9.13.d as applicable; 6) deleting .05% in place penetration and bypass leakage testing for charcoal adsorbers in 4.9.13.e; and 7) deleting the 1% in place penetration and bypass leakage testing for HEPA filters in 4.9.13.f.

The change in the BASES consist of: 1) changes in the identification titles for 3/4.7.7 and 3/4.9.13 2) changing "pump room" to "auxiliary building" in 3/4.7.7; and 3) adding that the surveillance requirements associated with the filtration unit for 3/4.7.7 are stated in Technical Specification 4.9.13.

### Discussion of Function of Subject Area

The three Technical Specifications for which the changes are requested are the three safety related ventilation systems associated with maintaining control room habitability and minimizing radioactivity releases to the environment for postulated accidents involving irradiated fuel.

Specifically Technical Specification 3/4.7.6 ensures a positive pressure envelope of filtered air to the Control Room to ensure habitable conditions in the Control Room under accident conditions. The positive pressure envelope is created by the Pressurization System discharging outside filtered air into the portions of the Control Building which provide the suction for the Control Room Filtration System which provides continual filtering of Control Room air.

Technical Specification 3/4.7.7 ensures that radioactive materials leaking from ECCS pumps in the Auxiliary Building during LOCA conditions are not allowed to migrate to the outside atmosphere without being filtered. This is accomplished by creation of a negative pressure in the Auxiliary Building of greater than 1/4" W.G. during Safety injection. actuation is the Emergency Exhaust System is aligned to take a suction on the Auxiliary Building. The Emergency Exhaust System filters the air before discharging to the environment.

Technical Specification 3/4.9.13 ensures that radioactive material released from irradiated fuel assemblies will be filtered prior to release to the environment by creation of a negative pressure in the Fuel Building of greater than 1/4" W.G. when the suction of the Emergency Exhaust System is aligned to the Fuel Building. The air is filtered through HEPA filters and charcoal beds prior to discharge to the environment. The filtration units and fan units identified as the Emergency Exhaust System in Technical Specification 3/4.7.7 and 3/4.9.13 are the same. Suction isolation dampers within the system are aligned to either the Auxiliary Building or the Fuel Building as required by the specified initiating signal (Safety Injection or Fuel Building Isolation Signal).

### Why Change Being is Requested

This change is being requested to: 1) provide more optimum pressure balance in and between the Control Building and the Auxiliary Building. With a flow of 9000 cfm +10% and the Emergency Exhaust System aligned to the Auxiliary Building, a negative pressure of approximately 3" W.G. is created. This high negative pressure in the Auxiliary Building reduces the positive pressure envelope in the Control Building to less than optimum levels due to leakage from the Control Building and Control Building Filtration units into the Auxiliary Building. Reduction of Emergency Exhaust Flow from 9000 cfm +10% to 6500 cfm +10% and increasing the Pressurization System flow from 500 cfm +10% to 750 cfm +10% provides both adequate negative pressure in the Auxiliary Building to ensure inleakage from the environment and establish a more desirable positive pressure envelope within the Control Building; 2) change the dirty filter dp for both the Pressurization System and the Emergency Exhaust System to be consistent with the new fan flow rates and safety evaluations. For the Emergency Exhaust System, the reduction in flow also reduces the dp across the filters. For the Pressurization System, the dirty

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filter dp was reduced to ensure adequate flow, as with a higher dp the flow may drop below acceptable limits for maintaining a positive pressure envelope in the Control Building. 3) Delete redundant surveillance testing requirements for the filters identified in both Technical Specification 3/4.7.7 and Technical Specification 3/4.9.13. By identifying the filter surveillance requirements in Technical Specification 4.9.13 and then cross referencing the requirement from Technical Specification 4.7.7 to 4.9.13, unnecessary confusion is avoided. 4) Identify the unique surveillance requirements as the Emergency Exhaust System being used for minimizing radioactivity releases following a LOCA vice being used for minimizing radioactivity releases following a fuel handling accident in the Fuel Building. 5) delete unnecessary and/or redundant wording in the surveillances on the filtration units.

#### SAFETY EVALUATION

Safety evaluations were performed in support of the changes in the Pressurization System flow rate and the Emergency Exhaust System flow rate. The changes in the dirty filter dp are based on experimental data. The other changes are for clarification, deletion of unnecessary wording, and consolidation/cross referencing of surveillance requirements on the Emergency Exhaust System Filtration unit.

The new flow rate for the Pressurization System (Technical Specification 3/4.7.6) was evaluated to ensure: 1) compliance with Regulatory Guides 1.78 and 1.95 which limit chlorine concentration in the Control Room to 15 ppm or less during any postulated chlorine release and 2) compliance with Criterion 19 of Appendix A to 10 CFR Part 50 which limits Control Room personnel radiation exposure to less than 5 rem whole body for the duration of postulation accidents.

Field testing was performed to ensure that an adequate margin of negative pressure in excess of 1/4" W.G. could be maintained. Negative pressures in the range of 0.3" W.G. to 0.5" W.G. were achieved in the Fuel Building and Auxiliary Building with air flows of 6500 cfm +10%.

The dirty filter dp was reduced to ensure that the flow rates stayed within the specified range as the dp increased from the clean filter dp to the maximum allowable dirty filter dp. Previously, with the fans set to achieve the specified flow rate with the dirty filter dp, clean filter flow rates were higher than desired. Currently, Technical Specifications 3/4.7.6, 3/4.7.7, and 3/4.9.13 do not adequately bound the system air flows to optimize the pressure/air leakage balance between the Auxiliary Building and the Control Building. This proposed changes will correct that situation.

The other requested changes to Technical Specifications 3/4.7.6, 3/4.7.7 and 3/4.9.13 serve to clarify wording, delete unnecessary wording, and to clearly identify the required testing on the Emergency Exhaust System Filtration Unit. Currently, redundant, identical testing requirements are contained in 4.7.7 and 4.9.13 for the filters. The change eliminates unnecessary confusion, and no testing requirements are deleted by any of the proposed changes.

### SIGNIFICANT HAZARD CONSIDERATION

The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. The systems involved are used to 1) ensure Control Room Habitability under accident conditions, including chlorine accident, LOCA, and Fuel Building irradiated fuel accident. The changes proposed increase the ability of the systems to ensure Control Room habitability during a LOCA or a Fuel Building fuel handling accident by providing a more reliable positive pressure envelope in the Control Building, thus ensuring that only air passing through HEPA and charcoal filters is discharged into the Control Room. The increased air flow will not increase chlorine concentrations in the Control Room during a chlorine accident above acceptable level specified in Regulatory Guide 1.78. 2) ensure that radioactive materials leaking from ECCS pumps in the Auxiliary Building during a LOCA are not discharged into the atmosphere without being processed through HEPA and charcoal filters. The changes do not reduce the required negative pressure of greater than 1/4" W.G. for the Auxiliary Building during a LOCA. 3) ensure that radioactive materials released from an irradiated fuel assembly damaged during a fuel handling accident in the Fuel Building will be filtered through HEPA and charcoal filters prior to discharge to the atmosphere. The reduction in flow from 9000 cfm +10% to 6500 cfm +10% does not reduce the ability of the Emergency Exhaust System to maintain a negative pressure of greater than 1/4" W.G. in the Fuel Building.

The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated. No new equipment is being added, methods of operation are not being changed (i.e., no change in auto start signals), and required surveillance testing is not being reduced. The scope of testing remains the same for the HEPA and charcoal adsorber units, the required positive or negative pressures for the Control Room and Fuel Building remain the same, and a required negative pressure for the Auxiliary Building is being added.

As previously discussed, the proposed changes do not involve a reduction in a margin of safety. The analyses of record have been evaluated and no significant reduction in a margin of safety is involved. Additionally, the changes involving deletion of unnecessary wording, clarification by retitling, and cross referencing of filtration unit testing for the Emergency Exhaust System from Technical Specification 3/4.7.7 to Technical Specification 3/4.9.13 serve to minimize potential confusion and clarify testing without affecting the kind of, consequences of, or increase the probability of an accident.

Based on the above discussions, it has been determined that the requested Technical Specification revisions do not involve a significant increase in the probability or consequences of an accident or other adverse condition over previous evaluations; or create the possibility of a new or different kind of accident over previous evaluations; or involve a significant reduction in a margin of safety. Therefore, the requested license amendment does not involve a significant hazards consideration.

ATTACHMENT II