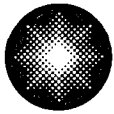


James A. Spina
Vice President

Calvert Cliffs Nuclear Power Plant, Inc.
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410.495.4455
410.495.3500 Fax



Constellation Energy
Generation Group

May 12, 2006

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Response to Request for Additional Information Regarding Elimination of Core
Alterations Technical Specification Actions

REFERENCES:

- (a) Letter from G. Vanderheyden (CCNPP) to Document Control Desk (NRC), dated June 7, 2005, License Amendment Request: Eliminate Use of the Term CORE ALTERATIONS in the Technical Specifications
- (b) Letter from P. D. Milano (NRC) to J. A. Spina (CCNPP), dated March 30, 2006, Request for Additional Information Regarding Elimination of Core Alterations Technical Specification Actions (TAC Nos. MC7330 and MC7331)

Reference (a) submitted a request to eliminate the use of the term CORE ALTERATIONS in the Technical Specifications. Reference (b) requested additional information needed to complete the Nuclear Regulatory Commission (NRC) review of the proposed change. Our response to Reference (b) is contained in Attachment (1). Note that this information does not change the No Significant Hazards determination or the Environmental Consideration contained in Reference (a).

A001

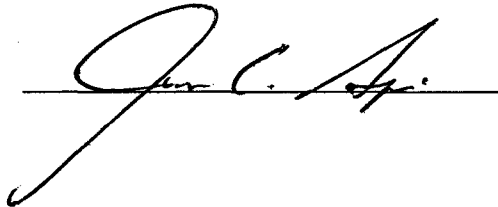
Should you have questions regarding this matter, please contact Mr. L. S. Larragoite at (410) 495-4922.

Very truly yours,



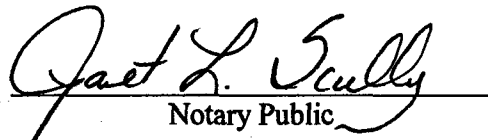
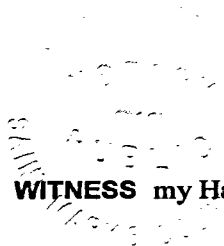
STATE OF MARYLAND :
 : TO WIT:
COUNTY OF CALVERT :

I, James A. Spina, being duly sworn, state that I am Vice President - Calvert Cliffs Nuclear Power Plant, Inc. (CCNPP), and that I am duly authorized to execute and file this License Amendment Request on behalf of CCNPP. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other CCNPP employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.



Subscribed and sworn before me, a Notary Public in and for the State of Maryland and County of St. Mary's, this 12th day of May, 2006.

WITNESS my Hand and Notarial Seal:



Notary Public

My Commission Expires:

March 25, 2007
Date

JAS/PSF/bjd

Attachment: (1) Request for Additional Information Regarding Elimination of Core Alterations Technical Specification Actions

cc: P. D. Milano, NRC
S. J. Collins, NRC

Resident Inspector, NRC
R. I. McLean, DNR

ATTACHMENT (1)

**REQUEST FOR ADDITIONAL INFORMATION REGARDING
ELIMINATION OF CORE ALTERATIONS TECHNICAL
SPECIFICATION ACTIONS**

ATTACHMENT (1)

REQUEST FOR ADDITIONAL INFORMATION REGARDING ELIMINATION OF CORE ALTERATIONS TECHNICAL SPECIFICATION ACTIONS

NRC Question:

1. *In the application, the licensee proposes changes to TS Sections 1.1, 3.3.7, 3.8.2, 3.8.5, 3.8.8, 3.8.10, 3.9.1, 3.9.2, 3.9.3, 3.9.4, and 3.9.6. Further, the licensee stated that these TS requirements impose an operational burden with no corresponding safety benefit and that the term unnecessarily complicates plant operations.*

Discuss and provide details as specific to each TS section proposed to be revised, of the operational burdens that have been experienced because of the term CORE ALTERATIONS. In addition, describe the benefits that would be gained, specific to each proposed change, from elimination of the term.

CCNPP Response:

Most of these Technical Specification (TS) only require the suspension of CORE ALTERATIONS if the equipment covered by the TS becomes inoperable. Suspending CORE ALTERATIONS has no effect on the initial conditions or mitigation of any design basis accident or transient and these requirements impose an operational administrative burden with no corresponding safety benefit. Note that for all TSs where the removal of the term CORE ALTERATIONS is proposed, there is a requirement to suspend movement of recently irradiated fuel assemblies. This requirement addresses the safety issue associated with movement of fuel as described in Reference (1).

In general, when preparing to perform CORE ALTERATIONS, operator attention is diverted from other more safety significant activities to perform administrative duties associated with CORE ALTERATIONS. We estimate the burden to verify TS conditions are met is approximately 10 man-hours each time we prepare for CORE ALTERATION activities. Imposition of these TS controls during CORE ALTERATIONS also requires that maintenance and testing (including Surveillance Testing) be moved to times when CORE ALTERATION activities are not being performed. This compresses the available time to perform the work and can result in work being performed while the plant is in safe, but less optimal, configurations (i.e., refueling pool water level). Reference (1) describes the TSs and associated accident analyses as related to this proposed change. The effect of the proposed change is described below for each TS.

1.1 – Definition of CORE ALTERATION

This TS is the definition of CORE ALTERATIONS and is proposed to be removed. It does not have any actions or surveillances. Therefore, by itself, it has no benefit or burden. However, it is used in the TS as described below.

3.3.7 – Containment Radiation Signal

The term CORE ALTERATIONS is used in the Applicability section of this TS. Therefore, prior to performing CORE ALTERATIONS the containment radiation signal channels must be operable as described in the LCO. This imposes an administrative burden on the operators who have to verify that the channels are operable. This can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. In addition, if one of the channels should become inoperable for some reason during CORE ALTERATIONS, then all CORE ALTERATIONS must be stopped, even though they are not an accident initiator and stopping CORE ALTERATIONS is not credited in the safety analyses. The administrative burden of tracking operable equipment and responding to the loss of that equipment is not justified for an activity that has no impact on the safety analyses.

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REQUEST FOR ADDITIONAL INFORMATION REGARDING ELIMINATION OF CORE ALTERATIONS TECHNICAL SPECIFICATION ACTIONS

3.8.2 – AC Sources – Shutdown

This TS requires that CORE ALTERATIONS be suspended if the required AC power sources are determined to be inoperable. The term CORE ALTERATIONS is not included in the Applicability portion of the TS. Therefore, the AC power sources are not required to be operable during CORE ALTERATIONS. However, if CORE ALTERATIONS are being performed during Mode 5 or 6 (the Applicability for this TS), they must be suspended if the required AC power source is determined to be inoperable. Again, this can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. Operators have to track the operability of equipment that is not needed during CORE ALTERATIONS which is purely an administrative function. The administrative burden of tracking operable equipment and responding to the loss of that equipment is not justified for an activity that has no impact on the safety analyses.

3.8.5 – DC Sources – Shutdown

This TS requires that CORE ALTERATIONS be suspended if the required DC power sources are determined to be inoperable. The term CORE ALTERATIONS is not included in the Applicability portion of the TS. Therefore, the DC power sources are not required to be operable during CORE ALTERATIONS. However, if CORE ALTERATIONS are being performed during Mode 5 or 6 (the Applicability for this TS), they must be suspended if the required DC power source is determined to be inoperable. Again, this can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. Operators have to track the operability of equipment that is not needed during CORE ALTERATIONS which is purely an administrative function. The administrative burden of tracking operable equipment and responding to the loss of that equipment is not justified for an activity that has no impact on the safety analyses.

3.8.8 – Inverters – Shutdown

This TS requires that CORE ALTERATIONS be suspended if the required inverters are determined to be inoperable. The term CORE ALTERATIONS is not included in the Applicability portion of the TS. Therefore, the inverters are not required to be operable during CORE ALTERATIONS. However, if CORE ALTERATIONS are being performed during Mode 5 or 6 (the Applicability for this TS), they must be suspended if the required inverters are determined to be inoperable. Again, this can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. Operators have to track the operability of equipment that is not needed during CORE ALTERATIONS which is purely an administrative function. The administrative burden of tracking operable equipment and responding to the loss of that equipment is not justified for an activity that has no impact on the safety analyses.

3.8.10 – Distribution Systems – Shutdown

This TS requires that CORE ALTERATIONS be suspended if the required distribution systems are determined to be inoperable. The term CORE ALTERATIONS is not included in the Applicability portion of the TS. Therefore, the distribution systems are not required to be operable during CORE ALTERATIONS. However, if CORE ALTERATIONS are being performed during Mode 5 or 6 (the Applicability for this TS), they must be suspended if the required distribution systems are determined to be inoperable. Again, this can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. Operators have to track the operability of equipment that is not needed during CORE ALTERATIONS

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REQUEST FOR ADDITIONAL INFORMATION REGARDING ELIMINATION OF CORE ALTERATIONS TECHNICAL SPECIFICATION ACTIONS

which is purely an administrative function. The administrative burden of tracking operable equipment and responding to the loss of that equipment is not justified for an activity that has no impact on the safety analyses.

3.9.1 – Boron Concentration

This TS requires that CORE ALTERATIONS be suspended if the required boron concentration is not maintained. The term CORE ALTERATIONS is not included in the Applicability portion of the TS. Therefore, the boron concentration is not required to be maintained during CORE ALTERATIONS. However, if CORE ALTERATIONS are being performed during Mode 6 (the Applicability for this TS), they must be suspended if the required boron concentration is not maintained. Again, this can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. Operators have to track a boron concentration that is not needed during CORE ALTERATIONS, which is purely an administrative function. The administrative burden of tracking the boron concentration is not justified for an activity (CORE ALTERATIONS) that has no impact on the safety analyses.

3.9.2 – Nuclear Instrumentation

This TS requires that CORE ALTERATIONS be suspended if the required nuclear instrumentation is determined to be inoperable. The term CORE ALTERATIONS is not included in the Applicability portion of the TS. Therefore, the nuclear instrumentation is not required to be operable during CORE ALTERATIONS. However, if CORE ALTERATIONS are being performed during Mode 6 (the Applicability for this TS), they must be suspended if the required nuclear instrumentation is determined to be inoperable. Again, this can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. Operators have to track the operability of equipment that is not needed during CORE ALTERATIONS which is purely an administrative function. The administrative burden of tracking operable equipment and responding to the loss of that equipment is not justified for an activity that has no impact on the safety analyses.

3.9.3 – Containment Penetrations

The term CORE ALTERATIONS is used in the Applicability section of this TS. Therefore, prior to performing CORE ALTERATIONS the containment penetrations must be in the status described in the LCO. This imposes an administrative burden on the operators who have to verify that the containment penetrations are in the required status. We estimate that establishing containment closure in accordance with this TS requires approximately 15 man-hours in addition to the 10 man-hours required to prepare for CORE ALTERATION activities in general. This creates an additional operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. In addition, if one of the penetrations should be found not in the correct status for some reason during CORE ALTERATIONS, then all CORE ALTERATIONS must be stopped, even though they are not an accident initiator and stopping CORE ALTERATIONS is not credited in the safety analyses. The administrative burden of tracking operable equipment and responding to the loss of that equipment is not justified for an activity that has no impact on the safety analyses.

3.9.4 – SDC and Coolant Circulation – High Water Level

The term CORE ALTERATIONS is used as a restriction in the LCO Note that allows removal of the shutdown cooling pumps from operation for a period of time. This is a plant specific Note, based on plant design to allow work to be performed on a common system during Mode 6. The Note requirement

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REQUEST FOR ADDITIONAL INFORMATION REGARDING ELIMINATION OF CORE ALTERATIONS TECHNICAL SPECIFICATION ACTIONS

imposes an administrative burden on the operators who have to verify that CORE ALTERATIONS have been suspended. This can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. The administrative burden of tracking the status of CORE ALTERATIONS is not justified for an activity that has no impact on the safety analyses.

3.9.6 – Refueling Pool Water Level

The term CORE ALTERATIONS is used in the Applicability section of this TS. Therefore, prior to performing any CORE ALTERATIONS the refueling pool water level must be as described in the LCO. This imposes an administrative burden on the operators who have to verify that the water level meets the LCO requirements. This can create an operational burden by diverting the operator's attention from safety significant issues to an administrative control that is not credited in the accident analyses. In addition, if we determine that the water level has changed and we no longer meet the TS LCO during any CORE ALTERATION, then all CORE ALTERATIONS must be stopped. Although the refueling pool water level is credited in the safety analysis for a fuel handling incident while moving irradiated fuel assemblies, it is not credited for other CORE ALTERATIONS. The proposed TS would still require the necessary refueling pool water level during movement of irradiated fuel assemblies. The administrative burden of tracking water levels and responding to a change in the water level is not justified for an activity that has no impact on the safety analyses.

NRC Question:

2. *Describe the procedural changes and operator training that will [be] performed because of the proposed TS changes, which will ensure that shutdown margin will be maintained during refuel operations.*

CCNPP Response:

The proposed change to remove the term CORE ALTERATIONS from the TS has no effect on shutdown margin. Shutdown margin during refueling is established by boron concentration and is high enough that there is a 5% shutdown margin. There are conservative assumptions on enrichment, fuel placement, and moderation used to determine the shutdown boron concentration. The shutdown margin boron concentration calculations contain no credit for any administrative controls associated with CORE ALTERATIONS.

There are no procedural changes identified that change the manner in which we maintain an adequate shutdown margin during Modes 5 and 6. Therefore, there are no operator training changes needed. Operator training continues to address the maintenance of an adequate shutdown margin and the appropriate response to a change in shutdown margin.

NRC Question:

3. *Confirm that the proposed changes will not impact TS sections not included in this application and the safe operation of the facility.*

CCNPP Response:

In Mode 6, there are a limited number of systems required to be operable in accordance with the TS. Since CORE ALTERATIONS are not an accident initiator and there are no accident assumptions concerning the control of CORE ALTERATIONS, there is no impact on other TS not included in this application.

ATTACHMENT (1)

REQUEST FOR ADDITIONAL INFORMATION REGARDING ELIMINATION OF CORE ALTERATIONS TECHNICAL SPECIFICATION ACTIONS

The term CORE ALTERATION does not appear in Title 10 of the Code of Federal Regulations or in the Standard Review Plan. Since CORE ALTERATIONS only occur when the reactor vessel head is removed, it only applies in Mode 6. There are only two Design Basis Events (DBEs) considered during Mode 6 for PWRs, a fuel handling incident and a boron dilution event. Since a fuel handling incident is initiated by the dropping of a recently irradiated fuel assembly, suspension of CORE ALTERATIONS (except for movement of a recently irradiated fuel assembly) will not prevent the initiation or mitigation of a fuel handling incident. Note that for all TSs where removal of the term CORE ALTERATIONS from the Actions is proposed, there is a requirement to suspend movement of recently irradiated fuel assemblies. The second analyzed DBE is a boron dilution event. The event is mitigated by stopping the dilution. Since the dilution event analysis assumes the most adverse conditions for the fuel and control rods, CORE ALTERATIONS have no effect on the initial conditions or mitigation of a boron dilution event.

Therefore, with the exception of suspending movement of recently irradiated fuel assemblies, there are no accidents or transients that are initiated by, or mitigation affected by, suspension of CORE ALTERATIONS. All required Actions that currently require suspension of CORE ALTERATIONS also require suspension of the movement of recently irradiated fuel, therefore, suspension of CORE ALTERATIONS provide no safety benefit and the term can be removed from the TS without impact on the safe operation of the facility.

REFERENCE

- (1) Letter from G. Vanderheyden (CCNPP) to Document Control Desk (NRC), dated June 7, 2005, License Amendment Request: Eliminate Use of the Term CORE ALTERATIONS in the Technical Specifications