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Constellation Energy
Generation Group

November 27, 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
Reply to a Notice of Violation; EA-06-198 – NRC Inspection Report Nos. 50-317/06-012; 50-318/06-012

REFERENCES:

(a) Letter from Mr. B. E. Holian (NRC) to Mr. J. A. Spina (CCNPP), dated September 8, 2006, Calvert Cliffs Nuclear Power Plant - NRC Inspection Report 50-317/06-012; 50-318/06-012; Preliminary White Finding

(b) Letter from Mr. S. J. Collins (NRC) to Mr. J. A. Spina (CCNPP), dated October 27, 2006, Final Significance Determination for a White Finding and Notice of Violation (NRC Inspection Report 50-317/06-012; 50-318/06-012-Calvert Cliffs Nuclear Power Plant)

This letter provides Calvert Cliffs Nuclear Power Plant's response to References (a) and (b), which identified a Notice of Violation associated with a white finding. This Notice of Violation involved a failure to establish and ensure an adequate trip setpoint for the electrical circuit breaker that supplies the 1A Emergency Diesel Generator essential support loads. The response to this Notice of Violation is provided in Attachment (1).

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

Very truly yours,

JAS/ALS/bjd

Attachment: (1) Reply to a Notice of Violation; EA-06-198 NRC Inspection Report 50-317(318)/06-012; Violation 06-012-01

cc: P. D. Milano, NRC
S. J. Collins, NRC
Resident Inspector, NRC
R. I. McLean, DNR
T. R. Quay, NRC
R. J. Conte, NRC

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ATTACHMENT (1)

REPLY TO A NOTICE OF VIOLATION; EA-06-198

NRC INSPECTION REPORT 50-317(318)/06-012; VIOLATION 06-012-01

Calvert Cliffs Nuclear Power Plant, Inc.
November 27, 2006

ATTACHMENT (1)

REPLY TO A NOTICE OF VIOLATION; EA-06-198
NRC INSPECTION REPORT 50-317(318)/06-012; VIOLATION 06-012-01

10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program.

Contrary to the above, since 1996 when Calvert Cliffs modified the on-site electrical distribution design by installing a new 1A emergency diesel generator (EDG), the licensee failed to ensure that design control measures provided for verifying or checking the adequacy of the design. Specifically, calculation D-E-94-001, dated August 26, 1994, did not account for all the loads that can simultaneously start after an undervoltage event when establishing the short-term over-current trip setting for [the] *electrical circuit breaker* [feeding] *1MCC123, the electrical supply for the EDG support systems. In addition, neither adequate design reviews, alternate calculations, nor suitable testing was done to identify that the over-current trip setting was incorrect.*

REASON FOR THE VIOLATION

As stated above, the subject violation was issued because Calvert Cliffs (CCNPP) failed to ensure that design control measures provided for verifying or checking the adequacy of the design associated with the 1996 installation of the 1A EDG. The root cause investigation performed to address this issue concluded that the root cause was a lack of questioning attitude by an Appendix B supplier (vendor) in August, 1994 which was not discovered in CCNPP's Owner Acceptance process, which was also performed in August, 1994. In particular, the vendor's assumption for the protective relay setpoint did not encompass all conditions which the protective relay would experience. This permitted some design conditions to exceed the setpoint assumption and result in the breaker tripping.

A contributing cause was a lack of questioning attitude when CCNPP reviewed the vendor's calculation. Although the vendor listed their assumption in the calculation, CCNPP's review did not question the adequacy of the assumption.

Another contributing cause was a lack of questioning attitude regarding the scope of post-modification testing. During post-modification testing, the 1A EDG electrical distribution system was not tested to its highest possible currents. In particular, 1A EDG load sequencing tests did not require loading all loads onto the 1A EDG. If all loads had been started, this issue would have been detected during system testing in 1996.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND RESULTS ACHIEVED

The following actions have been taken to address the cause of this violation and prevent future occurrences.

1. All affected plant components' (Societe Alsacienne De Constructions Mecaniques De Mulhouse [SACM] diesel generators) short-time overcurrent trip setpoints, have been corrected.

2. The vendor has been notified to ensure this issue is included in their corrective action program.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

1. Training will be provided to engineers on owner acceptance review expectations regarding Vendor Design Bases/Assumption Verification.

2. Training will be provided to identify when Engineering Test Procedures are required for post-modification testing. The training will include guidance for preparation and criteria of Engineering Test Procedures.

3. Calvert Cliffs will evaluate the safety-related 480V bus feeder breakers and safety-related MCC feeder breakers to ensure adequate margin exists between the feeder breaker overcurrent trip setpoint and the maximum design bases inrush current.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Calvert Cliffs is currently in compliance with 10 CFR Part 50, Appendix B Criterion III, "Design Control" with regard to ensuring that design control measures provide for verifying or checking the adequacy of design. The root cause of the subject issue is considered to be a latent design error due to the lack of questioning attitude associated with the design assumption in the calculation. Although a lack of questioning attitude by a vendor resulted in an inadequate protective relay setpoint, this is considered to be a special case. The SACM MCCs are significantly different than the other plant MCCs. The SACM MCCs have a large load capability, have multiple large loads that start simultaneously, and have high efficiency motors which require additional inrush current above other plant motors. The assumption used by the vendor is valid for other situations. Therefore, the vendor did not fully comprehend the special case in the SACM MCC design. Therefore, this is not considered symptomatic of a likely potential to affect other systems, structures, components, or processes.

Corrective steps have been taken as indicated above. The corrective steps indicated above that have not been taken will be completed in a timely manner, commensurate with the safety significance of the issue. An effectiveness review is planned to verify that the corrective steps were effective.