

March 3, 2008

Mr. Rick A. Muench
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, KS 66839

SUBJECT: WOLF CREEK GENERATING STATION - ISSUANCE OF AMENDMENT
REGARDING CHANGES TO TECHNICAL SPECIFICATION TABLE 3.3.2-1
(TAC NO. MD4839)

Dear Mr. Muench:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 175 to Facility Operating License No. NPF-42 for the Wolf Creek Generating Station. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated March 14, 2007 (ET 07-0004), as supplemented by letter dated December 18, 2007 (ET 07-0052).

The amendment revised TS Table 3.3.2-1, "Engineered Safety Features Actuation System Instrumentation," to separate the automatic actuation logic and actuation relays for steam line isolation (Function 4) and main feedwater isolation (Function 5) into the solid state protection system function and the main steam and feedwater isolation system. There are other proposed changes to the TSs and the plant in the application that are not being addressed in this amendment. The amendment to revise Surveillance Requirements 3.7.2.1 and 3.7.3.1 to replace the valve isolation times with the phrase "within limits" was issued August 28, 2007. The remaining TS and plant changes in the application will be addressed in future letters to you.

A copy of our related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Jack N. Donohew, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosures: 1. Amendment No. 175 to NPF-42
2. Safety Evaluation

cc w/encls: See next page

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OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/DIRS/ITSB/BC	NRR/DE/EICB/BC	OGC – NLO	NRR/LPL4/BC
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Wolf Creek Generating Station

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February 2006

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 175
License No. NPF-42

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Wolf Creek Generating Station (the facility) Facility Operating License No. NPF-42 filed by the Wolf Creek Nuclear Operating Corporation (the Corporation), dated March 14, 2007, as supplemented by letter dated December 18, 2007, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph h 2.C.(2) of Facility Operating License No. NPF-42 is hereby amended to read as follows:

- (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 175, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated in the license. The Corporation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented prior to the startup from Refueling Outage 16, scheduled for the spring of 2008.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Thomas G. Hiltz, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility
Operating License and
Technical Specifications

Date of Issuance: March 3, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 175

FACILITY OPERATING LICENSE NO. NPF-42

DOCKET NO. 50-482

Replace the following pages of the Facility Operating License No. NPF-42 and Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change. The corresponding overleaf pages are provided to maintain document completeness.

Facility Operating License

REMOVE

INSERT

- 4 -

- 4 -

Technical Specifications

REMOVE

INSERT

3.3-25

3.3-25

3.3-33

3.3-33

3.3-34

3.3-34

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 175 TO FACILITY OPERATING LICENSE NO. NPF-42
WOLF CREEK NUCLEAR OPERATING CORPORATION
WOLF CREEK GENERATING STATION
DOCKET NO. 50-482

1.0 INTRODUCTION

By application dated March 14, 2007, as supplemented by letter dated December 18, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML070800193 and ML073620328, respectively), Wolf Creek Nuclear Operating Corporation (the licensee) requested changes to the Technical Specifications (TSs), Appendix A to Facility Operating License No. NPF-42, for the Wolf Creek Generating Station (WCGS). The proposed changes to the TSs are the following:

1. Changes to TS 3.3.2, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," to separate the main steam and feedwater isolation system (MSFIS) from the solid state protection system (SSPS) in ESFAS Functions 4.b and 5.a of Table 3.3.2-1.
2. Changes to 3.7.3, "Main Feedwater Isolation Valves (MFIVs)," for the addition of the main feedwater regulating valves (MFRVs), and associated MFRV bypass valves to TS 3.7.3.
3. Changes to Surveillance Requirements (SRs) 3.7.2.1 and 3.7.3.1 to adopt the Nuclear Regulatory Commission (NRC)-approved Technical Specification Task Force Traveler 491, Revision 2 (TSTF-491R2), "Removal of Main Steam and Main Feedwater Isolation Times."
4. Changes to the TS Table of Contents to change the title of TS 3.7.3 (see No. 2 above) and to re-number the TS pages for TS 3.7.4 through TS 3.7.18.

The only changes to the TSs that are being addressed in this amendment are the changes in No. 1 above.

The changes to the TSs in No. 3 above, the adoption of TSTF-491R2 by revising SRs 3.7.2.1 and 3.7.3.1 for the main steam isolation valves (MSIVs) and main feedwater isolation valves (MFIVs), respectively, to replace the valve isolation times in the SRs with the phrase "within limits," were issued in Amendment No. 174 by letter dated August 28, 2007. In the application, the licensee is also proposing to replace the MSFIS controls; however, this replacement of the MSFIS controls does not involve any changes to the TSs.

In Attachments IV and V to the application, the licensee identified (1) changes to the TS Bases for the proposed amendment and (2) the list of regulatory commitments. In identifying changes to the TS Bases, the licensee is not requesting that NRC approve these changes; the changes to the TS Bases and the regulatory commitment are for the entirety of the proposed license amendment request in the application dated March 14, 2007. The identified changes to the TS Bases come under TS 5.5.14, "Technical Specification (TS) Bases Control Program," which states that "Licensees may make changes to the [TS] Bases without prior NRC approval provided the changes do not require either of the following: (1) a change to the TS incorporated in the license; or (2) a change to the updated FSAR [Final Safety Analysis Report] that requires approval pursuant to 10 CFR [Title 10 of the *Code of Federal Regulations*] 50.59."

The supplemental letter dated December 18, 2007, provided additional information that clarified the proposed changes to TS Table 3.3.2-1 in the application. However, in doing this, the supplemental letter did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination published in the *Federal Register* on June 19, 2007 (72 FR 33785).

2.0 REGULATORY EVALUATION

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of the TSs. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) SRs; (4) design features; and (5) administrative controls.

As stated in 10 CFR 50.36(d)(2)(i), "LCOs are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications ..." The remedial actions in the TSs are specified in terms of LCO conditions, required actions, and completion times (CTs), or allowed outage times (AOTs), to complete the required actions. When an LCO is not being met, the CTs specified in the TSs are the time allowed in the TSs for completing the specified required actions. The conditions and required actions specified in the TSs must be acceptable remedial actions for the LCO not being met, and the CTs must be a reasonable time for completing the required actions while maintaining the safe operation of the plant.

As required by 10 CFR 50.36(d)(2)(ii), an LCO must be included in TS for any item meeting one of the following four criteria:

- Criterion 1: Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
- Criterion 2: A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

- Criterion 3: A structure, system, or component [SSC] that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- Criterion 4: An SSC which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Those items that do not fall within or satisfy any of the above criteria are not required to be included in the TSs.

As required by 10 CFR 50.36(d)(3), SRs are the requirements related to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

3.0 BACKGROUND

The SSPS is described in the TS 3.3.2 Bases. The SSPS has two trains and includes input, logic, output bays and balance of plant (BOP) ESFAS circuitry that initiates the proper unit shutdown or engineered safety feature (ESF) actuation in accordance with the defined logic and based on the bistable outputs from the signal process control and protection system. This system is used for the decision logic processing of outputs from the signal processing bistables (the automatic actuation logic) and for actuating the associated ESF equipment components (the automatic actuation relays). If a required logic matrix combination is completed, the system will send actuation signals via master and slave relays to actuate the ESF components. If the measured value of a unit parameter exceeds the predetermined setpoint, an output from a bistable is forwarded to the SSPS or the BOP ESFAS for decision evaluation. Some unit parameters provide input only to the SSPS, while others provide input to the SSPS, BOP ESFAS (i.e., the MSFIS to automatically close the MSIVs or MFIVs), the main control board, the unit computer, and one or more control systems.

For Function 4 (main steam line isolation) and Function 5 (turbine trip and main feedwater isolation) in TS Table 3.3.2-1, the generation of the signal to isolate the main steam line (close the MSIVs) or main feedwater line (close the MFIVs) is in the SSPS; however, the SSPS does not act to close either the MSIVs or the MFIVs. It is the MSFIS that provides the signal to close these valves. The components that close these valves are in the valves. Therefore, the MSFIS in conjunction with the SSPS provides the controls to close the MSIVs or MFIVs to isolate the main steam line or main feedwater line to mitigate the consequences of a design basis accident.

The MSFIS consists of two independent actuation trains. The function of the MSFIS is to close the MSIVs or MFIVs for isolation of the main steam or feedwater line when required and the MSFIS provides the controls for closing the four MSIVs and four MFIVs. In response to accidents, the MSIVs and MFIVs fast-close automatically through the MSFIS upon receipt of an ESFAS automatic close signal from the SSPS. The MSIVs and MFIVs can also be manually fast-closed through the MSFIS from the main control board. In addition to the manual and automatic fast-close mode of operation, manual controls are provided for the slow opening or closing of each valve, for checking the accumulator pressures, and for a valve operational check that closes the valve 10 percent and then opens it again. The components that actuate to close a MSIV or a MFIV are not in the MSFIS; they are located at each valve.

In its application, the licensee stated that the current and existing MSFIS instrumentation and controls are considered part of the SSPS in TS Table 3.3.2-1. Therefore, the licensee explained that, currently, if one train of MSFIS is inoperable, then the train of SSPS containing this train of MSFIS is also considered inoperable even though there may be no inoperable component in that train of SSPS. By the current Functions 4 and 5 in TS Table 3.3.2-1, the only way to declare a train of MSFIS inoperable is to have the same train in the parent system, the SSPS, also declared inoperable. However, with the proposed addition of the MSFIS automatic actuation logic and actuation relays to Functions 4 and 5 in TS Table 3.3.2-1 (i.e., separate the MSFIS from the SSPS) one train of MSFIS could be declared inoperable or placed in test without declaring the corresponding train of SSPS inoperable.

As explained in the identified changes to the TS 3.3.2 Bases, the SSPS provides the signal inputs to the MSFIS for automatic steam line and main feedwater line isolation. Therefore, the SSPS must also remain in both Functions 4 and 5 in TS Table 3.3.2-1 to account for the possible inoperability of the instrumentation and controls for the input signals to the MSFIS. However, for the reason given in the previous paragraph, the licensee has proposed to add a new ESFAS function for the MSFIS automatic actuation logic and actuation relays as new Functions 4.c and 5.b in TS Table 3.3.2-1.

The proposed changes to TS Table 3.3.2-1 are not related to the licensee's proposed replacement or modification of the MSFIS controls that is also proposed in the application. This replacement of the MSFIS controls does not involve any changes to the TSs.

4.0 TECHNICAL EVALUATION

4.1 Proposed Changes to the TSs

In its application, the licensee proposed the following changes to (1) Condition H for LCO 3.3.2 and (2) ESFAS Functions 4 (steam line isolation) and 5 (feedwater line isolation) in TS Table 3.3.2-1:

1. Delete Condition H for LCO 3.3.2 by replacing the condition with the phrase "Not Used."
2. Add the phrase "(SSPS)" to the end of existing Function 4.b, "Automatic Actuation Logic and Actuation Relays."
3. Add the new Function 4.c entitled "Automatic Actuation Logic (MSFIS)."
4. For the new Function 4.c, specify the same applicable modes, required channels, conditions, and allowable value that exist for the current Function 4.b.
5. For the new Function 4.c, specify SR 3.3.2.6 for the required surveillance requirement.
6. Re-number the existing Functions 4.c and 4.d as Functions 4.d and 4.e with no changes to the requirements for these functions.

7. Re-align on the page, but do not change, the applicable modes, required channels, conditions, SRs, and allowable value for existing Function 4.d.(1), which is re-numbered per item 5 above as Function 4.e.(1).
8. Add the phase "(SSPS)" to the end of existing Function 5.a, "Automatic Actuation Logic and Actuation Relays" to be revised Function 5.a.
9. Add the new Function 5.b entitled "Automatic Actuation Logic (MSFIS)."
10. Add the same applicable modes, required channels, and allowable value to the new Function 5.b that exists for the current Function 5.a.
11. For the revised Function 5.a and new Function 5.b, add Mode 3 to the applicable modes with the exponent j, which is a footnote to TS Table 3.3.2-1.
12. For the revised Function 5.a and new Function 5.b, replace Condition H by Condition G.
13. For the new Function 5.b, specify SR 3.3.2.6 for the required surveillance requirement.
14. Re-number the existing Functions 5.b and 5.c as Functions 5.c and 5.d with no changes to the requirements for these functions.

The (1) revised footnote j and (2) addition of the new footnote k, for new Function 5.a and proposed Function 5.b, in Table 3.3.2-12 result from the proposed addition of the main feedwater regulating valves (MFRVs) and MFRV bypass valves (MFRVBVs) to TS 3.7.3, "Main Feedwater Isolation Valves (MFIVs)." These two proposed changes to TS Table 3.3.2-1, involving footnotes j and k, are not addressed in this amendment; they will be addressed in a later amendment that addresses the addition of the MFRVs and MFRVBVs to TS 3.7.3.

For the ESFAS functions listed in TS Table 3.3.2-1, the table lists the following requirements for each function: (1) applicable modes or other specified [operating] conditions when the function is required to be operable, (2) required number of channels or trains of instrumentation of the function that are required to be operable, (3) conditions to be met if the function is inoperable, (4) SRs performed periodically to demonstrate the function is operable, and (5) allowable value for the function. For the proposed changes to existing Function 4.b and 5.a and the addition of new Functions 4.c and 5.b, as described in the 14 items listed above, these requirements will remain the same in this amendment, except for the following:

- For the new Function 4.c, SRs 3.3.2.2 and 3.3.2.4 will be deleted.
- For the revised Function 5.a and new Function 5.b, there is the addition of Mode 3 as an applicable mode with the exponent on Mode 3 being the footnote j.
- For the revised Function 5.a and new Function 5.b, the required condition is changed from Condition H to Condition G.
- For the new Function 5.b, SRs 3.3.2.2, 3.3.2.4, and 3.3.2.14 will be deleted.

- The revision of footnote j, and addition of new footnote k are not addressed in this amendment, as explained above in a previous paragraph.

4.2 Revising Functions 4.b and 5.a and Adding New Functions 4.c and 5.b in Table 3.3.2-1

Functions 4 and 5 in TS Table 3.3.2-1 are for the ESFAS functions for steam line isolation and main feedwater line isolation in response to accidents. The ESFAS instrumentation for these functions initiates the necessary safety systems, based on the values of selected system parameters, to protect the core design limits and the reactor coolant system pressure boundary (RCSPB), and mitigate design basis accidents. Functions 4 and 5 represent the ESFAS instrumentation to detect the system parameters that the steam line or the main feedwater line needs to be isolated to protect the core or the RCSPB or to mitigate accidents involving steam line or feedwater line breaks. As explained by the licensee in its application, the SSPS generates the signal to close either the steam line or feedwater line when either is needed to be isolated, and the MSFIS receives the signal from the SSPS and then automatically actuates to have the MSIVs or MFIVs close to isolate the steam line or main feedwater line.

The licensee has proposed to separate the MSFIS function from the SSPS function by adding (1) the phrase "(SSPS)" to the existing Functions 4.b and 5.a to define the revised Functions 4.b and 5.a, the SSPS function, to provide the signal to the MSFIS to automatically close the MSIVs or MFIVs, and (2) the new Functions 4.c and 5.b to define the MSFIS function that upon receipt of the signal from SSPS actuates to have the valves automatically close. The MSFIS action is to send a signal to the valves which will actuate components in the valves that will close the valves. The revised Functions 4.b and 5.a cover the requirements on the instrumentation and controls in SSPS to generate the SSPS signal to go to the MSFIS to automatically close the MSIVs or MFIVs, and the new Functions 4.c and 5.b cover the requirements on the instrumentation and controls in MSFIS to take the signal from SSPS and automatically generate a signal that is sent to the valves to actuate the valves to close. The ability of the valves to close upon the valve receiving such a signal from MSFIS to close is demonstrated by SRs 3.7.2.2 (MSIVs) and 3.7.3.2 (MFIVs) that require, respectively, that each MSIV and MFIV is required to actuate to the isolation position on an actual or simulated actuation signal. The actuation signal comes from the MSFIS.

In demonstrating that a ESFAS function in Table 3.3.2-1 is operable, the entire pathway of the ESFAS instrumentation from sensing the appropriate system parameter through the signal generation to the actuation of the ESF component (in this case the MSIV or MFIV) must be shown to be able to perform their safety function by the required SRs in the table for the function. The SRs are the requirements related to test, calibration, or inspection to demonstrate that LCO 3.3.2, which requires the ESFAS instrumentation and controls for each function in TS Table 3.3.2-1 are operable, is met for each function. The only part of this pathway not covered in TS Table 3.3.2-1 for steam line and main feedwater isolation is covered in SRs 3.7.2.2 and 3.7.3.2 in the TSs on the actuation of the MSIVs and MFIVs to close by an actual or simulated actuation signal from MSFIS.

Since the ESFAS instrumentation initiates necessary safety systems to protect the core design limits and RCSPB, and to mitigate accidents, then, as required by Criteria 1 and 3 for LCOs in 10 CFR 50.36(d)(2)(ii), both the SSPS and MSFIS functions, if they are to be listed separately, must be in Table 3.3.2-1 for steam line and main feedwater line isolation. The NRC agrees that

(1) designating the revised Functions 4.b and 5.a with the phrase "(SSPS)" has the two ESFAS Functions 4.b and 5.a address only the SSPS part of the automatic actuation of the MSIVs and MFIVs and (2) adding the function "automatic actuation logic (MSFIS)" in the new Functions 4.c and 5.b has the new ESFAS Functions 4.c and 5.b address only the MSFIS part of the automatic actuation of the MSIVs and MFIVs. Based on this, the NRC staff concludes that adding (1) the phrase "(SSPS)" to existing Functions 4.b and 5.a and (2) the new Functions 4.c and 5.b meets 10 CFR 50.36 and, therefore, these proposed TS changes to TS Table 3.3.2-1 are acceptable.

4.3 Instrumentation Requirements for Revised Function 4.b

For revised Function 4.b, the licensee has proposed to keep the current requirements, in Table 3.3.2-1 for the existing Function 4.b, on the applicable modes when the function is required to be operable, required number of channels or trains, required condition to enter if the function is inoperable, required surveillances to periodically demonstrate that the function is operable, and allowable value. Therefore, there is no proposed change to the requirements in TS Table 3.3.2-1 for revised Function 4.b, which is now solely the SSPS and does not contain the MSFIS.

The revised Function 4.b will now refer only to the SSPS part of closing the MSIVs and the new Function 4.c will refer only to the MSFIS part of closing the MSIVs. The licensee is not changing any of the instrumentation and controls in the SSPS in this amendment. Based on restricting the revised Function 4.b to the SSPS and the SSPS remains the same design, the NRC staff agrees with the licensee that the current requirements in Table 3.3.2-1, on the applicable modes, required number of channels or trains, required condition if the function is inoperable, required surveillances, and allowable value, for existing Function 4 remain applicable to the SSPS, and do not have to change for what is now the revised Function 4.b.

4.4 Instrumentation Requirements for New Function 4.c

For the new Function 4.c, "Automatic Actuation Logic (MSFIS)," on the MSFIS part to automatically close the MSIVs, the licensee has proposed to keep the current requirements, in TS Table 3.3.2-1 for existing Function 4.b, on the applicable modes when the function is required to be operable, required number of channels or trains, required condition to enter if the function is inoperable, and allowable value. The licensee has only proposed to change the required surveillances to periodically demonstrate the function is operable; however, no new surveillance is being added to the TSs. Also, the design of the MSFIS is not being changed in this amendment since the proposed modification of the MSFIS in the application will be addressed in a future amendment.

The new Function 4.c refers to the MSFIS instrumentation for the automatic actuation logic to automatically send a signal to the MSIVs to close. Since the design of the MSFIS (which includes two trains) is not being changed and there are no proposed changes to the requirements in TS 3.7.2 on the MSIVs, the NRC staff agrees with the licensee that the current requirements in Table 3.3.2-1, on the applicable modes, required number of channels or trains, required condition if the function is inoperable, and allowable value, do not have to change and the current values continue to meet 10 CFR 50.36. Based on this, the NRC staff further concludes that these current values are acceptable for the new Function 4.c.

For the required surveillances for the new Function 4.c, the licensee proposes to delete the current SRs 3.3.2.2 and 3.3.2.4 for the existing Function 4.b and keep unchanged the current SR 3.3.2.6 for the existing Function 4.b. The current SR 3.3.2.2 is the performance of the actuation logic test and SR 3.3.2.4 is the performance of the master relay test, with the two SRs performed on a 92-day staggered test basis. SR 3.3.2.6 is the performance of the slave relay test on a 92-day surveillance test interval (STI).

In its supplemental letter dated December 18, 2007, the licensee stated that SR 3.3.2.3, also an actuation logic test, is not currently performed on valve controls logic and thus on the MSFIS since the MSFIS is only processing the automatic signal from the SSPS to the MSIVs and MFIVs. SR 3.3.2.2 is the same test as SR 3.3.2.3, although at a different STI, and the licensee's statement about SR 3.3.2.3 not applying to MSFIS would mean that SR 3.3.2.2, the same actuation logic test, would also not apply to MSFIS. This is consistent with the description of SR 3.3.2.2 on page B 3.3.2-46 in the identified changes to the TS 3.3.2 Bases in Attachment III to its supplemental letter dated December 18, 2007. For SR 3.3.2.2, on TS Bases page B 3.3.2-46, it is stated that this SR is only testing the SSPS logic. The extension of the statement about SR 3.3.2.3 in the supplemental letter dated December 18, 2007, to what is true about SR 3.3.2.2 was discussed with licensee in a conference call on February 1, 2008, and the licensee stated that this extension to SR 3.3.2.2 is correct and SR 3.3.2.2 is not required to be performed on MSFIS because it applies only to the SSPS.

Also, in its supplemental letter dated December 18, 2007, the licensee stated that the deletion of SR 3.3.2.4 is based on the master relay test in SR 3.3.2.4 only involving the SSPS logic and not involving the MSFIS logic. Because of this, SR 3.3.2.4 does not apply to the MSFIS function and is, therefore, not required to be performed on MSFIS.

Therefore, the existing SRs 3.3.2.2 and 3.3.2.4 for the existing Function 4.b will remain in the table, but only be applied to the revised Function 4.b or the SSPS part of the ESFAS function to close the main steam lines, which is addressed in Section 4.3 of this SE. Based on this, the NRC staff concludes that the deletion of SRs 3.3.2.2 and 3.3.2.4 from the new Function 4.c is acceptable because the surveillances do not apply to the MSFIS. Based on this conclusion, the NRC staff further concludes that the proposed deletion of SRs 3.3.2.2 and 3.3.2.4 meets 10 CFR 50.36 and, therefore, is acceptable for TS Table 3.3.2-1.

For the new function, the licensee is also proposing to keep the existing SR 3.3.2.6 requirement to perform a slave relay test every 92 days that exists for the current Function 4.b that currently includes both the SSPS and MSFIS instrumentation. The licensee stated that SR 3.3.2.6 remains an appropriate surveillance to be applied to the new Function 4.c. This statement is consistent with the description of SR 3.3.2.6 on page B 3.3-47 of the identified changes to the TS 3.3.2 Bases in Attachment III to the licensee's supplemental letter dated December 18, 2007. The NRC staff does not disagree with keeping the requirement for the new Function 4.c, but having the surveillance only on the MSFIS part of the instrumentation. Based on this conclusion, the NRC staff further concludes that keeping SR 3.3.2.6 for the new Function 4.c meets 10 CFR 50.36 and, therefore, is acceptable for TS Table 3.3.2-1.

4.5 Instrumentation Requirements for Revised Function 5.a

For revised Function 5.a, the licensee has proposed to keep the current requirements, in TS Table 3.3.2-1 for existing Function 5.a, for the required number of channels or trains,

required surveillances to periodically demonstrate the function is operable, and allowable value. The revised Function 5.a will now refer only to the signal generation within the SSPS to automatically close the MFIVs and the new Function 5.b will refer to the automatic actuation logic in the MSFIS to automatically send a signal to the MFIVs for the valves to close. There is no design change to the SSPS because of this amendment. Based on restricting the revised Function 5.a to the signal generation within the SSPS and there being no changes to the SSPS design, the NRC staff agrees with the licensee that the current requirements in TS Table 3.3.2-1, on the required number of channels or trains, required SRs, and allowable value, do not have to change, and the current values are acceptable for the revised Function 5.a.

The requirements are addressed by the licensee in its application and the supplemental letter dated December 18, 2007. For the applicable modes when the function must be operable and the required condition if the function is inoperable, the licensee has proposed the following for the revised Function 5.a:

1. Add Mode 3 to the applicable modes,
2. Include the exponent j , where j is a footnote to TS Table 3.3.2-1, and
3. Replace the Condition H with the existing Condition G and delete Condition H.

For item 1 above, the licensee is expanding the current requirements in TS Table 3.3.2-1 for the existing Function 5.a to be operable in Modes 1 and 2 to include also Mode 3 for revised Function 5.a. By TS 3.7.3 on the MFIVs, the MFIVs are required to be operable and thus capable of performing their safety function of isolating the main feedwater line in Modes 1, 2, and 3. Since the revised Function 5.a is the ESFAS instrumentation and controls to generate the signal in SSPS to isolate the main feedwater line by closing the MFIVs and the MFIVs, by TS 3.7.3 are required to be operable in Mode 3, the revised function must also be required to be operable in Mode 3 to ensure that the valves close in Mode 3 in response to an accident. Based on this, the NRC staff concludes that the proposed extension of the applicable modes to include Mode 3 for revised Function 5.a is necessary, meets 10 CFR 50.36, and is, therefore, acceptable.

For item 2, the revised j does not apply because the revised j is related to the addition of the MFRVs and MFRV bypass valves to TS 3.7.3, and these changes will be addressed in a future amendment.

As addressed in the supplemental letter dated December 18, 2007, the licensee has proposed to have the same exponent j for Mode 2 in the current requirements in TS Table 3.3.2-1 for existing Function 5.a also be used for the new Mode 3. The existing footnote j states the following: "Except when all MFIVs are closed." As stated in the previous paragraph, the MFIVs are required to be operable in Mode 2 and, therefore, the ESFAS function to generate the signal to close the MFIVs must also be operable in Mode 2. However, the current requirements in TS Table 3.3.2-1 restrict the requirement that the ESFAS function only be operable in Mode 2 when at least one of the MFIVs is not closed. If at least one MFIV is not closed, the main feedwater line is not isolated and the ESFAS function is needed to close the MFIVs that are not closed to perform the safety function of isolating the line in response to an accident. If all the MFIVs are closed, then the main feedwater line is isolated and the ESFAS function is not needed to close the MFIVs (no valves are open) to perform the safety function of isolating the

line in response to an accident. Based on this and there being no safety reason not to extend this qualification in Mode 2 to Mode 3, the NRC staff concludes that the proposed addition of the exponent j to Mode 3 for the applicable modes for revised Function 5.a meets 10 CFR 50.36, and is, therefore, acceptable.

For item 3 above, the licensee has proposed to replace the existing Condition H, for the existing Function 5.a when the function is inoperable, with the existing Condition G. The proposed Condition G is not a new condition to TS Table 3.3.2-1 of TS 3.3.2.

Both Conditions G and H are for one train of an ESFAS function being inoperable and for allowing one such train to be bypassed for up to 4 hours for surveillance testing provided the other train is operable. The required actions and CTs for these actions in both conditions are the same except for the following: (1) in Condition G the final required action is for the plant to be in Mode 4 within 36 hours and (2) in Condition H the final required action is for the plant to be in Mode 3. Therefore, the two conditions are the same except that Condition H is for an ESFAS function required to be operable in Modes 1 and 2 (i.e., when the function is inoperable, the required actions must have the plant be required to enter Mode 3 and not be in Modes 1 or 2) and Condition G is for an ESFAS required to be operable in Modes 1, 2, and 3 (i.e., when the function is inoperable, the required actions must have the plant be required to enter Mode 4 and not be in Modes 1, 2, or 3). Other than this, Condition H and Condition G are the same condition. Based on this and that the revised Function 5.a will be required to be operable in Mode 3, the NRC staff concludes that the proposed replacement of Condition H by Condition G for revised Function 5.a is necessary, meets 10 CFR 50.36, and is, therefore, acceptable.

In replacing Condition H with Condition G for the revised Function 5.a, this change results in that there will be no other function in TS Table 3.3.2-1 that has Condition H listed as the required condition to enter if the function is inoperable. Because of this, the licensee has proposed to also delete Condition H from TS 3.3.2 by replacing the condition, required actions, and CTs by the phrase "Not used." The letter H would remain in TS 3.3.2 under the heading "Actions", but the only text given with this condition would be the phrase "Not used." Because replacing Condition H with Condition G removes the only listing of Condition H in TS Table 3.3.2-1, the NRC staff concludes that Condition H should be removed from the listing of conditions under "Actions" in TS 3.3.2 and the proposed replacement of Condition H by the phrase "Not used" does have this effect on TS 3.3.2. Based on this, the NRC staff further concludes that this proposed change is acceptable and meets 10 CFR 50.36, and, therefore, this proposed TS change is acceptable.

4.6 Instrumentation Requirements for New Function 5.b

For the new Function 5.b on the MSFIS function to automatically close the MFIVs, the licensee has proposed to have the same requirements on the applicable modes when the function is required to be operable, required number of trains to be operable, and condition required to entered when the function is inoperable, and the allowable values that were proposed for the revised Function 5.a and addressed in the previous section, Section 4.5, of this Safety Evaluation (SE). The MSFIS has the same number of trains as the SSPS. On the same basis, as discussed in that section of this SE, that the proposed applicable modes, number of channels or trains, conditions, and allowable value are acceptable for the new Function 5.a and because the MSFIS has 2 trains, the NRC staff concludes that these valves are also acceptable for the new Function 5.b and meet 10 CFR 50.36, and are, therefore, acceptable to be in

TS Table 3.3.2-1. This approval includes the footnote j for the exponent to Modes 2 and 3 in the applicable modes for the new Function 5.b. The new footnote k does not apply because this footnote is related to the addition of the MFRVs and MFRV bypass valves to TS 3.7.3 and these changes will be addressed in a future amendment.

For the proposed surveillances that are required to be performed periodically to demonstrate that the new Function 5.b is operable, the licensee proposed that the same surveillances required to be performed for the new Function 4.b would also be required for new Function 5.b. For not including SRs 3.3.2.2 (actuation logic test), 3.3.2.4 (master relay test), and 3.3.2.14 (slave relay test for slave relay K620) of the existing Function 5.a as surveillances for the new Function 5.b on MSFIS, the licensee stated in its December 18, 2007, letter that these surveillances do not apply to the MSFIS. Therefore, on the same basis as discussed in Section 4.4 of this SE that the proposed SR 3.3.2.6 is acceptable for the new Function 4.b, the NRC staff concludes that this surveillance is also acceptable for the new Function 5.b and meets 10 CFR 50.36, and is, therefore, acceptable to be in TS Table 3.3.2-1.

4.7 Re-aligning Requirements for Existing Function 4.d.(1)

On the current TS page 3.3-33, the existing Function 4.d, "steam line pressure," is listed with the following two subset functions: (1) 4.d.(1) low and (2) 4.d.(2) negative rate high. The instrumentation requirements for existing Function 4.d are listed for the subset functions. The listing of the instrumentation requirements, as to applicable modes through allowable value, for the existing Function 4.d.(1) are not aligned opposite the listing of the function on the left-hand-side of TS Table 3.3.2-1, as is true for the other functions listed in the table. The instrumentation requirements for existing Function 4.d.(1) are aligned opposite the existing heading of Function 4.d. The licensee has proposed to move the requirements down the page to align the requirements with the existing Function 4.d.(1) because the requirements apply to the that function. This does not change any of the instrument requirements for the existing Function 4.d.(1). Since the proposed change is strictly administrative in nature to account for the misalignment of the instrument requirements for existing Function 4.d.(1) without changing any of the requirements in TS Table 3.3.2-1 for this function, the NRC staff concludes that these changes are necessary, meet 10 CFR 50.36, and are, therefore, acceptable.

4.8 Re-numbering Existing Functions in TS Table 3.3.2-1

In adding new Functions 4.c and 5.b to TS Table 3.3.2-1, the existing Functions 4.c and 4.d and existing Functions 5.b and 5.c in the table need to be re-numbered. The licensee has proposed to replace (1) existing Functions 4.c and 4.d as re-numbered Functions 4.d and 4.e and (2) existing Functions 5.b and 5.c as re-numbered Functions 5.c and 5.d. In these changes none of the requirements for the re-numbered functions are being changed. Since the proposed changes are an strictly administrative in nature to account for the addition of the new Functions 4.b and 5.c without changing any of the requirements in TS Table 3.3.2-1 for these functions, the NRC staff concludes that these changes are necessary, meet 10 CFR 50.36, and are, therefore, acceptable.

4.9 TS 3.3.2 Conclusions

The proposed changes to the TSs are listed in Section 4.1 of this SE. The evaluation of these TS changes by the NRC staff is given above in Sections 4.2 through 4.8 of this SE. Based on

the conclusions in Section 4.2 through 4.8, the NRC staff further concludes that the proposed changes to the TSs listed in Section 4.1 in this amendment meet 10 CFR 50.36 and are, therefore, acceptable.

The licensee identified a regulatory commitment in Attachment V to its application. The licensee committed to implement the license amendment prior to the startup from refueling outage 16 (RO 16), which is scheduled for the spring of 2008. The implementation of this amendment would be done when the implementation of the future amendments for (1) the MSIV and MFIV valve replacement in RO 16 and (2) the addition of MFRV and MFRV bypass valves to TS 3.7.3. These two future amendments are scheduled to be completed before RO 16 so that the valve replacement can be done in that refueling outage. Based on these two future amendments, the NRC staff concludes that this current amendment can be implemented at the same time these other two amendments are implemented, which is the implementation date in the regulatory commitment, prior to the startup from RO 16. Based on this, the NRC staff concludes that the implementation date in the regulatory commitment is acceptable for this amendment.

4.10 Identified Changes to the TS 3.3.2 Bases

In Attachment III to its letter dated December 18, 2007, the licensee identified changes to the TS 3.3.2 Bases that were associated with the TS changes given in that letter. In the changes shown in Insert B3.3.2-24, the licensee provided text related to the proposed footnotes j and k of TS Table 3.3.2-1 that will be addressed in a later amendment. Therefore, the licensee should consider revising the text in that insert because the revised footnote j and the new footnote k are not addressed in this amendment. Otherwise, the NRC staff does not disagree with the changes to TS 3.3.2 Bases identified in Attachment III to the licensee's letter dated December 18, 2007.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Kansas State official was notified of the proposed issuance of the amendment. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding published in the *Federal Register* on June 19, 2007 (72 FR 33785). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is 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.

Principal Contributor: Jack Donohew

Date: March 3, 2008