

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Matthew W. Sunseri
Vice President Operations and Plant Manager

November 20, 2009

WO 09-0039

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

Reference: 1) Letter WO 09-0022, dated September 3, 2009, from M. W. Sunseri, WCNOG, to USNRC

2) NRC letter dated October 26, 2009, from B. K. Singal, USNRC, to R. A. Muench, WCNOG

Subject: Docket No. 50-482: Revision to Technical Specification 3.8.1, "AC Sources – Operating"

Gentlemen,

Pursuant to 10 CFR 50.90, Wolf Creek Nuclear Operating Corporation (WCNOG) hereby requests an amendment to Renewed Facility Operating License No. NPF-42 for the Wolf Creek Generating Station (WCGS). This amendment request proposes to revise the Technical Specification (TS) 3.8.1, "AC Sources – Operating," consistent with the changes previously approved in Amendment No. 101 and with the guidance provided in Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation (Generic Letter 93-05)." WCNOG is proposing to add a Note to Required Actions B.3.1 and B.3.2 to indicate that the TS 3.8.1 Required Actions of B.3 are satisfied if the diesel generator (DG) became inoperable due to an inoperable support system, an independently testable component or preplanned preventative maintenance or testing. The Completion Time for Required Actions B.3.1 and B.3.2 is being revised to specify a Completion Time based on the discovery of an issue or failure of the DG.

Reference 1 submitted for NRC approval pursuant to 10 CFR 50.90 a proposed change that affected the TSs but was submitted as a revision to the TS Bases. This change was submitted to indicate that an inoperable support system that results in the inoperability of the DG is not considered a common cause failure or would not require the performance of Surveillance Requirement 3.8.1.2. Providing this clarification in the TS Bases is consistent with past practices that were previously approved by the NRC and are believed to be inherent, but not clearly stated, in the current TS and TS Bases. In Reference 1, WCNOG did not propose changes to TS 3.8.1 as this level of detail is not found in the NUREG-1431, "Standard Technical Specifications – Westinghouse Plants," and should be specified in the TS Bases.

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Reference 2 provided the results of the NRC staff acceptance review of Reference 1 and concluded that the proposed action is unacceptable for NRC review. The NRC staff indicated that the proposed change to the WCGS TS Bases established new requirements that cannot be readily construed to be an allowance permitted by TS required actions. The NRC staff further indicated that the proposed action did not include corresponding TS changes nor provided sufficient information to enable the NRC staff to identify how the proposed amendment was derived from the underlying analyses and evaluations in the Updated Safety Analysis Report. WCNOG is requesting the changes to TS 3.8.1 to reinstate what was previously approved by Amendment No. 101 and unintentionally deleted with the issuance of the improved TSs (Amendment No. 123).

Attachment I through IV provide the Evaluation, Markup of TSs, Retyped TS pages, and proposed TS Bases changes, respectively, in support of this amendment request. Attachment IV, proposed changes to the TS 3.8.1 Bases, is provided 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. Attachment V provides a List of Regulatory Commitments made by WCNOG in this submittal.

It has been determined that this amendment application does not involve a significant hazard consideration as determined per 10 CFR 50.92. The amendment application was reviewed by the WCNOG Plant Safety Review Committee. In accordance with 10 CFR 50.91, a copy of this application is being provided to the designated Kansas State official.

WCNOG requests approval of this proposed amendment by June 1, 2010, to minimize the potential for unnecessary testing of the diesel generator. Once approved, the amendment will be implemented within 30 days of receipt.

If you have any questions concerning this matter, please contact me at (620) 364-4008, or Mr. Richard D. Flannigan, Manager Regulatory Affairs, at (620) 364-4117.

Sincerely,



Matthew W. Sunseri

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- Attachments I - Evaluation of Proposed Change
- II - Markup of Technical Specification Pages
- III - Retyped Technical Specification Pages
- IV - Markup of Technical Specification Bases Pages (for information only)
- V - List of Regulatory Commitments

cc: E. E. Collins (NRC), w/a
T. A. Conley (KDHE), w/a
G. B. Miller (NRC), w/a
B. K. Singal (NRC), w/a
Senior Resident Inspector (NRC), w/a

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Matthew W. Sunseri, of lawful age, being first duly sworn upon oath says that he is Vice President Operations and Plant Manager 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 *M W Sunseri*
Matthew W. Sunseri
Vice President Operations and Plant Manager

SUBSCRIBED and sworn to before me this 20th day of November, 2009.



 Rhonda L. Tiemeyer
Notary Public

Expiration Date *January 11, 2010*

EVALUATION OF PROPOSED CHANGE

Subject: Revision to Technical Specification 3.8.1, "AC Sources – Operating"

1. SUMMARY DESCRIPTION
2. DETAILED DESCRIPTION
3. TECHNICAL EVALUATION
4. REGULATORY EVALUATION
 - 4.1 Applicable Regulatory Requirements/Criteria
 - 4.2 Precedent
 - 4.3 Significant Hazards Consideration
 - 4.4 Conclusions
5. ENVIRONMENTAL CONSIDERATION
6. REFERENCES

1. SUMMARY DESCRIPTION

Pursuant to 10 CFR 50.90, 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). This amendment request proposes to revise the Technical Specification (TS) 3.8.1, "AC Sources – Operating," consistent with the changes previously approved in Amendment No. 101 and with the guidance provided in Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation (Generic Letter 93-05)." WCNOC is proposing to add a Note to Required Actions B.3.1 and B.3.2 to indicate that the Required Actions are not applicable if the DG became inoperable due to an inoperable support system, an independently testable component or preplanned preventative maintenance or testing. The Completion Time for Required Actions B.3.1 and B.3.2 is being revised to specify a Completion Time based on the discovery of an issue or failure of the DG. Editorial changes are made to the existing Note to Required Action B.3.

2. DETAILED DESCRIPTION

Proposed changes to the TSs are as follows:

A Note is proposed to be added to the TS 3.8.1, Condition B, Required Actions B.3.1. The Note will state: "Not applicable if result of support system, independently testable component, or preplanned preventative maintenance or testing." Note 1 is proposed to be added to TS 3.8.1, Condition B, Required Action B.3.2. The Note will state: "Not applicable if result of support system, independently testable component, or preplanned preventative maintenance or testing."

The Completion Time for Required Actions B.3.1 and B.3.2 is being revised to specify a Completion Time based on the discovery of an issue or failure of the DG. The Completion Time is revised from "24 hours" to "24 hours from discovery of issue requiring common cause failure determination."

The existing Note to TS 3.8.1, Condition B, Required Action B.3.2 is revised to Note 2 and to make editorial corrections. The Note is revised from "The Required Action of B.3.2 is satisfied by the automatic start and sequence loading of the DG." to "2. Required Action B.3.2 is satisfied by the automatic start and sequence loading of the DG."

3. TECHNICAL EVALUATION

3.1 System Description

The onsite standby power source for each 4.16 kV engineered safety features (ESF) bus (NB01 and NB02) is a dedicated DG. Each DG is capable of supplying essential loads necessary to reliably and safely shut down the unit. Each diesel generator is rated at 6,201 kW for continuous operation. Each diesel generator is connected exclusively to a single 4.16-kV safety feature bus for one load group. The load groups are redundant and have similar safety related equipment. Each load group is adequate to satisfy minimum ESF demand caused by a LOCA

caused by a LOCA and/or loss of preferred power supply. The DG starts automatically on a safety injection (SI) signal or on an ESF bus undervoltage signal.

The DGs are electrically isolated from each other. Physical separation for fire and missile protection is provided between the DGs, since they are housed in separate rooms of a seismic Category I structure. Power and control cables for the DGs and associated switchgear are routed to maintain physical separation.

3.2 Background

On June 30, 2009, a through wall leak on Essential Service Water (ESW) System piping just upstream of valve EF HV-038 was identified by shift crew personnel during building watch rounds. The "B" ESW train was declared inoperable based on Technical Requirement TR 3.4.17, "Structural Integrity," and Condition A of LCO 3.7.8, "Essential Service Water (ESW) System," was entered. Required Action A.1 of LCO 3.7.8 has a Note to enter the applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources – Operating," for a diesel generator (DG) made inoperable by the ESW System. This resulted in the "B" DG being declared inoperable and entering Condition B of LCO 3.8.1. Required Action B.3.1 for TS 3.8.1 is to determine if the OPERABLE DG is inoperable due to a common cause failure. Control room personnel utilized procedure SYS KJ-200, "Inoperable Emergency Diesel," when the DG was declared inoperable and determined that a common cause failure did not exist. Step 6.1.5 of SYS KJ-200 specifies to document the evaluation of common cause on the procedure cover sheet. The documented evaluation indicated that "B" DG inoperability was not common cause due to the "B" train ESW being inoperable. The common cause determination was questioned by the Nuclear Regulatory Commission (NRC) Resident Inspector for WCGS.

WCNOC's initial review of the event determined that the requirements of TS 3.8.1 Required Action B.3.1 were met when it was determined that a common cause failure did not exist on the DG itself due to an inoperable support system. This information was provided to the Resident Inspector and NRC Project Manager on July 14, 2009. Subsequently, on July 28, 2009, during the weekly Resident Inspector issues meeting, WCNOC was informed that the NRC Staff (Technical Specification Branch) provided a position through the NRC Resident Inspector that guidance in GL 93-05 could not be utilized for determining common cause failure since the WCGS TSs did not specifically call for the use of the conditions cited in the GL. On August 13, 2009, a teleconference was held between WCNOC personnel, NRR personnel, and Regional personnel confirming the above position. From subsequent discussion with Regional personnel, WCNOC understood that if a change to the TS Bases under 10 CFR 50.59 were pursued without NRC approval, that this would be considered a potential violation of TS 5.5.14, "Technical Specification (TS) Bases Control Program," because the change was considered to change the intent of the specification.

WCNOC submitted a request (Reference 7) for approval pursuant to 10 CFR 50.90 changes in the intent of the TS but reflected in the TS Bases due to their detailed nature and to stay consistent with the wording in TS 3.8.1 of NUREG-1431. The TS 3.8.1 Bases was proposed to be revised to indicate that an inoperable support system that results in the inoperability of the diesel generator is not considered a common cause failure or would not require the performance of Surveillance Requirement 3.8.1.2. The proposed action to clarify in the TS Bases is consistent with past practices that were previously approved by the NRC and are believed to be inherent, but not clearly stated, in the current TS and TS Bases.

Subsequently, in Reference 8, the NRC staff provided the results of the acceptance review of Reference 7 and concluded that the proposed action is unacceptable for NRC review. The NRC staff indicated that the proposed change to the WCGS TS Bases established new requirements that cannot be readily construed to be an allowance permitted by TS required actions. The NRC staff further indicated that the proposed action did not include corresponding TS changes nor provided sufficient information to enable the NRC staff to identify how the proposed amendment was derived from the underlying analyses and evaluations in the Updated Safety Analysis Report.

3.3 NRC Generic Guidance

NRC Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability"

In July 1984, the NRC issued Generic Letter (GL) 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability." The purpose of GL 84-15 was to propose actions that would improve the reliability of DGs. An example of a performance TS to support desired DG reliability goals was provided in Enclosure 3 to the GL. This GL provided two actions associated with the condition of one inoperable DG, which were: (1) verify correct breaker alignment and power availability of offsite power, and (2) verify the opposite train DG starts from ambient conditions and achieves rated frequency and voltage. The intent here was to demonstrate OPERABILITY and no common mode problems exist. According to GL 84-15, 24 hours was identified as a reasonable amount of time to perform this test to confirm that the OPERABLE DG was not affected by the same problem as the inoperable DG.

WCNOC implemented changes to the TSs based on GL 84-15 in Amendment No. 8 (Reference 9).

NUREG-1366, "Improvements to Technical Specification Surveillance Requirements"

In May 1992, the NRC completed a comprehensive examination of TS surveillance requirements that require testing at power. This evaluation was documented in NUREG-1366, which was published in December 1992. In this guidance document, the staff recommended: "When an EDG itself is inoperable (not including a support system or independently testable component), the other EDG(s) should be tested only once (not every 8 hours) and within 8 hours unless the absence of any potential common-mode failure can be demonstrated."

NRC Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operations"

Based on the evaluation results that were documented in NUREG-1366, the NRC issued Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operations," dated September 27, 1993. Item 10.1 of GL 93-05 includes recommendations for TS changes associated with DG surveillance requirements. Recommendation number 1 under Item 10.1 states, "When a EDG itself is inoperable (not including a support system or independently testable component), the other EDG should be tested only once (not every 8 hours) and within 8 hours unless the absence of any potential common mode failure can be demonstrated." Proposed TS wording acceptable to the NRC was also provided for licensees to incorporate the above

recommendation into their TS as follows (Note that the proposed wording was based on the Standard TSs – NUREG-0452, not the improved Standard TSs – NUREG-1431):

b.If the diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirements 4.8.1.1.2.a.5 and 4.8.1.1.2.a.6 within 8 hours, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated.

NUREG-1431, "Standard Technical Specifications - Westinghouse Plants"

NUREG-1431, Revision 0, was formally issued on September 28, 1992 and contained the NUREG-1366 recommendations for either demonstrating that a common cause failure does not exist on the remaining DG or testing the remaining DG. However, the Completion Time for testing or demonstrating that a common cause failure does not exist on the remaining DG was relaxed from 8 to 24 hours, consistent with the earlier GL 84-15 recommendations.

Further relaxations in DG testing requirements were incorporated into Revision 1, published in April 1995, consistent with the GL 93-05 guidelines. Specifically, Revision 0 of NUREG-1431 had a Note in Condition B of LCO 3.8.1 (one DG inoperable) which required that Required Action B.3.1 or B.3.2 for the common cause evaluation or demonstration test be completed anytime Condition B was entered, even if the inoperable DG were restored to OPERABLE status within the 24 hour Completion Time. Because the common cause failure would no longer exist at that point, Revision 1 removed this Note and allowed the licensee's corrective action program to track the common cause failure evaluation on the alternate train DG.

The above changes incorporated into Revision 1 are unchanged in both Revision 2 and current Revision 3.

3.4 WCGS Prior Approval of TS Changes Based on Generic Letter 93-05 Guidance

On September 15, 1995, WCNOG submitted a license amendment request proposing to revise TS 3/4.8.1, "Electrical Power Systems – A.C. Sources," in part, based on the guidance in Generic Letter 93-05 and Generic Letter 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators (Generic Letter 94-01)."

Specifically, Action b. of TS 3.8.1.1 was proposed to be revised as follows:

b. With one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the offsite A.C. sources by performing Specification 4.8.1.1.1 within 1 hour and at least once per 8 hours thereafter. Demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Specification 4.8.1.1.2a.4 within 24 hours**, ***unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated, or if the diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, preplanned preventative maintenance or testing, or maintenance to correct a condition which, if left uncorrected, would not affect the OPERABILITY of the***

diesel generator; restore the inoperable diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~**This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status unless the diesel was declared inoperable to do preplanned preventative maintenance, testing, or maintenance to correct a condition which, if left uncorrected, would not affect the operability of the diesel generator.~~

Note that WCNOG maintained the 24 hours based on NUREG-1431, "Standard Technical Specifications – Westinghouse Plants." This specific change was approved in Amendment No. 101 (Reference 3) on August 9, 1996. The Safety Evaluation associated with Amendment No. 101, stated, in part:

The proposed changes are consistent with the recommendations contained in GL 93-05. Also, these changes are in conformance with Action B of TS 3.8.1 of the STS. The GL suggests that when an EDG is inoperable (not including a support system or independently testable component), the other EDG should be tested only once, unless the absence of any potential common mode failure can be demonstrated. Information provided in the STS indicates that 24 hours is a reasonable time frame to confirm that the operable EDG is not affected by the same problem as the inoperable EDG. The licensee reports that 24 hours is compatible with plant operating experience. Thus, the proposed changes are acceptable.

Section 1.0 of the Safety Evaluation (Reference 3) states, in part:

Specifically, the proposed changes would incorporate recommendations and suggestions from Generic Letter (GL) 93-05, "Line-Item Technical Specification Improvements to reduce Surveillance Requirements for Testing During Power Operation;" the Improved Standard Technical Specifications, NUREG-1431, "Standard Technical Specification – Westinghouse Plants" (STS);

The wording in the Safety Evaluation indicates that the wording of the STS (NUREG-1431) are such that the common cause failure determination or performing SR 3.8.1.2 for the OPERABLE DG are not necessary if the inoperable DG were inoperable due to an inoperable support system, an independently testable component, preplanned preventative maintenance or testing, or maintenance to correct a condition which, if left uncorrected, would not affect the OPERABILITY of the DG.

Based on the wording in the Safety Evaluation, it would appear the principal contributors considered that the existing wording in the Standard Technical Specifications (NUREG-1431) to be consistent with the recommendations contained in GL 93-05.

3.5 WCGS Conversion to Improved TSs (Amendment No. 123)

WCNOC letter ET 97-0050, dated May 15, 1997, provided the WCGS Technical Specification Conversion Application. Attachment 14 to the application was current technical specifications (CTS) Section 3/4.8, Electric Power Systems/improved technical specifications (ITS) Section 3.8, Electric Power Systems. Attachment 14 to ET 97-0050 provided the markups of Action b. and the associated description of changes (DOC). A review of DOC 1-05-LS-6 indicates that the change was considered a less restrictive change and the DOC further indicates that the change was based on the guidance in Generic Letter 84-15 and Generic Letter 93-05. While the expanded wording that was in the current TS was not incorporated into the ITS (in order to maintain consistency with the STS) or ITS Bases, the justification indicates that the intent of the ITS wording is based on the guidance in Generic Letter 84-15 and Generic Letter 93-05 (an inoperable support system that results in the inoperability of the DG is not considered a common cause failure or would not require the performance of SR 3.8.1.2).

The Standard Technical Specifications or TS Bases (NUREG-1431) do not include specific discussion consistent with the guidance in Generic Letter 93-05 for DG inoperability due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing. Specific information that was incorporated into the TSs and TS Bases as a result of Amendment No. 101 was not incorporated into the improved TSs and expanded TS Bases developed during the conversion to the improved TS so as to more closely adhere to standardization as it was believed that this allowance was inherent, but not clearly stated, in the improved TS (Reference 4) and TS Bases.

3.6 Evaluation

The objective of LCO 3.8.1, Required Action B.3 (includes Required Action B.3.1 and B.3.2) is to ensure that a failure of a DG itself, does not affect the opposite train DG capability to perform its specified safety function. The inoperability of a DG itself does not necessarily affect the reliability of the OPERABLE DG, unless there is some common cause failure possibility. This is consistent with GL 93-05 and NUREG-1366. In GL 93-05, the NRC staff stated that, in performing the study documented in NUREG-1366, the safety can be improved, equipment degradation increased, and an unnecessary burden on personnel eliminated by reducing the frequency of certain testing required in the TS during power operation. The changes eliminate testing that is likely to cause transients or excessive wear of equipment. An evaluation of these changes indicates that there will be a benefit to plant safety. The evaluation, documented in NUREG-1366, considered (1) unavailability of safety equipment due to testing, (2) initiation of significant transients due to testing, (3) actuation of engineered safety features that unnecessarily cycle safety equipment, (4) importance to safety of that system or component, (5) failure rate of that system or component, and (6) effectiveness of the test in discovering the failure.

According to GL 93-05, the NRC staff recommended that the requirements to test the remaining DG(s), when one DG is inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, be limited to those situations where the cause for inoperability has not been conclusively demonstrated to preclude the potential for a common cause failure. The proposed change incorporates the wording provided in the generic example of GL 93-05. However, the proposed changes are not specifically stated in NUREG-1431.

The Completion Time for Required Actions B.3.1 and B.3.2 is being revised to specify a Completion Time based on the discovery of an issue or failure of the DG. The Completion Time for Required Action B.3.1 and B.3.2 is intended to allow time to perform a common cause failure determination or perform SR 3.8.1.2 on the OPERABLE DG. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." In Required Actions B.3.1 and B.3.2, the Completion Time begins on discovery of an inoperable DG if the DG was declared inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing. If at any time during the existence of this Condition (one DG inoperable) a subsequent issue is discovered requiring a common cause failure determination, this Completion Time would begin to be tracked. This change is proposed in the event an issue or failure with the inoperable DG is identified subsequent to the initial inoperability declaration due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing. For example, if the "A" DG was declared inoperable for preplanned preventative maintenance and 30 hours into the maintenance activity a failure on the DG itself is identified, the existing Completion Time for Required Actions B.3.1 and B.3.2 would have expired and the default Condition (Condition H for WCGS) entered requiring a plant shutdown. LCO 3.0.2 and TS 1.3, Completion Times, state, in part:

Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.

In the above example, Condition B is not reentered for the "A" DG on the identification of a subsequent issue or failure. The proposed wording allows sufficient time to perform the common cause failure determination or perform SR 3.8.1.2 on the OPERABLE DG.

4. REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

Criterion 17—Electric power systems. An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

Electric power from the transmission network to the onsite electric distribution system shall be supplied by two physically independent circuits (not necessarily on separate rights of way) designed and located so as to minimize to the extent practical the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. A switchyard common to both circuits is acceptable. Each of these circuits shall be designed to be available in sufficient time following a loss of all onsite alternating current power supplies and the other offsite electric power circuit, to assure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. One of these circuits shall be designed to be available within a few seconds following a loss-of-coolant accident to assure that core cooling, containment integrity, and other vital safety functions are maintained.

Provisions shall be included to minimize the probability of losing electric power from any of the remaining supplies as a result of, or coincident with, the loss of power generated by the nuclear power unit, the loss of power from the transmission network, or the loss of power from the onsite electric power supplies.

Criterion 18—Inspection and testing of electric power systems. Electric power systems important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features, such as wiring, insulation, connections, and switchboards, to assess the continuity of the systems and the condition of their components. The systems shall be designed with a capability to test periodically (1) the operability and functional performance of the components of the systems, such as onsite power sources, relays, switches, and buses, and (2) the operability of the systems as a whole and, under conditions as close to design as practical, the full operation sequence that brings the systems into operation, including operation of applicable portions of the protection system, and the transfer of power among the nuclear power unit, the offsite power system, and the onsite power system.

General Design Criterion (GDC) 17 and 18 deal with the design and testing of the Electrical Power Systems for the unit, both offsite and onsite power systems. The proposed change does not affect the design of the onsite or offsite power systems, thus GDC 17 is not impacted by this change. The proposed change does involve DG testing, which is covered by GDC 18. However, the proposed change in remedial actions does not impact the ability of the DG to satisfy GDC 18, as the diesel generator (DG) is still capable of being thoroughly tested. GDC 18 does not specify the frequency or conditions requiring the conditional testing of the opposite train when one DG is inoperable. No other changes in the design, operation or testing of the DG are being proposed.

Regulatory Guide 1.6, Revision 0, "Independence Between Redundant Standby (Onsite) Power Sources and Between Their Distribution Systems (Safety Guide 6)" – Updated Safety Analysis Report (USAR) Appendix 3A, "Conformance to Regulatory Guides," indicates that the recommendations of this regulatory guide are met as described in USAR Section 8.1.4.3. The regulatory guide deals with the electrical independence of each division of the electrical distribution system. The proposed change to Required Actions B.3.1 and B.3.2 will not impact the design of the electrical distribution system, nor the associated interlocks between the onsite

and offsite electrical distribution systems. Thus, the proposed change does not impact WCGS's ability to meet Regulatory Guide 1.6, as described in USAR Section 8.1.4.3.

Regulatory Guide 1.9, Revision 1, "Selection, Design, and Qualification of Diesel-Generator Units used as Onsite Electric Power Systems at Nuclear Power Plants" – This regulatory guide deals with the selection, design, qualification and testing of DGs. The proposed change to Required Actions B.3.1 and B.3.2 will not impact the design, qualification, or testing of the DGs. Inservice tests comply with the recommendations of Regulatory Guide 1.9, Rev. 3, as modified by Amendment No. 101. The recommendations of this regulatory guide are met as described in USAR Section 8.1.4.3.

4.2 Precedent

- Amendment No. 101 was issued on August 6, 1996, for the Wolf Creek Generating Station.
- Amendment No. 112 was issued on June 17, 1996, for the Callaway Plant. This amendment approved, in part, change to Action Statement b. to incorporate the guidance from GL 93-05 that the requirements to test the remaining DG(s), when one DG is inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, be limited to those situations where the cause for inoperability has not been conclusively demonstrated to preclude the potential for a common cause failure. The Safety Evaluation for this Amendment indicates that the proposed changes are consistent with the recommendations contained in GL 93-05 and Action B of TS 3.8.1 of NUREG-1431.

4.3 Significant Hazards Consideration

WCNOC has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, Issuance of Amendment:

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

Response: No

WCNOC is proposing to add a Note to Required Actions B.3.1 and B.3.2 to indicate that the TS 3.8.1 Required Actions of B.3 are satisfied if the DG became inoperable due to an inoperable support system, an independently testable component or preplanned preventative maintenance or testing. The proposed change to the TS does not involve a change in the operational limits or physical design of the emergency power system. Diesel generator (DG) OPERABILITY and reliability will continue to be assured while minimizing the potential number of required DG starts. The DGs are not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not significantly increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No

No new or different accidents result from implementing the proposed change. The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operations. The change does not alter assumptions made in the safety analysis for DG performance.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

Response: No

The proposed change does not alter the manner in which safety limits, limiting safety system settings or limiting conditions for operation are determined. The safety analysis acceptance criteria are not impacted by this change. The proposed change will not result in operation in a configuration outside the design basis.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

4.3 Conclusions

This amendment request proposes to revise the TS 3.8.1 consistent with the guidance provided in Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation (Generic Letter 93-05)," that a common cause failure determination or performing SR 3.8.1.2 for the OPERABLE DG are not necessary if the inoperable DG were inoperable due to an inoperable support system, an independently testable component, preplanned preventative maintenance or testing. Based on the considerations discussed above, 1) there is a reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, 2) 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.

5. ENVIRONMENTAL CONSIDERATION

WCNOC has evaluated the proposed change and has determined that the change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amount of effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

6. REFERENCES

1. Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation (Generic Letter 93-05)," September 27, 1993.
2. WCNO letter ET 95-0099, "Revision to Technical Specification 3/4.8.1, "Electrical Power Systems – A.C. Sources," September 15, 1999.
3. License Amendment No. 101, "Wolf Creek Generating Station – Amendment No. 101 to Facility Operating License No. NPF-42 (TAC NO. M89995)," August 9, 1996.
4. License Amendment No. 123, "Conversion to Improved Technical Specifications for Wolf Creek Generating Station – Amendment No. 123 to Facility Operating License No. NPF-42 (TAC NO. M98738)," March 31, 1999.
5. NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," December 1992.
6. WCNO letter ET 97-0050, "Technical Specification Conversion Application," May 15, 1997.
7. WCNO letter WO 09-0022, "Request for Approval of Changes to the Technical Specifications 3.8.1, "AC Sources – Operating" Bases
8. NRC letter, "Wolf Creek Generating Station – Request for Approval of Changes to the Technical Specification 3.8.1, ["]AC Sources – Operating" Bases (TAC NO. ME2186)," October 26, 2009.
9. License Amendment No. 8, "Wolf Creek Generating Station – Amendment [Amendment] No. 8 to Facility Operating License No. NPF-42 (TAC NO. 63951)," May 29, 1987.

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. (continued)</p> <p><i>----- NOTE ----- Not applicable if result of support system, independently testable component, or preplanned preventative maintenance or testing.</i></p> <p><i>1. Not applicable if result of support system, independently testable component, or preplanned preventative maintenance or testing.</i></p>	<p>B.2 <i>----- NOTE ----- In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature.</i></p> <p>Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable.</p> <p><u>AND</u></p> <p>B.3.1 Determine OPERABLE DG is not inoperable due to common cause failure.</p> <p><u>OR</u></p> <p>B.3.2 <i>----- NOTE ----- The Required Action of B.3.2 is satisfied by the automatic start and sequence loading of the DG.</i></p> <p>Perform SR 3.8.1.2 for OPERABLE DG.</p> <p><u>AND</u></p>	<p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p> <p>24 hours</p> <p>24 hours</p> <p><i>From discovery of issue requiring common cause failure determination</i></p> <p>(continued)</p>

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. (continued)</p>	<p>B.2</p> <p>-----NOTE----- In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature.</p> <p>-----</p> <p>Declare required feature(s) supported by the inoperable DG inoperable when its required redundant feature(s) is inoperable.</p>	<p>4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)</p>
	<p><u>AND</u></p> <p>B.3.1</p> <p>-----NOTE----- Not applicable if result of support system, independently testable component, or preplanned preventative maintenance or testing.</p> <p>-----</p> <p>Determine OPERABLE DG is not inoperable due to common cause failure.</p> <p><u>OR</u></p>	

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. (continued)</p>	<p>B.3.2 -----NOTE----- 1. Not applicable if result of support system, independently testable component, or preplanned preventative maintenance or testing. 2. The Required Action of B.3.2 is satisfied by the automatic start and sequence loading of the DG. ----- Perform SR 3.8.1.2 for OPERABLE DG. <u>AND</u> -----NOTE----- Required Action B.4.2.1 and B.4.2.2 are only applicable for planned maintenance and may be used once per cycle per DG. ----- B.4.1 Restore DG to OPERABLE status. <u>OR</u> B.4.2.1 Verify the required Sharpe Station gensets are available. <u>AND</u></p>	<p>24 hours from discovery of issue requiring common cause failure determination</p> <p>72 hours</p> <p><u>AND</u></p> <p>6 days from discovery of failure to meet LCO</p> <p>Once per 12 hours</p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.4.2.2 Restore DG to OPERABLE status.	7 days AND 10 days from discovery of failure to meet LCO
C. Required Action B.4.2.1 and associated Completion Time not met.	C.1 Restore DG to OPERABLE status.	72 hours
D. Two offsite circuits inoperable.	<p>D.1</p> <p style="text-align: center;">-----NOTE-----</p> <p>In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature.</p> <p style="text-align: center;">-----</p> <p>Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.</p> <p><u>AND</u></p> <p>D.2 Restore one offsite circuit to OPERABLE status.</p>	<p>12 hours from discovery of Condition D concurrent with inoperability of redundant required features</p> <p>24 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>E. One offsite circuit inoperable.</p> <p><u>AND</u></p> <p>One DG inoperable.</p>	<p style="text-align: center;">-----NOTE-----</p> <p>Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating," when Condition E is entered with no AC power source to any train.</p> <hr/> <p>E.1 Restore offsite circuit to OPERABLE status.</p> <p><u>OR</u></p> <p>E.2 Restore DG to OPERABLE status.</p>	<p>12 hours</p> <p>12 hours</p>
<p>F. Two DGs inoperable.</p>	<p>F.1 Restore one DG to OPERABLE status.</p>	<p>2 hours</p>
<p>G. One load shedder and emergency load sequencer inoperable.</p>	<p>G.1 Declare affected DG and offsite circuit inoperable.</p> <p><u>AND</u></p> <p>G.2 Restore load shedder and emergency load sequencer to OPERABLE status.</p>	<p>Immediately</p> <p>12 hours</p>
<p>H. Required Action and associated Completion Time of Condition A, C, D, E, F, or G not met.</p> <p><u>OR</u></p> <p>Required Actions B.1, B.2, B.3.1, B.3.2, B.4.1, and B.4.2.2 and associated Completion Time not met.</p>	<p>H.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>H.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
I. Three or more required AC sources inoperable.	I.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.1.1 Verify correct breaker alignment and indicated power availability for each offsite circuit.	7 days
SR 3.8.1.2 -----NOTES----- 1. Performance of SR 3.8.1.7 satisfies this SR. 2. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 3. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. ----- Verify each DG starts from standby conditions and achieves steady state voltage ≥ 3740 V and ≤ 4320 V, and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	31 days

(continued)

Markup of Technical Specification Bases Pages (for information only)

BASES

ACTIONS

B.2 (continued)

The Completion Time for Required Action B.2 is intended to allow the operator time to evaluate and repair any discovered inoperabilities. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." In this Required Action, the Completion Time only begins on discovery that both:

- a. An inoperable DG exists; and
- b. A required feature on the other train (Train A or Train B) is inoperable and not in the safeguards position.

If at any time during the existence of this Condition (one DG inoperable) a required feature subsequently becomes inoperable, this Completion Time would begin to be tracked.

Discovering one required DG inoperable coincident with one or more inoperable required support or supported features, or both, that are associated with the OPERABLE DG, results in starting the Completion Time for the Required Action. Four hours from the discovery of these events existing concurrently is acceptable because it minimizes risk while allowing time for restoration before subjecting the unit to transients associated with shutdown.

In this Condition, the remaining OPERABLE DG and offsite circuits are adequate to supply electrical power to the onsite Class 1E Distribution System. Thus, on a component basis, single failure protection for the required feature's function may have been lost; however, function has not been lost. The 4 hour Completion Time takes into account the OPERABILITY of the redundant counterpart to the inoperable required feature. Additionally, the 4 hour Completion Time takes into account the capacity and capability of the remaining AC sources, a reasonable time for repairs, and the low probability of a DBA occurring during this period.

B.3.1 and B.3.2

Required Action B.3.1 provides an allowance to avoid unnecessary testing of OPERABLE DG. If it can be determined that the cause of the inoperable DG does not exist on the OPERABLE DG, SR 3.8.1.2 does not have to be performed. If the cause of inoperability exists on the other DG, it would be declared inoperable upon discovery and Condition F of LCO 3.8.1 would be entered. Once the failure is repaired, the common cause failure no longer exists, and Required Action B.3.1 is satisfied. If the cause of the initial inoperable DG cannot be confirmed not to exist on

INSERT B3.8.1-9

Ⓐ

INSERT B 3.8.1-9

[New paragraph]

Required Action B.3.1 and B.3.2 are modified by a Note specifying that the Required Action is not applicable if the DG was declared inoperable due an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing. Required Action B.3.2 is modified by Note 2 stating that it is satisfied by the automatic start and sequence loading of the DG. Note 2 indicates that an additional start of the DG for test purposes only, is not required if the DG has automatically started and loaded following a loss of the offsite power source to its respective bus (Ref. 18).

BASES

ACTIONS B.3.1 and B.3.2 (continued)

the remaining DG, performance of SR 3.8.1.2 suffices to provide assurance of continued OPERABILITY of that DG. Required Action B.3.2 is modified by a Note stating that it is satisfied by the automatic start and sequence loading of the DG. The Note indicates that an additional start of the DG for test purposes only, is not required if the DG has automatically started and loaded following a loss of the offsite power source to its respective bus (Ref. 18).

INSERT B.3.8.1-10

In the event the inoperable DG is restored to OPERABLE status prior to completing either B.3.1 or B.3.2, the plant corrective action program will continue to evaluate the common cause possibility. This continued evaluation, however, is no longer under the 24 hour constraint imposed while in Condition B.

According to Generic Letter 84-15 (Ref. 7), 24 hours is reasonable to confirm that the OPERABLE DG is not affected by the same problem as the inoperable DG.

B.4.1, B.4.2.1, and B.4.2.2

In Condition B, the remaining OPERABLE DG and offsite circuits are adequate to supply electrical power to the onsite Class 1E Distribution System. With a DG inoperable, the inoperable DG must be restored to OPERABLE status within the applicable, specified Completion Time.

The Completion Time of 72 hours for Required Action B.4.1 applies when a DG is discovered or determined to be inoperable, such as due to a component or test failure, and requires time to effect repairs, or it may apply when a DG is rendered inoperable for the performance of maintenance during applicable MODES. The 72-hour Completion Time takes into account the capacity and capability of the remaining AC sources, reasonable time for repairs, and the low probability of a DBA during this period.

The second Completion Time for Required Action B.4.1 also establishes a limit on the maximum time allowed for any combination of required AC power sources to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition B is entered while, for instance, an offsite circuit is inoperable, the LCO may already have been not met for up to 72 hours. If the offsite circuit is restored to OPERABLE status within the required 72 hours, this could lead to a total of 144 hours, since initial failure to meet the LCO, to restore the compliance with the LCO (i.e., restore the DG). At this time, an offsite circuit could again become inoperable and an additional 72 hours allowed prior to complete

INSERT B 3.8.1-10

The Completion Time for Required Action B.3.1 and B.3.2 is intended to allow time to perform a common cause failure determination or perform SR 3.8.1.2 on the OPERABLE DG. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." In Required Actions B.3.1 and B.3.2, the Completion Time begins on discovery of an inoperable DG if the DG was declared inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing. If at any time during the existence of this Condition (one DG inoperable) a subsequent issue is discovered requiring a common cause failure determination, this Completion Time would begin to be tracked.

LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by WCNOC in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Richard Flannigan at (620) 364-4117.

REGULATORY COMMITMENT	DUE DATE/EVENT
Once approved, the amendment will be implemented within 30 days of receipt.	Within 30 days of receipt