

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Robert C. Hagan
Vice President Engineering

September 15, 1995

ET 95-0099

U. S. Nuclear Regulatory Commission
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Reference: Letter CO 95-0010, dated July 29, 1994, from R. N. Johannes, WCNOG, to USNRC
Subject: Docket No. 50-482: Revision to Technical Specification 3/4.8.1, "Electrical Power Systems - A.C. Sources"

Gentlemen:

This letter transmits an application for amendment to Facility Operating License No. NPF-42 for Wolf Creek Generating Station. This license amendment request replaces the Reference in its entirety. The Reference has been revised based upon conversations with the NRC. This revised submittal proposes changes to Technical Specification 3/4.8.1, "Electrical Power Systems - A.C. Sources," and its associated Bases to achieve an overall improvement in emergency diesel generator reliability and availability. Specifically, it is being proposed that the guidance of Regulatory Guide 1.9, Revision 3, Generic Letter 93-05, and Generic Letter 94-01 be adopted. Also, several surveillance requirements would be revised or eliminated and the specific emergency diesel generator fuel oil surveillance requirements would be addressed in the Diesel Fuel Oil Testing Program. Descriptions of the Diesel Fuel Oil Testing Program and the Emergency Diesel Generator Reliability Program would be added to Section 6 of the technical specifications to ensure that administrative controls are in place in order to maintain emergency diesel generator reliability and availability. These proposed changes are consistent, in part, with recent NRC guidance concerning emergency diesel generator surveillance requirements.

Attachment I provides a safety evaluation including a description of the proposed changes. Attachment II provides a no significant hazards consideration determination and Attachment III provides an environmental impact determination. The specific changes to the technical specification proposed by this request are provided in Attachment IV.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Kansas State official. This proposed revision to the Wolf Creek Generating Station Technical Specifications will be fully implemented within 90 days of formal Nuclear Regulatory Commission approval.

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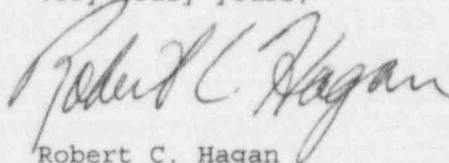
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If you have any questions concerning this matter, please contact me at (316) 364-8831, extension 4553, or Mr. Richard D. Flannigan, at extension 4500.

Very truly yours,



Robert C. Hagan

RCH/jra

Attachments I - Safety Evaluation
 II - No Significant Hazards Consideration Determination
 III - Environmental Impact Determination
 IV - Proposed Technical Specification Changes

cc: G. W. Allen (KDHE), w/a
L. J. Callan (NRC), w/a
D. F. Kirsch (NRC), w/a
J. F. Ringwald (NRC), w/a
J. C. Stone (NRC), w/a

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Robert C. Hagan, of lawful age, being first duly sworn upon oath says that he is Vice President Engineering 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 Robert C. Hagan
Robert C. Hagan
Vice President
Engineering

SUBSCRIBED and sworn to before me this 15th day of Sept., 1995.

Angela E. Wessel
Notary Public

Expiration Date July 3, 1999

ATTACHMENT I
SAFETY EVALUATION

Safety Evaluation

Background

The proposed changes to Technical Specification 3/4.8.1 described in this license amendment request are based upon, in part, the guidance of Generic Letter 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators From Plant Technical Specifications," Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electrical Power Systems at Nuclear Power Plants," Revision 3, and NUREG-1431, "Standard Technical Specifications - Westinghouse Plants." Also, the guidance of NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," Revision 1, and Regulatory Guide 1.160 has been adopted to formulate a comprehensive Emergency Diesel Generator Reliability Program. The proposed technical specification changes are an integral part of this reliability program.

A short description for each of the aforementioned guidance documents is provided below.

Generic Letter 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators From Plant Technical Specifications," was issued on May 31, 1994, to advise licensees that they may request a license amendment to remove accelerated testing and special reporting requirements for emergency diesel generators from plant technical specifications. This generic letter stated that in order to implement the recommendations of the generic letter licensees must commit to implement within 90 days a maintenance program for monitoring and maintaining diesel generator performance consistent with the provisions of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and the guidance of Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."

Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," was issued on September 27, 1993, to provide guidance to licensees in preparing a license amendment request to implement line-item technical specifications improvements concerning the reduction in the amount of testing that the technical specifications require during power operation. These line-item technical specifications are based upon the recommendations of a study that included a comprehensive examination of surveillance requirements and is reported in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements."

Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants," Revision 3, was issued as part of the resolution of Generic Safety Issue B-56, "EDG Reliability." This regulatory guide integrates the guidance previously contained in Regulatory Guide 1.9, Revision 2, Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," and Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability."

NUREG-1431, "Standard Technical Specifications - Westinghouse Plants," contains improved Standard Technical Specifications for Westinghouse plants and documents the positions of the Nuclear Regulatory Commission based on the Westinghouse Owners Group's proposed Standard Technical Specifications. The improved Standard Technical Specifications were developed based on the criteria in the interim Commission Policy Statement on Technical Specification Improvements for Nuclear Power Reactors, dated February 6, 1987.

NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," Revision 1, presents all generic guidance developed for meeting the requirements of the station blackout rule, 10 CFR 50.63. It includes appendices that provide guidance relative to emergency diesel generator reliability programs and equipment operability. In particular, Appendix D provides a methodology for effective monitoring and maintaining emergency diesel generator reliability.

Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," was developed to provide guidance for complying with the provisions of 10 CFR 50.65.

Evaluation

This section of the license amendment request describes each of the proposed changes to the technical specifications and the justification for each proposed change. Revised technical specification numbers are provided in parentheses next to the current technical specification numbers, where applicable. Also, a table has been included that provides a cross reference of the current technical specification numbers to the revised technical specification numbers with a brief description of the proposed change.

Current Technical Specification Number	Proposed Technical Specification Changes	Revised Technical Specification Number
Index Page XI	Deletes reference to Table 4.8-1	-----
3.8.1.1, Action a	Implements the guidance of Generic Letter 93-05 and NUREG-1366	-----
3.8.1.1, Action b	Implements the guidance of Generic Letter 93-05 and NUREG-1366	-----
3.8.1.1, Action c	Implements the guidance of Generic Letter 93-05 and NUREG-1366	-----
3.8.1.1, Action e	Implements the guidance of Generic Letter 93-05 and NUREG-1366	-----
-----	Implements the guidance of NUREG-1431	3.8.1.1, Action g
-----	Implements the guidance of NUREG-1431	3.8.1.1, Action h
4.8.1.1.2a	Implements the guidance of Generic Letter 94-01	-----
4.8.1.1.2a.4	Implements the guidance of Regulatory Guide 1.9, Revision 3 and NUREG-1431	-----
4.8.1.1.2a.5	Implements the guidance of Regulatory Guide 1.9, Revision 3 and NUREG-1431	-----
4.8.1.1.2b	Implements the guidance of NUREG-1431	-----
4.8.1.1.2c	No Change	-----
4.8.1.1.2d	Implements the guidance of NUREG-1431	-----
4.8.1.1.2e	Implements the guidance of NUREG-1431	-----
4.8.1.1.2f	Implements the guidance of Regulatory Guide 1.9, Revision 3 and NUREG-1431	-----
4.8.1.1.2g	No Change	-----
4.8.1.1.2g.1	Deleted per Regulatory Guide 1.9, Revision 3	-----
4.8.1.1.2g.2	Deleted	-----
4.8.1.1.2g.3	Combines Full-Load and Single-Load Rejection Test Acceptance Criteria	4.8.1.1.2g.1
4.8.1.1.2g.4	Revised to be consistent with NUREG-1431	4.8.1.1.2g.2
4.8.1.1.2g.5	Revised to be consistent with NUREG-1431	4.8.1.1.2g.3
4.8.1.1.2g.6	Revised to be consistent with NUREG-1431/Portions relocated to revised 4.8.1.1.2g.5	4.8.1.1.2g.4
-----	Contains portions relocated from current 4.8.1.1.2g.6	4.8.1.1.2g.5
4.8.1.1.2g.7	Implements guidance of Regulatory Guide 1.9, Revision 3/Deletes Overload Test	4.8.1.1.2g.6
-----	Contains Hot Restart Test relocated from current 4.8.1.1.2g.7	4.8.1.1.2g.7
4.8.1.1.2g.8	Deleted per Regulatory Guide 1.9, Revision 3 and NUREG-1431	-----
4.8.1.1.2g.9	Revised to be consistent with NUREG-1431	4.8.1.1.2g.8
4.8.1.1.2g.10	No Change	4.8.1.1.2g.9
4.8.1.1.2g.11	No Change	4.8.1.1.2g.10
4.8.1.1.2g.12	No Change	4.8.1.1.2g.11
4.8.1.1.2h	Revised to be consistent with NUREG-1431	-----
4.8.1.1.2i	Revised to be consistent with NUREG-1431	-----
4.8.1.1.3	Deleted per guidance of Generic Letter 94-01	-----
Table 4.8-1	Deleted per guidance of Generic Letter 94-01	-----
4.8.1.2	Deletes reference to Technical Specification 4.8.1.1.3	-----
Bases 3/4.8	Expands descriptions of Surveillance Requirements and Action Statements	-----

Current Technical Specification Number	Proposed Technical Specification Changes (Continued)	Revised Technical Specification Number
-----	Adds requirement for PSRC review of Diesel Fuel Oil Testing Program	6.5.1.6, Item i
-----	Adds requirement for audits of the Diesel Fuel Oil Testing Program	6.5.2.8, Item m
-----	Adds requirements for the establishment of procedures for the Diesel Fuel Oil Testing Program	6.8.1, Item i
-----	Adds description of Diesel Fuel Oil Testing Program	6.8.4, Item g
-----	Adds description of Emergency Diesel Generator Reliability Program	6.8.4, Item h

I. Index Page XI

A. Description of Proposed Change

This proposed change would delete the reference to Table 4.8-1. Table 4.8-1 specifies the frequency of testing based on the number of failure during the last 20 valid tests of each emergency diesel generator.

B. Justification

Reference Technical Specification 4.8.1.1.2a.

II. Technical Specification 3.8.1.1, Action a

A. Description of Proposed Change

This action statement currently provides the actions to be taken with one offsite circuit of the required A.C. electrical power sources inoperable. Specifically, this action statement requires, in part, that if either emergency diesel generator of the required A.C. electrical power sources has not been successfully tested within the past 24 hours, Technical Specification 4.8.1.1.2a.4 must be performed separately for that emergency diesel generator within 24 hours to demonstrate its operability. Note "*" for this action statement states that the automatic start and sequence loading of an emergency diesel generator satisfies the testing requirements of Technical Specification 4.8.1.1.2a.4 for this action statement. It is being proposed that this portion of Action a and its associated note be deleted.

B. Justification

This proposed change is consistent with the guidance of Generic Letter 93-05 and NUREG-1366 which allow the deletion of requirements for alternate testing that requires testing of emergency diesel generators and other unrelated systems not associated with an inoperable train or subsystem (other than an inoperable emergency diesel generator). Note "*" can be deleted since an emergency diesel generator is no longer required to be tested as part of this action statement. These proposed changes are also consistent with Technical Specification 3.8.1, Action A, from NUREG-1431 and are compatible with plant operating experience.

III. Technical Specification 3.8.1.1, Action b

A. Description of Proposed Change

This action statement currently provides the actions to be taken with one emergency diesel generator of the required A.C. electrical power sources inoperable. Specifically, this action statement requires, in part, the demonstration of the operability of the remaining operable emergency diesel generator by performing Technical Specification 4.8.1.1.2a.4 within 24 hours. Note "***" for this action statement states that this test is required to be completed regardless of when the inoperable emergency diesel generator is restored to operable status unless the emergency diesel generator 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 emergency diesel generator. It is being proposed that the requirement to test the remaining operable emergency diesel generator when one emergency diesel generator is inoperable be limited to those situations where the cause for inoperability could not be conclusively demonstrated. This will preclude the potential for common mode failures. Also, in addition to the current exceptions stated in Note "***", the test would not be required to be accomplished if the emergency diesel generator was declared inoperable due to an inoperable support system or an independently testable component. When a test is required, it would be required to be performed within 24 hours of having determined that the emergency diesel generator is inoperable.

B. Justification

This proposed change is consistent, in part, with the guidance of Generic Letter 93-05 and NUREG-1366 which recommend that when an emergency diesel generator is inoperable (not including a support system or independently testable component), the other emergency diesel generator should be tested only once, unless the absence of any potential common mode failure can be demonstrated. This proposed change is also consistent with Technical Specification 3.8.1, Action B, from NUREG-1431 which states that 24 hours is a reasonable time frame to confirm that the operable emergency diesel generator is not affected by the same problem as the inoperable emergency diesel generator. Also, this change is compatible with plant operating experience.

IV. Technical Specification 3.8.1.1, Action c

A. Description of Proposed Change

This action statement currently provides the actions to be taken with one offsite circuit and one emergency diesel generator of the required A.C. electrical power sources inoperable. Specifically, this action statement requires, in part, the demonstration of the operability of the remaining operable emergency diesel generator by performing Technical Specification 4.8.1.1.2a.4 within 8 hours. Note "***" for this action statement states that this test is required to be completed regardless of when the inoperable emergency diesel generator is restored to operable status unless the emergency diesel generator 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 emergency diesel generator. It is being proposed that the requirement to test the remaining operable emergency diesel generator when one offsite circuit and one emergency diesel generator is inoperable be limited to those situations where the cause for inoperability could not be conclusively demonstrated. This will preclude the potential for common mode failures. Also, in addition to the current exceptions stated in Note "***", the test would not be required to be accomplished if the emergency diesel generator was declared inoperable due to an inoperable support system or an independently testable component.

This action statement also states that a successful test of emergency diesel generator operability performed in accordance with Technical Specification 4.8.1.1.2a.4 under this action for an operable emergency diesel generator or an emergency diesel generator that was restored to operable, satisfies the subsequent testing requirements of Technical Specification 3.8.1.1, Action a or Action b for an operable emergency diesel generator. It is being proposed that the reference to Technical Specification 3.8.1.1, Action a be deleted since Action a no longer requires the testing of an emergency diesel generator.

B. Justification

This proposed change is consistent with the guidance of Generic Letter 93-05 and NUREG-1366 which recommend that when an emergency diesel generator is inoperable (not including a support system or independently testable component), the other emergency diesel generator should be tested only once and within 8 hours unless the absence of any potential common mode failure can be demonstrated. These proposed changes are also compatible with plant operating experience.

V. Technical Specification 3.8.1.1, Action e

A. Description of Proposed Change

This action statement currently provides the actions to be taken with two offsite circuits of the required A.C. electrical power sources inoperable. Specifically, this action statement requires, in part, the demonstration of the operability of two emergency diesel generators by performing Technical Specification 4.8.1.1.2a.4 within 8 hours unless the emergency diesel generators are already operating. Also, this action statement states that a successful test of emergency diesel generator operability performed in accordance with Technical Specification 4.8.1.1.2a.4 under this action for the operable emergency diesel generators, satisfies the subsequent testing requirement of Technical Specification 3.8.1.1, Action a. Note "*" for this action statement states the automatic start and sequence loading of an emergency diesel generator satisfies the testing requirements of Technical Specification 4.8.1.1.2a.4 for this action statement. It is being proposed that these portions of Action e and the associated note be eliminated.

B. Justification

These proposed changes are consistent with the guidance of Generic Letter 93-05 and NUREG-1366 which allow the deletion of requirements for alternate testing that requires testing of emergency diesel generators and other unrelated systems not associated with an inoperable train or subsystem (other than an inoperable emergency diesel generator). Note "*" can be deleted since an emergency diesel generator is no longer required to be tested as part of this action statement. Also, the reference to Technical Specification 3.8.1.1, Action a can be deleted since Action a no longer requires the testing of an emergency diesel generator. These proposed changes are consistent with Technical

Specification 3.8.1, Action C, from NUREG-1431 and are compatible with plant operating experience.

VI. New Technical Specification 3.8.1.1, Action g

A. Description of Proposed Change

It is being proposed that Action g be added to Technical Specification 3.8.1.1 to require that with one or more diesel generators with new fuel oil properties outside the required Diesel Fuel Oil Testing Program limits, following addition of new fuel oil to the Diesel Fuel Oil Storage Tanks, the stored fuel oil properties must be restored to within the required limits within 30 days. Also, a note would be added to require that the properties of American Petroleum Institute (API) Gravity, specific gravity or an absolute specific gravity; kinematic viscosity; water and sediment content; and flash point be confirmed to be within the limits of the Diesel Fuel Oil Testing Program, prior to the addition of the new fuel oil to the Diesel Fuel Oil Storage Tanks.

B. Justification

Action g, and its associated note, would address the required action to be taken in the event the new fuel oil properties do not meet the Diesel Fuel Oil Testing Program limits. A failure to meet the API gravity, kinematic viscosity, flash point or water and sediment limits is cause for rejecting the new fuel oil prior to the addition to the Diesel Fuel Oil Storage Tanks, but does not represent a failure to meet the Limiting Condition for Operation of Technical Specification 3.8.1.1, since the new fuel oil will not have been added to the storage tanks. Provided these new fuel oil properties are met subsequent to the addition of the new fuel oil to the storage tanks, 30 days is provided in the Diesel Fuel Oil Testing Program to complete the analyses of the other new fuel oil properties. In the event the other new fuel oil properties are not met, this action statement provides an additional 30 days to meet the Diesel Fuel Oil Testing Program limits. This period provides sufficient time to test the stored fuel oil to determine that the new fuel oil, when mixed with the previously stored fuel oil, remains acceptable, or to restore the stored fuel oil properties. This additional 30 day period is acceptable because the fuel oil properties of interest, even if they are not within limits, would not have an immediate effect on emergency diesel generator operation. The diesel fuel oil surveillance conducted in accordance with the Diesel Fuel Oil Testing Program will ensure the availability of high quality fuel oil for the emergency diesel generators. The proposed addition of this action statement is consistent with the intent of Technical Specification 3.8.3 of NUREG-1431.

It is being proposed that a description of the Diesel Fuel Oil Testing Program be added to Section 6 of the technical specifications. It is also being proposed that Section 6 be revised to require that the Diesel Fuel Oil Testing Program be reviewed by the Plant Safety Review Committee, audited by the Nuclear Safety Review Committee, and written procedures established, implemented, and maintained for the

implementation of the program. These proposed revisions are discussed in more detail later in this evaluation.

VII. New Technical Specification 3.8.1.1, Action h

A. Description of Proposed Change

It is being proposed that Action h be added to Technical Specification 3.8.1.1 to require that with one or more diesel generators with stored fuel oil total particulates outside the required Diesel Fuel Oil Testing Program limits, the stored fuel oil properties must be restored to within the required limits within 7 days.

B. Justification

Action h would address the required action in the event the stored fuel oil total particulates do not meet the Diesel Fuel Oil Testing Program limits. At least once every 31 days, a sample of fuel oil is obtained from the storage tanks and the particulate contamination is verified to be less than 10 mg/liter. It is acceptable to obtain a field sample for subsequent laboratory testing in lieu of field testing. Fuel oil degradation during long term storage is identified by an increase in total particulates, due mostly to oxidation. An increase in particulates does not mean the fuel oil will not burn properly in a diesel engine. The increase in particulates can cause fouling of filters and fuel oil injection equipment which can cause engine failure. The frequency for performing surveillances on stored fuel oil is based on stored fuel oil degradation trends which indicate that particulate concentration is unlikely to change significantly between surveillances. The proposed addition of this action statement is consistent with the intent of Technical Specification 3.8.3 of NUREG-1431. As discussed previously, it is being proposed that a description of the Diesel Fuel Oil Testing Program be added to Section 6 of the technical specifications. It is also being proposed that Section 6 be revised to require that the Diesel Fuel Oil Testing Program be reviewed by the Plant Safety Review Committee, audited by the Nuclear Safety Review Committee, and written procedures established, implemented, and maintained for implementation of the program. These proposed revisions are discussed in more detail later in this evaluation.

VIII. Technical Specification 4.8.1.1.2a

A. Description of Proposed Change

This surveillance requirement currently requires that each emergency diesel generator be demonstrated operable in accordance with the frequency specified in Table 4.8-1 on a staggered test basis. Table 4.8-1 specifies the frequency of testing based on the number of failures during the last 20 valid tests of each emergency diesel generator. It is being proposed that Table 4.8-1 be deleted. The frequency of testing for the emergency diesel generators would be changed to at least once per 31 days on a staggered test basis.

B. Justification

This proposed change is consistent with the guidance presented in Generic Letter 94-01. This generic letter was developed based upon Option 4 in SECY-93-044, "Resolution of Generic Safety Issue B-56, 'Diesel Generator Reliability'." Option 4 recommends that licensees adopt the accelerated testing provisions of the improved Standard Technical Specifications with an option to relocate accelerated testing and special reporting requirements for the emergency diesel generators from the technical specifications to the maintenance program when the maintenance rule goes into effect in 1996. However, after further consideration by the NRC it was concluded that it was not necessary to await the effective date of the maintenance rule. The generic letter states that licensees may request the removal of the technical specification provisions for accelerated testing and special reporting requirements for emergency diesel generators at this time. However, licensees must commit to implement within 90 days a maintenance program for monitoring and maintaining diesel generator performance consistent with the provisions of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and the guidance of Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."

Wolf Creek Nuclear Operating Corporation will implement this maintenance program under the control of the Emergency Diesel Generator Reliability Program (EDGRP). The EDGRP will govern all activities associated with emergency diesel generator reliability and will be based upon Appendix D of NUMARC 87-00, Revision 1. This program will capture the provisions of the maintenance rule as it applies to emergency diesel generators and will be consistent with the provisions of 10 CFR 50.65 and the guidance of Regulatory Guide 1.160. The EDGRP will be fully implemented within 90 days of formal NRC approval of this proposed revision to the technical specifications. Also, as part of this license amendment request, it is being proposed that a description of the EDGRP be added to Section 6 of the technical specifications. This addition is discussed later in this evaluation.

IX. Technical Specification 4.8.1.1.2a.4

A. Description of Proposed Change

This surveillance requirement currently requires that each emergency diesel generator starts and accelerates to 514 revolutions per minute (RPM) in less than or equal to 12 seconds. This surveillance also requires that each emergency diesel generator obtain a voltage of 4160 + 160 - 420 volts and a frequency of 60 ± 1.2 Hertz within 12 seconds after the start signal. The emergency diesel generator shall be started by manual control, a simulated loss-of-offsite power signal, or a safety injection test signal. It is being proposed that this surveillance requirement be revised to eliminate the 12 second requirement for obtaining the prescribed speed, voltage, and frequency. The requirement to obtain 514 RPM would be deleted since it is redundant to the frequency requirement. A statement would also be added that allows the

emergency diesel generator to be slow started and allowed to reach rated speed at a rate that is selected to minimize stress and wear. In order to accomplish a slow start, the emergency diesel generator must be placed in manual control; therefore, the requirement to start the emergency diesel generator by a simulated loss-of-offsite power signal or a safety injection test signal would be deleted. The requirement would continue to be satisfied by surveillance requirement 4.8.1.1.2f.

B. Justification

This surveillance requirement is considered to be a "Start Test" as described in Regulatory Guide 1.9, Revision 3. A "Start Test" is performed to demonstrate proper startup from standby conditions and to verify that the required design voltage and frequency is attained. For these tests, Regulatory Guide 1.9, Revision 3, recommends that the emergency diesel generators be slow started and allowed to reach rated speed on a prescribed schedule that is selected to minimize stress and wear. Therefore, the removal of the 12 second time requirement is justified in order to reduce undue stress and wear on the emergency diesel generators. Also, this proposed change is consistent, in part, with Technical Specification 3.8.1.2 from NUREG-1431.

The proposal to delete the requirement to obtain 514 RPM is consistent with Regulatory Guide 1.9, Revision 3, and Technical Specification 3.8.1.2 from NUREG-1431. As stated above, the 514 RPM verification is redundant to the frequency verification since the frequency of the generator can be converted directly into engine RPM ($RPM=120(\text{frequency})/\#\text{Poles}$). Therefore, the verification that the emergency diesel generator reaches rated voltage and frequency is a satisfactory means of demonstrating operability in lieu of the RPM verification.

X. Technical Specification 4.8.1.1.2a.5

A. Description of Proposed Change

This surveillance requirement currently requires that the emergency diesel generator be synchronized and gradually loaded to an indicated 6000 to 6201 kilowatts for at least 60 minutes. It is being proposed that the load band of 6000 to 6201 kilowatts be revised to correspond with 90 to 100 percent of the continuous rating of the emergency diesel generators (5580 - 6201 kilowatts). Also, it is being proposed that a statement be added to this surveillance requirement that requires the emergency diesel generator to be operated until temperature equilibrium is attained in addition to the 60 minute operating requirement. A statement would also be added that allows the loading of the emergency diesel generator to be gradual in order to minimize stress and wear on the emergency diesel generator.

B. Justification

Regulatory Guide 1.9, Revision 3, considers this surveillance requirement to be a "Load-Run Test." A "Load-Run Test" demonstrates 90 to 100 percent of the continuous rating of the emergency diesel

generator for an interval of not less than 1 hour and until temperature equilibrium has been attained. This test may be accomplished by synchronizing the generator with offsite power and the loading and unloading of an emergency diesel generator during this test should be gradual and based on a prescribed schedule that is selected to minimize stress and wear on the emergency diesel generator. The proposed changes to this surveillance requirement are consistent with the guidance of Regulatory Guide 1.9, Revision 3, and Technical Specification 3.8.1.3 from NUREG-1431.

XI. Technical Specifications 4.8.1.1.2b

A. Description of Proposed Change

This surveillance requirement currently requires the checking for and the removal of accumulated water in the diesel generator day tanks at least once per 31 days and after each operation of the emergency diesel generator where the period of operation was greater than or equal to one hour. It is being proposed that this surveillance requirement be revised to eliminate the requirement to check for and remove accumulated water from the diesel generator day tanks after each operation of the emergency diesel generator where the period of operation was greater than or equal to one hour.

B. Justification

This proposed change would make this surveillance requirement consistent with Technical Specification 3.8.1.5 from NUREG-1431. NUREG-1431 states that the removal of water from the day tanks eliminates the necessary environment for bacterial survival and is the most effective means of controlling microbiological fouling. In addition, it eliminates the potential for water entrainment in the fuel oil during emergency diesel generator operation. Also, NUREG-1431 considers the performance of this surveillance requirement as preventative maintenance and that the presence of water does not necessarily represent failure of this surveillance requirement, provided the accumulated water is removed during the performance of this surveillance. The requirement to check for and remove water from the day tanks after each operation of the emergency diesel generator is considered to be overly conservative since the day tanks are required be checked for water at least once per 31 days and this requirement is considered to be preventative maintenance. Also, the presence of water does not necessarily represent an immediate operability concern with the emergency diesel generator and significant water accumulation in the day tank is not expected to occur.

XII. Technical Specifications 4.8.1.1.2d and 4.8.1.1.2e

A. Description of Proposed Change

These surveillance requirements currently require, in part, the sampling of new and stored fuel oil in accordance with prescriptive requirements specified in each surveillance requirement. It is being proposed that these prescriptive surveillance requirements be revised to require that

the new and stored fuel oil properties be tested and maintained within the limits of the Diesel Fuel Oil Testing Program.

B. Justification

The Diesel Fuel Oil Testing Program includes the sampling and testing requirements and acceptance criteria which are based upon the applicable ASTM Standards. This program ensures that the quality of new fuel oil and stored fuel oil is verified and maintained in order to sustain the reliability and operability of the emergency diesel generators. The surveillance requirements' periodicity, ASTM testing standards, and acceptance criteria would be specified in the Bases Section for this technical specification, as well as in the plant procedures utilized to test the emergency diesel generator fuel oil on initial receipt and periodically, as currently required. The relocation of the diesel fuel oil surveillance requirements is consistent, in part, with the intent of NUREG-1431. As previously discussed in this evaluation, it is being proposed that a description of the Diesel Fuel Oil Testing Program be added to Section 5 of the technical specifications. Also, Section 6 of the technical specifications would be revised to require that the program be reviewed by the Plant Safety Review Committee, audited by the Nuclear Safety Review Committee, and written procedures established, implemented, and maintained for the implementation of the Diesel Fuel Oil Testing Program. These proposed revisions are discussed in more detail later in this evaluation.

XIII. Technical Specification 4.8.1.1.2f

A. Description of Proposed Change

This surveillance requirement currently requires that each emergency diesel generator be started from ambient conditions (using the keep warm system) by manual control, a simulated loss-of-offsite power signal, or a safety injection test signal. Each emergency diesel generator must be accelerated to at least 514 rpm in less than or equal to 12 seconds and generator voltage and frequency shall be $4160 + 160 - 420$ volts and 60 ± 1.2 Hertz within 12 seconds after the start signal. Also, the emergency diesel generator must be loaded to an indicated 6000 to 6201 kilowatts in less than or equal to 60 seconds and be operated at a load of 6000 to 6201 kilowatts for at least 60 minutes. Note "***" states that the 6000 to 6201 kilowatt band is meant as guidance to avoid routine overloading of the engine and that loads in excess of this band for special testing under direct monitoring or momentary variations due to changing bus loads shall not invalidate this test. It is being proposed that the requirement to load the emergency diesel generator to an indicated 6000 to 6201 kilowatts in less than or equal to 60 seconds, to operate the emergency diesel generator at a load of 6000 to 6201 kilowatts for at least 60 minutes, and the associated note be eliminated. Also, it is proposed that the requirement to accelerate the emergency diesel generator to at least 514 rpm in less than or equal to 12 seconds be deleted.

B. Justification

Regulatory Guide 1.9, Revision 3, considers this surveillance to be a "Fast-Start Test." A "Fast-Start Test" demonstrates that each emergency diesel generator starts from standby conditions. If a plant normally has in operation keep warm systems designed to maintain lube oil and jacket water cooling at certain temperatures or prelubrication systems or both, this would constitute normal standby conditions for that plant. Verification that the emergency diesel generator reaches required voltage and frequency within acceptable limits and time is also required. Therefore, based on this guidance, the requirement to operate the emergency diesel generator for at least 60 minutes at 6000 to 6201 kilowatts can be deleted. This portion of the surveillance requirement would be satisfied by the performance of Technical Specification 4.8.1.1.2a.5 once per 31 days on a staggered test basis. The requirement to accelerate the emergency diesel generator to at least 514 rpm in less than or equal to 12 seconds can be deleted since it is redundant to the requirement to obtain the specified frequency and voltage in less than or equal to 12 seconds (Reference Justification for Technical Specification 4.8.1.1.2a.4). Also, the requirement to load the emergency diesel generator to an indicated 6000 to 6201 kilowatts in less than or equal to 60 seconds can be deleted since Regulatory Guide 1.9, Revision 3, no longer requires the emergency diesel generator to be fast loaded, due to the adverse affect on the reliability of the emergency diesel generator. The proposed changes to this surveillance requirement are consistent with the guidance of Regulatory Guide 1.9, Revision 3, and surveillance requirement 3.8.1.7 from NUREG-1431.

XIV. Technical Specification 4.8.1.1.2g.1

A. Description of Proposed Change

This surveillance requirement currently requires the inspection of an emergency diesel generator in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service at least once per 18 months during shutdown. It is being proposed that this requirement be relocated to the EDGRP.

B. Justification

It is being proposed that this technical specification surveillance requirement be relocated to the EDGRP based on the guidance of Regulatory Guide 1.9, Revision 3, and NUREG-1431 which no longer require an inspection of an emergency diesel generator on an 18 month frequency. The EDGRP would still require the inspection in conjunction with the manufacturer's recommendations and the incorporation of specific plant experience; however, the inspection would no longer be a technical specification requirement. Changes to the EDGRP would be accomplished pursuant to 10 CFR 50.59. It is also being proposed that a description of the EDGRP be added to Section 6 of the technical specifications. This proposed addition is discussed in more detail later in this evaluation.

XV. Technical Specification 4.8.1.1.2g.2

A. Description of Proposed Change

This surveillance requirement currently requires the verification of the capacity of an emergency diesel generator to reject the Essential Service Water Pump motor load (the largest single emergency load) while maintaining voltage at $4160 + 160 - 420$ volts and the frequency at 60 ± 5.4 Hertz. It is being proposed that this requirement be eliminated.

B. Justification

It is being proposed that this surveillance requirement, which is considered to be the "Single-Load Rejection Test" by Regulatory Guide 1.9, Revision 3, be eliminated based on its redundancy with the "Full-Load Rejection Test" which is required to be accomplished by surveillance requirement 4.8.1.1.2g.3. The "Single-Load Rejection Test" is an insignificant transient compared to the other transient tests being performed and is a duplication of the testing of the generator and engine capabilities to handle a transient. The starting sequence tests duplicate the transient load swings that occur when conducting the "Single-Load Rejection Test," and if the emergency diesel generator satisfies the requirement for the load sequencing, it will pass the "Single-Load Rejection Test."

Regulatory Guide 1.9, Revision 3, position C.2.2.7, "Single Load Rejection Test," requires the demonstration that the emergency diesel generator is capable of rejecting a loss of the largest single load while operating at a power factor between 0.8 and 0.9 with voltage and frequency requirements being met. The emergency diesel generator shall not trip on overspeed. Position C.2.2.8, "Full-Load Rejection Test," requires the demonstration that the emergency diesel generator is capable of rejecting a load equal to 90 to 100 percent of its continuous rating while operating at a power factor between 0.8 and 0.9 with the voltage requirements being met. The emergency diesel generator shall not trip on overspeed. Regulatory Guide 1.9, Revision 3, allows a maximum frequency of 65.4 Hertz (560 RPM) for the "Single-Load Rejection Test" and the "Full-Load Rejection Test". This is based on a nominal speed of 514 RPM plus 75 percent of the difference between the nominal speed and the overspeed trip setpoint of 575 RPM.

Analysis of previous surveillance tests conducted at Wolf Creek Generating Station has shown that the frequency and voltage transient from the "Single-Load Rejection Test" is far less severe of a test on the emergency diesel generators than that from the "Full-Load Rejection Test." The previous surveillance tests results have shown that the maximum transient values are well within the $4160 + 160 - 420$ volt and 60 ± 5.4 hertz acceptance criteria and are within the steady state criteria of $4160 + 160 - 420$ volt and 60 ± 1.2 hertz stated for the LOCA/SIAS surveillance test (Reference Table 1). Specifically, the frequency has never exceeded 61 Hertz (523 RPM) for the "Single-Load Rejection Test" nor the "Full-Load Rejection Test." This is within the band allowed by Regulatory Guide 1.9, Revision 3 and does not approach the overspeed trip setpoint of 575 RPM. Similar analysis has shown that

the voltage transient from the "Single-Load Rejection Test" is insignificant compared to that of the "Full-Load Rejection Test."

The proposed addition of a tighter frequency criteria for the "Full-Load Rejection Test," (<65.4 hertz) and the requirement that the emergency diesel generator performance tests provide steady state operation within $4160 + 160 - 420$ volts and 60 ± 1.2 hertz will adequately assure the continued required performance of the emergency diesel generators in lieu of performing the "Single-Load Rejection Test." For over-frequency conditions, the 65.4 hertz limit being applies to the "Full-Load Rejection Test," will provide for adequate performance for limiting motor overspeed well within NEMA Std. MG 1-20.44 specifications and is equivalent to the previous limit given for the "Single-Load Rejection Test." Operation within the steady state criteria provides adequate voltages and frequencies for the continuous operation of the connected loads, and specifically for induction motors, conforms to NEMA Std. MG 1-20.45 for variations from rated voltage and rated frequency.

Institute of Electrical and Electronics Engineers (IEEE) Std 387-1977, "IEEE Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations," only specifies the performance of a load rejection test that demonstrates the capability of the emergency diesel generator to reject the maximum rated load without exceeding speeds or voltages which will cause tripping, mechanical damage, or harmful overstresses. It does not specify the performance of a "Single-Load Rejection Test."

The magnitude of the load changes seen by the emergency diesel generator during load sequencing is greater than 2 times that of the "Single-Load Rejection Test." The sequencing of the largest load occurs late in the load sequencing, and is approximately equivalent to the "Single-Load Rejection Test." An example of the kilovolts-amps-reactive (KVAR) and kilowatts rejections can be seen in Figure A2 of IEEE Std 387-1984.

The actual test load torque for the "Single-Load Rejection Test" (Essential Service Water pump) is approximately 8453 lb-ft. The maximum design load torque is 9491 lb-ft for rejection of the Essential Service Water pump. The starting and breakdown torques are 10385 lb-ft and 20770 lb-ft, respectively, at the Essential Service Water pump nameplate voltage of 4000 Volts A.C. Therefore, the load torque upon loss of the Essential Service Water pump is approximately one-half of the torque change seen during starting of the Essential Service Water pump.

The load rejection of the Essential Service Water pump on an isochronous operating diesel generator will result in an acceleration of the shaft and the corresponding increase in frequency. However, the system inertia will act to resist the increase in frequency. The acceleration torque will remain until the engine electrical mechanical governor compensates to shut the fuel rack and bring the shaft speed back to 514 rpm. This load rejection can take place before or after the engine governor or generator voltage regulator have corrected for the load additions depending on the time constants of the governor and voltage regulator. Due to the large system inertia which is mostly the emergency diesel and generator, the speed change is small and will be

less than that seen during the load sequencing. The governor correction during rejection of the Essential Service Water pump is minimal and more during starting. The starting of the Essential Service Water pump has a greater affect on the emergency diesel generator because the torque being added to the system is a load and accelerating torque. Therefore, based on the above discussion, the "Single-Load Rejection Test" is redundant to the "Full-Load Rejection Test" and can be eliminated.

TABLE 1

Emergency Diesel Generator "Single-Load Rejection Test" History

Equipment Number	Date Performed	Steady State Voltage	Voltage Max. After Trip	Voltage Min. After Trip	Steady State Hertz Prior to Trip	Hertz Max. After Trip
KKJ01A	12/17/87	4160	4252	4200	60.1	60.9
KKJ01A	11/26/88	4150	4305	4160	60.4	61
KKJ01A	3/11/90	4160	4305	4242	60.01	60.4
KKJ01A	4/23/90	4200	4095	4042	60	60.4
KKJ01A	11/10/91	4160	4200	4150	60.25	60.6
KKJ01A	11/14/91	4150	4230	4180	60.3	60.6
KKJ01A	5/3/93	4190	4200	4147	60.2	60.4
KKJ01A	10/15/94	4200	4200	4095	60.2	60.4
KKJ01B	12/20/87	4180	4252.5	4200	60.05	60.3
KKJ01B	11/28/88	4160	4252	4200	60.2	60.6
KKJ01B	3/10/90	4150	4305	4253	60	60.4
KKJ01B	5/1/90	4100	4253	4180	60	60.4
KKJ01B	11/11/91	4080	4200	4150	60	60.6
KKJ01B	11/13/91	4080	4042	3990	60	60.2
KKJ01B	5/4/93	4100	4147	4068	60	60.4
KKJ01B	10/17/94	4100	4042.5	3990	60	60.5

XVI. Technical Specification 4.8.1.1.2g.3 (4.8.1.1.2g.1)

A. Description of Proposed Change

This surveillance requirement currently requires the verification that each emergency diesel generator is capable of rejecting a load of 6201 kilowatts without tripping and that the emergency diesel generator voltage does not exceed 4784 volts during and following the load rejection. It is being proposed that this surveillance requirement be revised to require the verification that each emergency diesel generator operating at a power factor between 0.8 and 0.9 does not trip on overspeed and that the voltage does not exceed 4784 volts and that the frequency does not exceed 65.4 Hertz following a load rejection of 5580 to 6201 kilowatts. The frequency criteria from the "Single-Load Rejection Test" in surveillance requirement 4.8.1.1.2g.2 would be relocated to this surveillance requirement. Also, a note would be added which states that this surveillance shall not be performed in Modes 1 or 2 and credit may be taken for unplanned events that satisfy this requirement.

B. Justification

As discussed previously, this surveillance requirement is classified as the "Full-Load Rejection Test" by Regulatory Guide 1.9, Revision 3. Specifically, Regulatory Guide 1.9, Revision 3, describes this test as a demonstration of the emergency diesel generator's capability to reject a load equal to 90 to 100 percent of its continuous rating (5580-6201 kilowatts) while operating at a power factor between 0.8 and 0.9 and verifying that the voltage requirements are met and that the emergency diesel generator will not trip on overspeed. The proposed changes to this surveillance requirement will encompass, in part, the guidance of Regulatory Guide 1.9, Revision 3. Also, the proposed addition of the note that will not allow the surveillance requirement to be performed in Modes 1 or 2 is based on the improved Standard Technical Specifications (NUREG-1431) which recognizes that the performance of this surveillance requirement during operation with the reactor critical could cause perturbations to the electrical distribution systems that could challenge continued steady state operation and, as a result, unit safety systems. The proposed deletion of surveillance requirement 4.8.1.1.2g.2 and the revision of surveillance requirement 4.8.1.1.2g.3 has combined, in part, the requirements of the "Single-Load Rejection Test" and the "Full-Load Rejection Test."

XVII. Technical Specification 4.8.1.1.2g.4 (4.8.1.1.2g.2)

A. Description of Proposed Change

This surveillance requirement currently requires the demonstration, by simulating a loss-of-offsite power, that the emergency buses are deenergized and the loads are shed from the emergency buses, and the emergency diesel generator starts on the autostart signal. Also, the emergency busses must be energized with the permanently connected loads with 12 seconds and the auto-connected shutdown loads must be energized

through the shutdown sequencer with the emergency diesel generator operating for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained within specified limits. It is being proposed that this surveillance requirement be retained in its entirety; however, it would be revised to be consistent with surveillance requirement 3.8.1.11 from NUREG-1431. Also, a note would be added which states that this surveillance shall not be performed in Modes 1 or 2 and credit may be taken for unplanned events that satisfy this requirement.

B. Justification

This surveillance requirement can be classified as the "Loss-of-Offsite-Power Test" in accordance with Regulatory Guide 1.9, Revision 3. As stated above this surveillance requirement would be retained in its entirety; however, it would be revised to be consistent with the improved Standard Technical Specifications. Also, the justification for the addition of the note is discussed above under Technical Specification 4.8.1.1.2g.3.

XVIII. Technical Specification 4.8.1.1.2g.5 (4.8.1.1.2g.3)

A. Description of Proposed Change

This surveillance requirement currently requires that on a safety injection actuation signal (SIAS) without loss-of-offsite power, the emergency diesel generator starts on the autostart signal and operates on standby for greater than or equal to 5 minutes. Also, the offsite power source must energize the auto-connected emergency (accident) load through the LOCA sequencer and the generator voltage and frequency shall be within specified limits within 12 seconds after the autostart signal. It is being proposed that this surveillance requirement be retained in its entirety; however, it would be revised to be consistent, in part, with surveillance requirement 3.8.1.12 from NUREG-1431. Also, a note would be added which states that this surveillance shall not be performed in Modes 1 or 2 and credit may be taken for unplanned events that satisfy this requirement.

B. Justification

This surveillance requirement can be classified as the "SIAS Test" in accordance with Regulatory Guide 1.9, Revision 3. As stated above this surveillance requirement would be retained in its entirety; however, it would be revised to be consistent, in part, with the improved Standard Technical Specifications. The portion of surveillance requirement 3.8.1.12 from NUREG-1431 which requires the verification that permanently connected loads remain energized from the offsite power system would not be added to Technical Specification 4.8.1.1.2g.5 (4.8.1.1.2g.3) since it is not discussed in Regulatory Guide 1.9, Revision 3 and is not currently in Technical Specification 4.8.1.1.2g.5. Also, the justification for the addition of the note is discussed above under Technical Specification 4.8.1.1.2g.3.

XIX. Technical Specification 4.8.1.1.2g.6 (4.8.1.1.2g.4)

A. Description of Proposed Change

This surveillance requirement currently requires the demonstration that the emergency diesel generator can satisfactorily respond to a loss-of-offsite power (LOOP) in conjunction with a SIAS in whatever sequence they might occur. A simultaneous LOOP/LOCA event is demonstrated by simulating a LOOP and SIAS and verifying that the emergency buses are deenergized and loads are shed from the emergency buses and the emergency diesel generator starts on the autostart signal. Also, the emergency diesel generator must attain the required voltage and frequency, energize the permanently connected loads within acceptable limits and time, energize the autoconnected loads through the load sequencer, and operate for greater than or equal to 5 minutes. Also, all automatic diesel generator trips, except high jacket coolant temperature, engine overspeed, low lube oil pressure, high crankcase pressure, start failure relay, and generator differential, must be verified to be automatically bypassed upon loss of voltage on the emergency bus concurrent with a SIAS. It is being proposed that this surveillance requirement be retained in its entirety, except that the requirement to verify that a portion of the automatic diesel generator trips are automatically bypassed would be relocated to renumbered Technical Specification 4.8.1.1.2g.5. In addition, the surveillance requirement would be revised to be consistent with surveillance requirement 3.8.1.19 from NUREG-1431. Also, a note would be added which states that this surveillance shall not be performed in Modes 1 or 2 and credit may be taken for unplanned events that satisfy this requirement.

B. Justification

This surveillance requirement can be classified as the "Combined SIAS and LOOP Tests" in accordance with Regulatory Guide 1.9, Revision 3. As stated above, this surveillance requirement would be retained in its entirety except that a portion of the surveillance test would be relocated to renumbered Technical Specification 4.8.1.1.2g.5. Also, it would be revised to be consistent with the Improved Standard Technical Specifications. The justification for the addition of the note is discussed above under Technical Specification 4.8.1.1.2g.3.

XX. (Renumbered Technical Specification 4.8.1.1.2g.5)

A. Description of Proposed Change

Currently, Technical Specification 4.8.1.1.2g.6 requires, in part, that all automatic diesel generator trips, except high jacket coolant temperature, engine overspeed, low lube oil pressure, high crankcase pressure, start failure relay, and generator differential, be verified to be automatically bypassed upon loss of voltage on the emergency bus concurrent with a SIAS. It is being proposed that this portion of Technical Specification 4.8.1.1.2g.6 be relocated to renumbered Technical Specification 4.8.1.1.2g.5. Also, a note would be added which states that this surveillance shall not be performed in Modes 1 or

2 and credit may be taken for unplanned events that satisfy this requirement.

B. Justification

The portion of Technical Specification 4.8.1.1.2g.6 that is being proposed to be relocated to renumbered Technical Specification 4.8.1.1.2g.5 is considered to be the "Protective Trip Bypass Test," as described in Regulatory Guide 1.9, Revision 3. This surveillance would be revised to be consistent with surveillance requirement 3.8.1.13 from NUREG-1431. Also, the justification for the addition of the note is discussed above under Technical Specification 4.8.1.1.2g.3.

XXI. Technical Specification 4.8.1.1.2g.7 (4.8.1.1.2g.6)

A. Description of Proposed Change

Currently, surveillance requirement 4.8.1.1.2g.7 requires the verification that each emergency diesel generator operate for at least 24 hours. During the first 2 hours of this test, the emergency diesel generator shall be loaded to an indicated 6600 to 6821 kilowatts and during the remaining 22 hours of this test, the emergency diesel generator shall be loaded to an indicated 6000 to 6201 kilowatts. The generator voltage and frequency shall be $4160 + 160 - 420$ volts and $60 + 1.2$ Hertz, $- 3$ Hertz within 12 seconds after the start signal and the steady state generator voltage and frequency shall be maintained within $4160 + 160 - 420$ volts and 60 ± 1.2 Hertz during the test. Within 5 minutes after completing this 24 hour test, surveillance requirement 4.8.1.1.2g.6b must be performed (Hot Restart Test). Note "*" states that if Technical Specification 4.8.1.1.2g.6b is not satisfactorily completed, it is not necessary to repeat the preceding 24 hour test. Instead, the emergency diesel generator may be operated at 6201 kilowatts for 1 hour or until operating temperature has stabilized. It is being proposed that this note be deleted and the surveillance requirement revised to require that the full-load capability of each emergency diesel generator be demonstrated at a power factor between 0.8 and 0.9 for an interval of not less than 24 hours at 5580 to 6201 kilowatts. The generator voltage and frequency shall be maintained within $4160 + 160 - 420$ volts and 60 ± 1.2 Hertz during this test. This proposed change would eliminate the requirement to load the emergency diesel generator to an indicated 6600 to 6821 kilowatts for the first 2 hours of the test. Also, a note would be added which states that this surveillance shall not be performed in Modes 1 or 2 and credit may be taken for unplanned events that satisfy this requirement. In addition, this proposed change would relocate the "Hot Restart Test" to a separate technical specification surveillance requirement (Renumbered Technical Specification 4.8.1.1.2g.7).

B. Justification

These changes are consistent, in part, with the definition of the "Endurance and Margin Test" as described in Regulatory Guide 1.9, Revision 3. However, the requirement to operate each emergency diesel generator for two hours at 105 to 110 percent of the continuous rated

load has been eliminated. It appears that this requirement originates from the fact that many older nuclear power plants were built with emergency diesel generator capacity below emergency bus loading. At the start of an accident, the bus loading during the first two hours may well be above the continuous rating of the emergency diesel generator. Bus loading calculations for Wolf Creek Generating Station indicate that under the worst scenario, emergency bus loading would be 5822 kilowatts, which is only approximately 94 percent of the rated continuous load for each emergency diesel generator.

The emergency diesel generators at Wolf Creek Generating Station utilize Colt-Pielstick PC 2.5V 14 cylinder engines. The generator ratings are 6201 kilowatts continuous, 6635 kilowatts for 2000 hours, 6821 kilowatts for 168 hours (110 percent of rated continuous), and 7441 kilowatts for 30 minutes. All ratings are at a power factor of 0.8. The worst case accident bus loading occurs during a station blackout, cold shutdown conditions with engineered safety features and non-engineered safety features loads connected. The bus loading under these conditions is 5822 kilowatts. Without non-engineered safety features loads connected, the bus load is 4556 kilowatts. Under LOCA conditions, recirculation phase, the maximum load (engineered safety features plus non-engineered safety features) is 5440 kilowatts. With LOCA recirculation conditions and only engineered safety features loads connected, the total bus load is 5258 kilowatts. At the continuous rated load of the emergency diesel generator (6201 kilowatts with power factor at 0.8), the normal fuel rack position is 47 to 49 millimeters. At the 110 percent power level (6821 kilowatts with power factor at 0.8), the fuel rack position is 51 to 52 millimeters. A total of 75 millimeters of fuel rack movement is available; however, a mechanical stop prevents movement above 55 millimeters. The ability of the governor actuator and fuel rack mechanism to move rapidly to the maximum fuel position is demonstrated each time a successful fast start of the emergency diesel generator is conducted. Therefore, as described above ample margin exists in the capacity of the emergency diesel generators to preclude overloading during the accident conditions.

The EDGRP will contain the minimum requirements for emergency diesel generator performance monitoring that are commensurable with the goals of the program. The purpose of performance monitoring is to monitor certain parameters on an ongoing basis in order to obtain information about the physical state of the emergency diesel generators that may potentially impact the operability and which could be used for trending purposes. These trends may signal degradation and would allow the evaluation of the condition to enable the prediction of the onset of failures and allow corrective actions to be taken prior to a failure occurring. The EDGRP will establish a thorough performance monitoring system that will specify, trend, and analyze the necessary emergency diesel generator parameters. Tracking and trending of operational parameters will ensure high reliability and availability of the emergency diesel generators.

In addition, operating at 110 percent of rated load is detrimental to long-term emergency diesel generator reliability. The relationship between high loads and wear is well known for typical piston engine

applications and engine manufactures have indicated that aging and wear significantly increase after 95 percent of the continuous load rating is achieved. Therefore, based on the Wolf Creek Generating Station emergency bus loading, the diesel generator rated capacity, and the increase in aging and wear, the requirement to perform the two hour margin test is considered unnecessary and detrimental to the long-term reliability of the emergency diesel generators. The justification for the addition of the note is discussed above under Technical Specification 4.8.1.1.2g.3.

XXII. (Renumbered Technical Specification 4.8.1.1.2g.7)

A. Description of Proposed Change

Currently, Technical Specification 4.8.1.1.2g.7 requires that within 5 minutes following the completion of the 24 hour test, surveillance requirement 4.8.1.1.2g.6b must be performed. Note "*" states that if Technical Specification 4.8.1.1.2g.6b is not satisfactorily completed, it is not necessary to repeat the preceding 24 hour test. Instead, the emergency diesel generator may be operated at 6201 kilowatts for 1 hour or until operating temperature has stabilized. It is being proposed that this "Hot Restart Test" be relocated to this technical specification with a stipulation that the emergency diesel generator must be operated for at least 2 hours at full-load conditions prior to conducting the "Hot Restart Test."

B. Justification

The "Hot Restart Test," as defined in Regulatory Guide 1.9, Revision 3, demonstrates the hot restart functional capability at full-load temperature conditions by verifying that the emergency diesel generator starts on a manual or autostart signal, attains the required voltage and frequency within acceptable limits and time, and operates for longer than 5 minutes. The regulatory guide also states that this test may be performed following the 24 hour endurance test; however, the regulatory guide does not require the test to be performed in conjunction with the 24 hour test.

The "Hot Restart Test" is performed to verify that the emergency diesel generator does not have, in any way, impaired performance following operation at full load or equilibrium temperatures. Failure to restart when hot, or extended delay in restarting, is typically only experienced with small forced-air-cooled diesel engines which, upon being tripped undergo a temperature rise transient. The larger diesel generators are water cooled and do not experience any significant temperature rise transients during operation or after shutdown, hence the "Hot Restart Test" can be performed at any time after the emergency diesel generator has been operated at continuous rated load for a period long enough for the operating temperature to stabilize, which is approximately one to two hours.

NUREG-1431 allows the "Hot Restart Test" to be performed within 5 minutes of shutting down the emergency diesel generator anytime after it has operated for at least 2 hours at full load conditions. The Bases

section for surveillance requirement 3.8.1.15 in NUREG-1431 states that the requirement to operate for a minimum of 2 hours at full load conditions prior to performing the "Hot Restart Test" is based on manufacturers recommendations for achieving hot conditions. However, Wolf Creek Generating Station's diesel engine manufacturer does not state a minimum time requirement for achieving hot conditions. It is suggested that the engine exhaust and jacket water temperatures be monitored until operating temperatures have stabilized. Also, in NUREG-1366, the NRC Staff recommends that utilities be permitted to change their technical specifications to separate the 24 hour test and the "Hot Restart Test." The only requirement should be that the "Hot Restart Test" is performed within 5 minutes of operating the emergency diesel generator at its continuous rating for 2 hours or until operating temperature have stabilized. The proposed addition of this surveillance requirements is consistent with the guidance of Regulatory Guide 1.9, Revision 3, NUREG-1431, and NUREG-1366.

XXIII. Technical Specification 4.8.1.1.2g.8

A. Description of Proposed Change

Currently, Technical Specification 4.8.1.1.2g.8 requires the verification that the auto-connected loads to each emergency diesel generator do not exceed 6201 kilowatts. It is being proposed that this surveillance requirement be eliminated.

B. Justification

This surveillance requirement can be eliminated based on the fact that bus loading calculations for Wolf Creek Generating Station indicate that under the worst scenario emergency bus loading would be 5822 kilowatts which is only approximately 94 percent of the rated continuous load for each emergency diesel generator. Also, this requirement is not contained in NUREG-1431 or Regulatory Guide 1.9, Revision 3. The auto-connected bus loadings are monitored and trended by the Emergency Diesel Generator Reliability Program with the electrical bus load growth being controlled by an Electrical Load Growth Program.

XXIV. Technical Specification 4.8.1.1.2g.9 (4.8.1.1.2g.8)

A. Description of Proposed Change

It is being proposed that a note be added to this surveillance requirement which stipulates that the surveillance shall not be performed in Modes 1, 2, 3, or 4 and that credit may be taken for unplanned events that satisfy this requirement.

B. Justification

The addition of this note would make this surveillance requirement consistent with surveillance requirement 3.6.1.16 from NUREG-1431. The requirement for not performing this surveillance requirement in Modes 1, 2, 3, or 4 is due to the fact that a required offsite circuit is removed

from service, the electrical distribution system is perturbed, and safety systems are challenged.

XXV. Technical Specification 4.8.1.1.2h

A. Description of Proposed Change

This surveillance requirement currently requires that at least once per 10 years or after any modifications which could affect emergency diesel generator interdependence, both emergency diesel generators be started simultaneously, during shutdown, and verify that both emergency diesel generators accelerate to at least 514 RPM in less than or equal to 12 seconds. It is being proposed that this surveillance requirement be revised to eliminate the requirement to perform the test after any modifications which could affect emergency diesel generator interdependence and replace the requirement to obtain 514 RPM with voltage and frequency requirements.

B. Justification

This surveillance requirement can be considered to be the "Redundant Unit Test" in accordance with Regulatory Guide 1.9, Revision 3. This test demonstrates that, by starting and running both redundant units simultaneously, potential common failure modes that may be undetected in single emergency diesel generator unit tests do not occur. The proposed change to this surveillance requirement will make it consistent with surveillance requirement 3.8.1.20 from NUREG-1431. The elimination of the requirement to perform this surveillance requirement after any modifications which could affect emergency diesel generator interdependence is justified based on the ability of the Wolf Creek Generating Station modification process to detect concerns related to the interdependence of the emergency diesel generators. Also, the inherent design of the emergency diesel generators aids in the ability to maintain the interdependence of the emergency diesel generators. The replacement of the requirement to accelerate the emergency diesel generator to at least 514 RPM in less than or equal to 12 seconds with voltage and frequency requirements is justified since the RPM requirement is redundant to the frequency and voltage requirements (Reference Justification for Technical Specification 4.8.1.1.2a.4).

XXVI. Technical Specification 4.8.1.1.2i

A. Description of Proposed Change

This surveillance requirement currently requires that every 10 years each fuel oil storage tank be drained, accumulated sediment removed and cleaned using a sodium hypochlorite solution or equivalent. It is being proposed that this surveillance requirement be revised to eliminate the requirement to clean the tank using a sodium hypochlorite solution or equivalent.

B. Justification

The proposed change to this surveillance requirement will make it consistent with surveillance requirement 3.8.3.6 from NUREG-1431. The proposed removal of the requirement to clean the tank using a sodium hypochlorite solution or equivalent will allow greater flexibility for cleaning the tanks. Sodium hypochlorite is no longer a viable cleaning medium since it has been classified as a hazardous waste. More effective cleaning techniques are now available such as high-pressure water cleaning. The EDGRP will ensure that the method of cleaning the fuel oil tanks will not introduce surfactants in the fuel oil system that could potentially affect the operability and reliability of the emergency diesel generators.

XXVII. Technical Specification 4.8.1.1.3

A. Description of Proposed Change

This surveillance requirement currently requires the reporting of all emergency diesel generator failures, valid or nonvalid, in a Special Report to the Commission. It is being proposed that this surveillance requirement be eliminated.

B. Justification

The elimination of this surveillance requirement is consistent with the guidance provided in Generic Letter 94-01 and is discussed under Technical Specification 4.8.1.1.2a. 10 CFR 50.72 and 50.73 still provide criteria that may require the notification of the Commission of significant emergency diesel generator failures. Also, guidance will be provided in the EDGRP on reporting failures of the emergency diesel generators.

XXVIII. Table 4.8-1

A. Description of Proposed Change

Reference Technical Specification 4.8.1.1.2a.

XXIX. Technical Specification 4.8.1.2

A. Description of Proposed Change

This surveillance requirement currently requires the demonstration of the operability of one circuit between the offsite transmission network and the onsite Class 1E Distribution System and one emergency diesel generator during Modes 5 and 6 by the performance of each of the requirements of Technical Specifications 4.8.1.1.1, 4.8.1.1.2 (except for Technical Specification 4.8.1.1.2a.5), and 4.8.1.1.3. It is being proposed that the reference to Technical Specification 4.8.1.1.3 be deleted.

B. Justification

The proposed deletion of the reference to Technical Specification 4.8.1.1.3 (Reports) is necessary since it is being proposed to eliminate Technical Specification 4.8.1.1.3 based on the guidance provided in the Generic Letter 94-01.

XXX. Technical Specification Bases Section 3/4.8

A. Description of Proposed Change

It is being proposed that Technical Specification Bases Section 3/4.8 be revised to describe, in part, the changes proposed by this license amendment request and provide greater detail concerning certain surveillance requirements and actions statements. Also, the Diesel Fuel Oil Testing Program would be described and the specific surveillance requirements from Technical Specifications 4.8.1.1.2d and 4.8.1.1.2e would be relocated to this Bases Section. These relocated surveillance requirements could then be changed without prior NRC approval, provided an unreviewed safety question did not exist.

It is being proposed that relocated Technical Specifications 4.8.1.1.2d and 4.8.1.1.2e be revised to provide greater flexibility for the testing of the diesel fuel oil. These changes include the addition of an ASTM standard (ASTM D4294-90) for the analysis for sulfur. This ASTM standard provides a more current method for the analysis for sulfur than those already specified in the surveillance requirements. In addition to the ASTM standard, it is being proposed that the phrase "in accordance with" be replaced with "based on" in the relocated surveillance requirements. This change will allow minor variances from a specific ASTM standard while still meeting the intent of the standard. These minor variances are sometimes necessary due to the impracticality of a test or due to an ASTM standard not being specifically meant for diesel fuel oil. Also, the current requirement to test new fuel oil for a clear and bright appearance with proper color when tested in accordance with ASTM D4176-82 would be replaced with the requirement to test new fuel oil for a water and sediment content of less than or equal to 0.05 percent when tested in accordance with ASTM D1796-83. This proposed change is discussed in more detail later in this evaluation. An exception to ASTM D129, which is specified in ASTM D975-81, has been taken. ASTM D129 uses a Barium precipitation method for the determination of sulfate after oxidation has occurred. The use of any wet lab sulfate analysis is acceptable since the determination is made in the aqueous rinse water for the oxidation process. The proposed changes described above will not affect the ability to verify the quality of diesel fuel oil.

The current reference to ASTM D2276-78 for the testing of diesel fuel oil for particulate contamination has been updated to utilize the 1983 edition of the standard. This proposed change does not affect the ability to verify the particulate contamination of the diesel fuel oil, but only provides a more current and better method for determining quality of the diesel fuel oil. An exception is also taken to ASTM D2276 as to the nominal filter size used in the laboratory particulate

test analysis. The proposed exception allows the use of a 3.0 micron absolute laboratory filter in lieu of the 0.8 micron nominal filter as specified in ASTM D2276, Method A. ASTM D2276 was written based on aviation turbine fuel requirements. Emergency diesel generator engines require less restrictive fuel particulate contamination requirements than that of aviation turbines and therefore less restrictive fuel oil specifications. WCGS's emergency diesel generators are designed to operate with fuel delivered through a 5 micron nominal filter. Therefore, based on this, a laboratory testing method utilizing a filter more representative of the ones used on the emergency diesel generators would provide a test method more representative for diesel engine fuel oil particulate contamination. The particulate contamination will still be maintained less than 10 mg/liter when verified based on ASTM D2276, Method A. The only difference is that a 3.0 micron absolute test filter will be used instead of the 0.8 micron nominal filter. Since the emergency diesel generator filters are 5.0 micron nominal size, the 3.0 micron absolute test filters will provide sufficient conservatism that the emergency diesel generators will still perform their intended safety function.

XXXI. Technical Specification 6.5.1.6, Item i

A. Description of Proposed Change

It is being proposed that Item i be added to Technical Specification 6.5.1.6 to require that the Plant Safety Review Committee be responsible for the review of the Diesel Fuel Oil Testing Program. This proposed change is consistent with Technical Specification 5.5.1.2 from NUREG-1431.

XXXII. Technical Specification 6.5.2.8, Item m

A. Description of Proposed Change

It is being proposed that the current Item m be relettered as Item n and a new Item m be added to Technical Specification 6.5.2.8 to require audits of the Diesel Fuel Oil Testing Program be performed under the cognizance of the Nuclear Safety Review Committee. This proposed change is consistent with Technical Specification 5.5.2.3 from NUREG-1431.

XXXIII. Technical Specification 6.8.1, Item i

A. Description of Proposed Change

It is being proposed that Item h be added to Technical Specification 6.8.1 to require that written procedures be established, implemented, and maintained for the implementation of the Diesel Fuel Oil Testing Program. This proposed change is consistent with Technical Specification 5.7.1.1 from NUREG-1431.

XXXIV. Technical Specification 6.8.4g

A. Description of Proposed Change

It is being proposed that this technical specification be added to the "Administrative Controls" section of the technical specifications in order to briefly describe the Diesel Fuel Oil Testing Program. The Diesel Fuel Oil Testing Program includes sampling and testing requirements, and acceptance criteria for both new and stored fuel oil to ensure the proper quality of the fuel oil utilizing recommended fuel oil practices. The program provides means of determining whether new fuel oil is of the appropriate grade and has not been contaminated with substances that would have an immediate, detrimental impact on emergency diesel generator operability. Also, the program provides sufficient testing of stored fuel oil to ensure that fuel oil degradation is identified prior to potentially affecting emergency diesel generator operability or reliability.

Contrary to NUREG-1431, exception is taken to the requirement for new fuel oil to have a clear and bright appearance with proper color. 40 CFR 80.29, "Fuels and Fuel Additives," was amended in 1992 to conform with the Clean Air Act Amendments of 1990. The Clean Air Act authorizes the EPA to require the use of a dye in high sulfur non-highway diesel fuel to differentiate it from low sulfur highway diesel fuel. As an alternate test method for the requirement in NUREG-1431 to test for clear and bright appearance with proper color, it is being proposed that new fuel oil be tested for water and sediment based on the applicable ASTM Standards. Specifically, Technical Specification Bases Section 3/4.8 will require that new fuel oil be tested for a water and sediment content of less than or equal to 0.05 percent when tested in accordance with ASTM D1796-83. This proposed change will still ensure that the properties of new fuel oil are adequate to maintain the reliability and operability of the emergency diesel generators.

Changes to the Diesel Fuel Oil Testing Program would be accomplished pursuant to 10 CFR 50.59, "Changes, tests, and experiments." Title 10 CFR 50.59 permits a licensee, among other things, (i) to make changes to the facility as described in the safety analysis report, or (ii) to make changes in the procedures as described in the safety analysis report, without prior NRC approval, unless the proposed change involves a change in the technical specifications or an unreviewed safety question. By deleting the specific reference in the technical specifications of the testing standards being used to meet technical specifications testing requirements, an ASTM standard, or standard edition, could be changed without prior NRC approval, provided an unreviewed safety question did not exist.

An unreviewed safety question exists (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased; or (ii) if a possibility for an accident or malfunction of a different type than any previously evaluated in the safety analysis report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification

is reduced. 10 CFR 50.59(b)(1) requires that records be maintained of any changes made pursuant to 10 CFR 50.59 and that these records must include a written safety evaluation which provides the bases for the determination that the change does not involve an unreviewed safety question. Additionally, a report is required to be submitted to the NRC periodically containing a brief description of any changes made pursuant to 10 CFR 50.59, as well as a summary of the safety evaluation of each change. As a result, the NRC will periodically be informed of changes that are made to the Diesel Fuel Oil Testing Program.

XXXV. Technical Specification 6.8.4h

A. Description of Proposed Change

It is being proposed that this technical specification be added to the "Administrative Controls" section of the technical specifications in order to briefly describe the Emergency Diesel Generator Reliability Program. The EDGRP will establish the requirements and guidelines for emergency diesel generator reliability, availability, and monitoring. The EDGRP will be based upon NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," Revision 1, Appendix D. Also, provisions will be incorporated in the EDGRP for meeting the requirements of the Maintenance Rule, 10 CFR 50.65. The EDGRP will require implementation of activities to ensure that: emergency diesel generator performance is maintained at an acceptable level and target reliability is achieved; emergency diesel generators whose performance deviates significantly from acceptable levels are subject to additional efforts to restore emergency diesel generator performance; and a graded response to declining emergency diesel generator reliability is implemented via action levels and remedial efforts developed from statistical analyses and programmatic experience. In addition, as with the Diesel Fuel Oil Testing Program, changes to the EDGRP would be accomplished pursuant to 10 CFR 50.59.

Compliance with the requirements of the maintenance rule, as it applies to the emergency diesel generators, will be accomplished by: using an emergency diesel generator target reliability as the overall performance goal; using an emergency diesel generator target reliability and system availability goal as the overall performance criteria; using methods of the NUMARC program to monitor emergency diesel generator failures and govern the remedial actions taken when a failure occurs; screening emergency diesel generator failures for maintenance preventable function failures; and prescribing system parameters important to system performance and reliability that are to be monitored and trended.

This license amendment request proposes to revise the existing Wolf Creek Generating Station Technical Specification requirements concerning emergency diesel generator testing. These changes are in accordance with the intent of guidance provided by the Commission in Generic Letter 94-01, Generic Letter 93-05, Regulatory Guide 1.9, NUREG-1431, and manufacturer's recommendations. The proposed changes will serve to increase the overall emergency diesel generator reliability and longevity. Based on the aforementioned discussion, Wolf Creek Nuclear Operating Corporation has concluded that the proposed technical

specification revisions do not adversely affect or endanger the health or safety of the general public or involve an unreviewed safety question.

ATTACHMENT II

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

No Significant Hazards Consideration Determination

This license amendment request proposes revising Technical Specification 3/4.8.1 and its associated Bases to achieve an overall improvement in emergency diesel generator reliability and availability. These proposed changes adopt the guidance of Regulatory Guide 1.9, Revision 3, Generic Letter 93-05 and Generic Letter 94-01. Also, several surveillance requirements that are redundant or inappropriate would be revised or eliminated and specific fuel oil surveillance requirements would be addressed in the Diesel Fuel Oil Testing Program. Descriptions of the Diesel Fuel Oil Testing Program and the Emergency Diesel Generator Reliability Program would be added to Section 6 of the Technical Specifications.

Standard I - Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated

These proposed changes do not involve a change in the operational limits or physical design of the emergency power system. Emergency diesel generator operability and reliability will continue to be assured while minimizing the number of required emergency diesel generator starts. Also, emergency diesel generator reliability will be enhanced by minimizing severe test conditions which can lead to premature failures.

Standard II - Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated

These proposed changes do not involve a change in the operational limits or physical design of the emergency power system. The performance capability of the emergency diesel generator will not be affected. Emergency diesel generator reliability and availability will be improved by the implementation of the proposed changes. There is no actual impact on any accident analysis.

Standard III - Involve a Significant Reduction in the Margin of Safety

These proposed changes do not involve a change in the operational limits or physical design of the emergency power system. The performance capability of the emergency diesel generator will not be affected. Emergency diesel generator reliability and availability will be improved by the implementation of the proposed changes. No margin of safety is reduced.

Based on the above discussions, it has been determined that the requested technical specification revision does 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 or condition over previous evaluations; or involve a significant reduction in a margin of safety. The requested license amendment does not involve a significant hazards consideration.

ATTACHMENT III
ENVIRONMENTAL IMPACT DETERMINATION

Environmental Impact Determination

10 CFR 51.22(b) specifies the criteria for categorical exclusions from the requirement for a specific environmental assessment per 10 CFR 51.21. This amendment request meets the criteria specified in 10 CFR 51.22(c)(9) as specified below:

- (i) the amendment involves no significant hazards consideration

As demonstrated in Attachment II, the proposed changes do not involve any significant hazards consideration.

- (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite

The proposed changes do not involve a change to the facility or operating procedures which would cause an increase in the amounts of effluents or create new types of effluents.

- (iii) there is no significant increase in individual or cumulative occupational radiation exposure

The proposed changes do not create additional exposure to personnel nor affect levels of radiation present. Also, the proposed change does not result in any increase in individual or cumulative occupational radiation exposure.

Based on the above it is concluded that there will be no impact on the environment resulting from this change and the change meets the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.21 relative to requiring a specific environmental assessment by the Commission.