

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Richard A. Muench
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February 4, 1998

ET 98-0007

U. S. Nuclear Regulatory Commission
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Washington, D. C. 20555

Reference: 1) Letter dated April 3, 1997, from E. W. Merschoff, NRC to
N. S. Carns, WCNOG

2) Letter ET 97-0050, dated May 15, 1997, from R. A. Muench,
WCNOG to NRC

Subject: Docket No. 50-482: Proposed Revision to Technical
Specification 3/4.2.4, Quadrant Power Tilt Ratio

Gentlemen:

This letter transmits an application for amendment to Facility Operating License No. NPF-42 for Wolf Creek Generating Station (WCGS). This request proposes to revise Technical Specification 3.2.4, Quadrant Power Tilt Ratio, and associated Bases, to clarify the required Actions for the Limiting Condition for Operation (LCO) and other changes consistent with the Technical Specification Conversion application previously submitted by Reference 2. The proposed revisions would:

- (a) Revise the Action for determining QUADRANT POWER TILT RATIO (QPTR) when QPTR is above the LCO limit.
- (b) Revise the completion time for resetting the Power Range Neutron Flux-High Trip Setpoints after QPTR is determined to be above the LCO limit.
- (c) Delete the Actions requiring QPTR to be restored within 24 hours, QPTR to be verified during a return to power operation, resetting the Power Range Neutron Flux-High trip setpoint to less than 55% following a power reduction to 50% RATED THERMAL POWER or below, and Actions for QPTR in excess of 1.09. Other changes to make the QUADRANT POWER TILT RATIO LCO and Actions consistent with those previously submitted by Reference 2 and proposed industry travelers.

This license amendment request will clarify previous concerns identified in Reference 1. These concerns related to a Technical Specification Clarification for Technical Specification 3.2.4 and the NRC belief that our interpretation was nonconservative. Implementation of the changes proposed in this license amendment request eliminate any confusion associated with the Actions required to be taken when QPTR exceeds 1.02.

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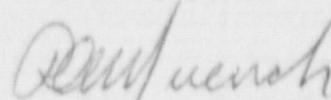
AUDIT 1/1

A Safety Evaluation is provided in Attachment I; a No Significant Hazards Consideration Determination, in Attachment II. Attachment III is the related Environmental Impact Determination. Marked up pages are provided in Attachment IV (for current Technical Specifications and Bases) and in Attachment V (for Improved Technical Specifications and Bases submitted by Reference 2).

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 WCGS Technical Specifications will be fully implemented within 60 days of formal NRC approval.

If you have any questions concerning this matter, please contact me at (316) 364-8831, extension 4034, or Mr. Michael J. Angus, at extension 4077.

Very truly yours,



Richard A. Muench

RAM/jad

Attachments: I - Safety Evaluation
II - No Significant Hazards Consideration Determination
III - Environmental Impact Determination
IV - Proposed Current Technical Specification Change
V - Proposed Improved Technical Specification Change

cc: V. L. Cooper (KDHE), w/a
W. D. Johnson (NRC), w/a
E. W. Merschoff (NRC), w/a
J. F. Ringweld (NRC), w/a
J. C. Stone (NRC), w/a

Classified

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Richard A. Muerch, 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 *Richard A. Muench*
Richard A. Muench
Vice President
Engineering

SUBSCRIBED and sworn to before me this 4th day of February, 1998.

 JULIE A. DALE
Notary Public - State of Kansas
My Appt. Expires 10/20/98

Notary Public
Expiration Date 10/20/98

ATTACHMENT I
SAFETY EVALUATION

Safety Evaluation.

Proposed Changes

This license amendment request proposes to revise Wolf Creek Generating Station (WCGS) Technical Specification 3.2.4, QUADRANT POWER TILT RATIO. The proposed revisions would clarify the required Actions for the Limiting Condition for Operation (LCO) and other changes consistent with the Technical Specification Conversion application previously submitted as part of the WCGS Technical Specification Conversion application via letter ET 97-0050, dated May 15, 1997 and proposed industry travelers to NUREG-1431, Rev. 1, "Standard Technical Specifications, Westinghouse Plants."

Specifically, the proposed changes are:

- Revise the Action for determining QUADRANT POWER TILT RATIO (QPTR) to at least once per 12 hours, instead of once per hour until QPTR is reduced to within limit or THERMAL POWER is reduced to less than 50%.
- Revise the completion time hours for resetting the Power Range Neutron Flux-High trip setpoints from 4 hours after the power reduction following QPTR measurements to 72 hours after QPTR is determined to be outside the limit.
- Delete the Actions (a.3., a.4.) for verifying QPTR to be restored within 24 hours and for identifying and correcting the cause of the out-of-limit condition prior to increasing THERMAL POWER. New required Actions are added to confirm that the Heat Flux Hot Channel Factor and Nuclear Enthalpy Rise Hot Channel Factor is within its limit and to reevaluate the safety analyses and normalize excore detectors.
- Deletion of the Actions for QPTR in excess of 1.09.

The associated Bases section would also be revised to reflect these changes by including relevant details from the applicable Bases sections submitted in the Technical Specification Conversion application.

Background

QPTR is defined by the Technical Specifications (Definition 1.25) as "the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater. With one excore detector inoperable, the remaining three detectors shall be used for computing the average." This calculation looks at the radial flux tilt in the upper part of the core as determined by the four Power Range upper detectors, and at the radial flux tilt in the lower part of the core as determined by the four Power Range lower detectors. The QPTR is the greater of the two flux tilts. The QPTR limit ensures that the gross radial power distribution remains consistent with the design values used in the safety analyses. Precise radial power distribution measurements are made during startup testing, after refueling, and periodically during power operation.

In Inspection Report 50-482/96021, the NRC review of Technical Specification Clarification 026-85 indicated that the clarification provided guidance contrary to Technical Specification requirements and could have resulted in non-compliance. The inspection report states: "Technical Specification Clarification 026-85 allowed increasing power while the quadrant power tilt ratio exceeded a prescribed limit. This clarification involved a change to

Technical Specification 3.2.4.a.4 which prohibited increasing power with the quadrant power tilt ratio greater than the prescribed limit." WCNOG provided additional information in a letter dated January 22, 1997 (WO 97-0017) and concluded that the clarification does not violate nor constitute a change to Technical Specification 3.2.4. The NRC subsequently determined that the wording in the Technical Specifications supported our position, however, the NRC continued to believe that our clarification was non-conservative. In a telecon on May 8, 1997, WCNOG provided information concerning the proposed wording in the Technical Specification Conversion application and indicated that a license amendment request would be considered for the current technical specifications.

Evaluation

The proposed changes to the technical specification requirements for the QPTR are discussed and evaluated individually in the following paragraphs.

1. Requirements for Determining QPTR

The Action to calculate QPTR once per hour until THERMAL POWER was reduced to less than 50% RATED THERMAL POWER (RTP) when QPTR exceeds the LCO requirements would be deleted and replaced by a new requirement to determine QPTR at least once per 12 hours. The required Action to determine QPTR at least once per 12 hours would be performed after reducing THERMAL POWER per required Action a.1. This change represents a reduction in requirements for monitoring and reducing power. With QPTR not within limit, the current Action is to perform a calculation of QPTR at least once per hour until either the QPTR is restored to within limit or THERMAL POWER is reduced to less than 50% RTP. The proposed change would require QPTR to be calculated at least once per 12 hours and continue to reduce THERMAL POWER by at least 3% for each 1% that QPTR exceeds the limit until either QPTR is restored to within its limit or 50% RTP is achieved. The 12 hour frequency is sufficient because, as stated in the NUREG-1431, Rev. 1 Bases, further changes in QPTR would be relatively slow. The once per hour frequency is excessive considering the slow rate of flux change and the potential to divert the attention of control room operators from corrective action with respect to QPTR.

Current Action a.2.b) is revised to make reducing the Power Range Neutron Flux-High trip setpoints into a separate required Action (discussed further in item 2) and to clarify that any required THERMAL POWER reduction be completed within 2 hours after each QPTR determination. The completion time of the Action is revised in order to make it clear if the once per 12 hour QPTR determination specified in the proposed Action a.2. determines that an additional reduction in power is required below the level initially determined by proposed Action a.1, then 2 hours is allowed to complete the additional power reduction. The proposed change also removes confusion between which QPTR determinations apply to subsequent steps in Action a. The proposed change would ensure that the most current QPTR determination applies to the subsequent steps.

The proposed changes would retain the 2 hour requirement to reduce power proportionally to the percent that QPTR exceeds its limit. This would result in a power reduction that provides additional margin to fuel design limits during a flux tilt condition to assure that design limits are not challenged by local flux peaking. These design margins are set conservatively and provide further assurance that operation in accordance with the required Actions would not challenge fuel design limits.

The above changes are consistent with NUREG-1431, Rev. 1, including industry travelers and were included in the WCGS Technical Specification Conversion application.

2. Completion Time for Resetting the Power Range Neutron Flux-High Trip Setpoints

With QPTR not within limit, current Action a.2 requires that THERMAL POWER and the Power Range Neutron Flux-High trip setpoints be reduced. Two hours are currently allowed for power reduction and an additional four hours are allowed for the completion of the setpoint reduction. A completion time of 72 hours to reduce the trip setpoints, as proposed, will allow time to reduce reactor power, perform the required QPTR determination, and permit orderly resetting of the high flux trip channel setpoints. During the trip setpoint change, there is increased potential for human error resulting in a plant transient. Providing additional time should reduce the chances that a human error initiated transient will occur. In addition, the reactor power would be reduced within 2 hours if required; this would provide additional margin to fuel design limits while the setpoint changes were being performed.

A reduction of the Power Range Neutron Flux-High trip setpoints by $\geq 3\%$ for each 1% by which QPTR exceeds 1.00, is a conservative action for protection against the consequences of severe transients with potentially unanalyzed power distributions.

The above changes are included in the WCGS Technical Specification Conversion application and are consistent with changes proposed to NUREG-1431, Rev. 1, by industry travelers.

3. Delete the Actions (a.3., a.4.) for verifying QPTR to be restored within 24 hours and for identifying and correcting the cause of the out-of-limit condition prior to increasing THERMAL POWER

Current required Action a.3., which verifies QPTR to be restored within 24 hours after exceeding the limit or reduce power to less than 50% RTP and to reset the Power Range Neutron Flux-High trip setpoints after a required reduction to less than or equal to 55% RTP, would be deleted. Current required Action a.4., which requires identifying and correcting the cause of the out-of-limit condition prior to increasing THERMAL POWER, would also be deleted.

The proposed change would replace these Actions with the following new Actions:

- a.3. - for QPTR out of limit, including requirements for measuring Heat Flux Hot Channel Factor $F_Q(Z)$ and Nuclear Enthalpy Rise Hot Channel Factor F_{AH}^N within 24 hours after achieving equilibrium conditions from a THERMAL POWER reduction required by Action a.1.
- a.5 - for QPTR out of limit, including requirements to reevaluate the safety analyses and confirm that the results remain valid prior to increasing THERMAL POWER and Power Range Neutron Flux-High trip setpoints above the limits of Action a.1. and a.4.
- a.6 - for QPTR out of limit, including requirements to normalize the excore detectors to restore QPTR to within limit prior to increasing THERMAL POWER above the limit of Action a.1.
- a.7 - after normalizing excore detectors, the Action is required to be performed to measure Heat Flux Hot Channel Factor $F_Q(Z)$ and Nuclear Enthalpy Rise Hot Channel Factor F_{AH}^N within 24 hours after achieving equilibrium conditions not to exceed 48 hours after increasing THERMAL POWER above the limit of Action a.1.

The proposed change focuses on maintaining peaking factors $F_0(Z)$ and F_{AH}^N within limits rather than the QPTR. This is appropriate because QPTR is a monitored parameter that is indicative of peaking factor problems. The proposed change requires verification that $F_0(Z)$ and F_{AH}^N are within limits within 24 hours after achieving equilibrium conditions by performing Surveillance Requirements that can directly measure flux shapes in the core. If $F_0(Z)$ and F_{AH}^N are not within limits, the Conditions for those technical specifications will specify additional required actions. Since the peaking factors are of prime importance, the proposed changes will ensure that the power distribution remains consistent with the initial conditions assumed in the safety analyses.

The proposed change also allows verification of the peaking factors after a power change within 24 hours after achieving equilibrium conditions with THERMAL POWER reduced by Action a.1. Depending on the scenario by which QPTR came to exceed its limit, the time required to (a) achieve equilibrium (steady state) conditions under which flux mapping can be performed, (b) perform the flux map, and (c) analyze the flux map, could exceed 24 hours. A significant fraction of the 24 hour completion time could be required to achieve the equilibrium conditions necessary to begin flux mapping. The proposed delay (i.e., allowing time to achieve equilibrium conditions) is reasonable because when QPTR exceeds its limit, Action a.1 requires a reduction of THERMAL POWER to at least 3% from RTP for each 1% of indicated QPTR greater than 1.00 within 2 hours. This would result in a power reduction that would provide additional margin to fuel design limits during a flux tilt condition to assure that design limits are not challenged by local flux peaking. These design margins are set conservatively and provide further assurance that operation in accordance with the Actions would not challenge fuel design limits.

The proposed changes also would eliminate the requirement to reduce the Power Range Neutron Flux-High trip setpoints to less than or equal to 55% within 4 hours of reaching 50% RTP. This change is acceptable on the basis that the proposed changes would still require the Power Range Neutron Flux-High trip setpoints to be reduced to greater than or equal to 3% below RTP for each 1% of QPTR greater than 1.00 as discussed above. The acceptability of changing the completion time from four hours to 72 hours has previously been discussed.

The above changes are consistent with NUREG-1431, Rev. 1, and proposed industry travelers and were included in the WCGS Technical Specification Conversion application. Some additional changes are identified in Attachment V for the Improved Technical Specifications and have been incorporated into the proposed changes to the current technical specifications. These additional changes are the subject of a proposed traveler and are discussed below.

4. Deletion of the Actions for QPTR in excess of 1.09

Actions involving QPTRs exceeding 1.09 would be deleted. The requirements of Action b. regarding QPTRs in excess of 1.09 due to misalignment of control rods are addressed by the requirements of Specification 3.1.3.2 for ensuring rod group misalignment limits. Action c. regarding QPTRs in excess of 1.09 due to other causes are replaced by the less restrictive requirements of Action a.

Action c. requires that the QPTR be calculated once per hour and that power be reduced to less than 50% RTP within 2 hours and the Power Range Neutron Flux-High trip setpoint be reduced within the next 4 hours. In addition, Action c. requires identification and correction of the cause of the tilt condition and periodic verification that QPTR is within limits during any subsequent ascension to RTP. With the deletion of Action c., the Action a. requirements would be implemented with QPTR limits in excess of 1.09. These actions require (1) a 3% RTP reduction for each 1% of QPTR in excess of 1.00 within 2

hours of determining QPTR and a reduction in flux trip setpoints, (2) that QPTR be calculated only once per 12 hours, and (3) verification of peaking factors prior to and following power ascension and a reevaluation of safety analyses prior to power ascension above the limits determined in Action a.1 and a.4. The requirements of the proposed change are acceptable because (1) the QPTR would be expected to change slowly over time so a less frequent calculation of QPTR would be acceptable, (2) once control room personnel commence a power reduction, in accordance with the proposed changes, the effect of any flux tilt will tend to be mitigated by reducing the flux and establishing greater margin to fuel design limits, and the reduction of power would result in a plant transient that generally would be less severe than the reduction to less than 50% RTP as required by proposed Action c, and (3) the proposed Actions prior to and subsequent to power ascension provide assurance that power operation at or near RTP will be in accordance with the safety analyses.

This proposed change is consistent with NUREG-1431, Rev. 1, and industry travelers that were included in the WCGS Technical Specification Conversion application.

5. Proposed changes to the Improved Technical Specifications (ITS).

Required Action A.6 is revised to add a new Note stating "Required Action A.7 shall be completed whenever Required Action A.6 is performed." to clarify that Required Action A.7 must be completed whenever Required Action A.6 is performed. As discussed in Section 1.3 of the ITS, an ACTIONS Condition remain in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability. Therefore, when Required Action A.6 is completed, QPTR should be back within limit and the LCO may be exited. Adding this Note ensures that the peaking factors are verified after normalization of the excore detectors.

Additionally, Required Action A.6 is revised to state "Normalize excore detectors to restore QPTR to within limits." NUREG-1431, Rev. 1, Required Action A.5 (ITS Required Action A.6) originally stated "Calibrate excore detectors to eliminate tilt." A proposed traveler was generated changing the wording of this Action and the proposed traveler was subsequently revised after submittal of the conversion application. Required Action A.5 in NUREG-1431, Rev. 1, states that the excore detectors shall be calibrated to show zero QPTR. Normalization of QPTR to near 1.00 can be accomplished by calibration of the Nuclear Instrumentation System (NIS) or through the use of constants to apply to indicated NIS currents. Thus, the absence of a tilt will manifest itself as QPTR=1.00 rather than zero since quadrant power tilt is expressed as a ratio. Also, from a literal read standpoint the tilt cannot be restored to exactly 1.00, therefore, Required Action A.6 is modified to "Normalize excore detectors to restore QPTR to within limit."

An industry traveler has been generated for these changes and been approved by the Westinghouse Owners Group MERITS mini-group.

Conclusion

Based on the above discussions and the No Significant Hazards Consideration Determination presented in Attachment II, the proposed changes do not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Updated Safety Analysis Report; or create a possibility for an accident or malfunction of a different type than any previously evaluated in the safety analyses report; or reduce the margin of safety as defined in the basis for any technical specification. Therefore, the proposed changes do not adversely

affect, or endanger the health or safety of the general public or involve a significant safety hazard.

ATTACHMENT II

NO SIGNIFICANT HAZARD& CONSIDERATION DETERMINATION

No Significant Hazards Consideration Determination

Proposed Changes

This license amendment request proposes to revise Wolf Creek Generating Station (WCGS) Technical Specification 3.2.4, Quadrant Power Tilt Ratio. The proposed revisions would clarify the required Actions for the Limiting Condition for Operation (LCO) and other changes consistent with the Technical Specification Conversion application previously submitted as part of the WCGS Technical Specification Conversion application via letter ET 97-0050, dated May 15, 1997 and proposed industry travelers to NUREG-1431, Rev. 1, "Standard Technical Specifications, Westinghouse Plants."

Specifically, the proposed changes are:

- Revise the Action for determining QUADRANT POWER TILT RATIO (QPTR) to at least once per 12 hours, instead of once per hour until QPTR is reduced to within limit or THERMAL POWER is reduced to less than 50%.
- Revise the completion time to 72 hours for resetting the Power Range Neutron Flux-High trip setpoints after QPTR is determined to be above the LCO limit.
- Delete the Actions (a.3., a.4.) for verifying QPTR to be restored within 24 hours and for identifying and correcting the cause of the out-of-limit condition prior to increasing THERMAL POWER. New required Actions are added to confirm that the Heat Flux Hot Channel Factor and Nuclear Enthalpy Rise Hot Channel Factor is within its limit and to re-evaluate the safety analyses and normalize excore detectors.
- Deletion of the Actions for QPTR in excess of 1.09.

The associated Bases section would also be revised to reflect these changes by including relevant details from the applicable Bases sections submitted in the Technical Specification Conversion application.

Application of Standards

The following Standards identified in 10 CFR 50.92 have been used to determine whether the proposed changes involve a Significant Hazards Consideration. Each of the identified proposed changes is evaluated against the three Standards.

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

1. Requirements for Determining QPTR

The Action to calculate QPTR once per hour until THERMAL POWER was reduced to less than 50% RATED THERMAL POWER (RTP) when QPTR exceeds the LCO requirements would be deleted and replaced by a new requirement to determine QPTR at least once per 12 hours.

The proposed change involves only the compensatory measures to be taken should the QPTR be outside its limit. The frequency with which QPTR is calculated is not assumed in the initiating events for any accident previously evaluated. In addition, the change does not involve any new operating activities or hardware change. Therefore, the proposed change would not significantly increase the probability of an accident previously evaluated.

Once THERMAL POWER has been reduced appropriately in proportion to the amount that QPTR exceeds 1.00, any additional change would be sufficiently slow that a 12-hour interval for recalculating QPTR will provide an adequate level of protection. Therefore, the proposed change will not significantly increase the consequences of any accident previously evaluated.

2. Completion time for Resetting the Power Range Neutron Flux-High Trip Setpoints

The proposed change to allow 72 hours for resetting the Power Range Neutron Flux-High trip setpoints involves only the compensatory measures to be taken should the QPTR be outside its limit. These compensatory measures are not assumed in the initiating events for any accident previously evaluated. The proposed actions recognize that the required reduction in power (3% for each 1% of indicated QPTR in excess of 1.00) provide adequate margin for fuel design limits so that consequences of assumed accidents would not be significantly affected. Therefore, the proposed change will not adversely affect the probability or consequences of any accident previously evaluated. Further, by permitting more time to perform resetting the trip setpoints, the chances of a transient may be reduced.

3. Delete of the Actions (a.3., a.4.) for verifying QPTR to be restored within 24 hours and for identifying and correcting the cause of the out-of-limit condition prior to increasing THERMAL POWER

The proposed changes would delete current Actions a.3. and a.4. and add new Actions for QPTR out of limit including requirements for measuring $F_0(Z)$ and F_{AH}^N prior to and following a return to power and performing safety analyses to verify safety requirements are met prior to increasing power above the limits of Action a.1. The proposed changes involve only the compensatory measures to be taken should the QPTR be outside its limit. These compensatory measures are not assumed in the initiating events for any accident previously evaluated. Therefore, the proposed change will not affect the probability or consequences of any accident previously evaluated.

4. Deletion of the Actions for QPTR in excess of 1.09

The proposed change would delete the required Actions for QPTR in excess of 1.09 and Actions for QPTR in excess of 1.02 are followed for all instances where QPTR exceeds 1.02. The proposed change involves only the compensatory measures to be taken should the QPTR be outside its limit. These compensatory measures are not assumed in the initiating events for any accident previously evaluated. The proposed actions recognize that the required reduction in power (3% for each 1% of indicated QPTR in excess of 1.00) provide adequate margin for fuel design limits so that consequences of assumed accidents would not be significantly affected. Therefore, the proposed change will not affect the probability or consequences of any accident previously analyzed.

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

1. Requirements for Determining QPTR

The proposed change for calculating QPTR once every 12 hours does not involve a physical alteration to the plant or change the method by which any safety-related system performs its function. The manner in which the plant would be operated would not be altered. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

2. Completion Time for Resetting the Power Range Neutron Flux-High Trip Setpoints

The proposed change to allow 72 hours for resetting the Power Range Neutron Flux-High trip setpoints do not involve a permanent physical alteration to the plant; no new or different kinds of equipment will be installed. The change would not alter the manner in which the plant would be operated only the timing of actions that provide potential mitigation of accidents. Thus, the change would not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Delete the Actions (a.3., a.4.) for verifying QPTR to be restored within 24 hours and for identifying and correcting the cause of the out-of-limit condition prior to increasing THERMAL POWER

The proposed changes would delete current Actions a.3. and a.4. and add new Actions for QPTR out of limit including requirements for measuring $F_0(Z)$ and F_{AH}^N prior to and following a return to power and performing safety analyses to verify safety requirements are met prior to increasing power above the limits of Action a.1. The proposed changes do not involve a physical alteration to the plant; no new or different kinds of equipment would be installed. The changes would not alter the manner in which the plant would be operated only the timing of actions that provide potential mitigation of accidents. Thus, the changes would not create the possibility of a new or different kind of accident from any accident previously evaluated.

Deletion of the Actions for QPTR in excess of 1.09

The proposed change would delete the required Actions for QPTR in excess of 1.09 and Actions for QPTR in excess of 1.02 are followed for all instances where QPTR exceeds 1.02. The proposed change does not involve a physical alteration to the plant or changes in the way in which the plant is operated. The proposed change involves only the compensatory measures to be taken should QPTR be outside its limit. The assumptions of the accident analyses are unaffected by the proposed change. No new permutations or event initiators are introduced by the proposed alternate methods of dealing with QPTRs in excess of 1.09. Therefore, there is no possibility of a new or different kind of accident from any accident previously evaluated.

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

1. Requirements for Determining QPTR

The proposed change for calculating QPTR once every 12 hours does not change any accident analysis assumptions, initial conditions or results. The proposed change will continue to ensure that the plant is maintained in a safe condition while QPTR is in excess of its limit. Additionally, calculating QPTR once per 12 hours as opposed to every hour while QPTR is in excess of its limit would avoid the diversion of personnel resources from corrective actions with regard to meeting the LCO. Therefore, the proposed change will not involve a significant reduction in any margin of safety.

2. Completion Time for Resetting the Power Range Neutron Flux-High Trip Setpoints

The proposed change to allow 72 hours for resetting the Power Range Neutron Flux-High trip setpoints will continue to ensure that the plant is maintained in a safe condition within the envelope of the safety analyses while QPTR is in excess of its limit. The proposed actions recognize that the required reduction in power (3% for each 1% of indicated QPTR in excess of 1.00) provide adequate margin for fuel design limits so that consequences of assumed

accidents would not be significantly affected. Therefore, the proposed change will not involve a significant reduction in any margin of safety.

3. Delete the Actions (a.3., a.4.) for verifying QPTR to be restored within 24 hours and for identifying and correcting the cause of the out-of-limit condition prior to increasing THERMAL POWER

The proposed changes would delete current Actions a.3. and a.4. and add new Actions for QPTR out of limit including requirements for measuring $F_0(Z)$ and F_{AH}^N prior to and following a return to power and performing safety analyses to verify safety requirements are met prior to increasing power above the limits of Action a.1. The proposed changes will continue to ensure that the plant is maintained in a safe condition within the envelope of the safety analysis while QPTR is in excess of its limit. Therefore, the proposed changes will not involve a significant reduction in any margin of safety.

4. Deletion of the Actions for QPTR in excess of 1.09

The proposed change would delete the required Actions for QPTR in excess of 1.09 and Action for QPTR in excess of 1.02 are followed for all instances where QPTR exceeds 1.02. The proposed change will continue to ensure that the plant is maintained in a safe condition within the envelope of the safety analyses while QPTR is in excess of its limit. While different actions are taken in response to a QPTR in excess of 1.09, the proposed change will assure that accident analyses assumptions continue to be met. Therefore, the proposed changes will not involve a significant reduction in any margin of safety.

Conclusions

Based on the above discussions, it has been determined that the requested technical specification revisions do not involve a significant increase in the probability of consequences of an accident or other adverse conditions 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. Therefore, 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

None of the proposed changes involves a change to the facility or operating procedures that 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 relate to Actions associated with QPTR exceeding its limit of 1.02. These changes have no relation to occupational radiation exposure, either individual or cumulative.

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.