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CALVERT CLIFFS
NUCLEAR POWER PLANT

June 21, 2010

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 1; Docket No. 50-317
Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01

REFERENCES:

(a) NRC Generic Letter 2008-01, dated January 11, 2008, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems

(b) Letter from Mr. D. V. Pickett (NRC) to Mr. G. H. Gellrich (CCNPP), dated January 8, 2010, Calvert Cliffs Nuclear Power Plant Unit Nos. 1 and 2-Closeout of Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (TAC Nos. MD7807 and MD7808)

(c) Letter from Mr. Glenn T. Dentel (NRC) to Mr. G. H. Gellrich (CCNPP), dated May 5, 2010, Calvert Cliffs Nuclear Power Plant-NRC Integrated Inspection Report 05000317/2010002 and 05000318/2010002

(d) Letter from Mr. J. A. Spina (CCNPP) to Document Control Desk (NRC), dated October 10, 2008, Three-Month Supplemental Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"

(e) Letter from Mr. M. G. Kowal (NRC) to Mr. J. A. Spina (CCNPP), dated August 4, 2008, Calvert Cliffs Nuclear Power Plant Unit 2 Re: Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Proposed Alternative Course of Action (TAC No. MD7808)

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(f) Letter from Mr. T. E. Trepanier (CCNPP) to Document Control Desk (NRC), dated June 12, 2009, Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01

(g) Letter from Mr. J. A. Spina (CCNPP) to Document Control Desk (NRC), dated October 14, 2008, Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"

The Nuclear Regulatory Commission (NRC) issued Generic Letter 2008-01 (Reference a) to request that each licensee evaluate the licensing basis, design, testing, and corrective actions for the Emergency Core Cooling Systems, Decay Heat Removal System, and Containment Spray System to ensure that gas accumulation is maintained less than the amount that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified. The Generic Letter (GL) requested each licensee to provide certain information in a written response to be submitted within nine months of the date of the GL. Additionally, per the GL, if a licensee could not provide the requested information in time to meet the requested response date, a three-month response describing the licensee's alternative course of action was requested.

As documented in Reference (b), our GL response is considered closed and no further information or action was requested by the NRC staff. Further, as documented in Reference (c), the inspection requirements of NRC Temporary Instruction 2515/177 "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal and Containment Spray Systems" were completed. No findings of significance were identified. However, as stated in Reference (d), we are providing a Nine-Month Supplemental (Post-Outage) Response to Reference (a) for Calvert Cliffs Nuclear Power Plant Unit 1 (CCNPP Unit 1). In Reference (e), the staff requested a Nine-Month Supplemental (Post-Outage) Response for Calvert Cliffs Nuclear Power Plant Unit 2 (CCNPP Unit 2) only. That response for CCNPP Unit 2 (Reference f) has been submitted as requested and was found acceptable by the staff (Reference b). However, because we had identified sections of the subject systems piping in CCNPP Unit 1 that were inadvertently omitted from the scope of the walkdowns and therefore could not be evaluated within nine months of the date of the GL, in Reference (d) we volunteered to submit a Nine-Month Supplemental (Post-Outage) Response for CCNPP Unit 1. That response is provided in Attachment (1) of this letter.

This supplemental response (Attachment 1) is being submitted within 90 days of startup from the spring 2010 Unit 1 outage which ended March 23, 2010. The long-term actions identified by the industry relative to the Generic Letter, as described in Reference (g), were not completed in time for inclusion of any relevant conclusions in this Generic Letter response. We continue to track those long-term actions in our action item tracking process.

We have evaluated the systems that perform the functions described in Generic Letter 2008-01 and have concluded that these systems are Operable, as defined in our Technical Specifications. Further, the subject systems are in conformance with our commitments to the applicable draft General Design Criteria, as stated in our Updated Final Safety Analysis Report.

Should you have questions regarding this matter, please contact Mr. Douglas E. Lauver at (410) 495-5219.

Very truly yours,

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

I, George H. Gellrich, being duly sworn, state that I am Vice President - Calvert Cliffs Nuclear Power Plant, LLC (CCNPP), and that I am duly authorized to execute and file this response 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 21st day of June, 2010.

WITNESS my Hand and Notarial Seal:

Janet L. Sully
Notary Public

My Commission Expires:

March 1, 2011
Date

GHG/ALS/bjd

Attachment: (1) Calvert Cliffs Nuclear Power Plant Unit 1 Nine-Month Supplemental (Post-Outage) Response to Generic Letter 2008-01

cc: D. V. Pickett, NRC
S. J. Collins, NRC
Resident Inspector, NRC
S. Gray, DNR

ATTACHMENT (1)

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT 1 NINE-MONTH SUPPLEMENTAL (POST-OUTAGE) RESPONSE TO GENERIC LETTER 2008-01

Calvert Cliffs Nuclear Power Plant, LLC
June 21, 2010

ATTACHMENT (1)

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT 1 NINE-MONTH SUPPLEMENTAL (POST-OUTAGE) RESPONSE TO GENERIC LETTER 2008-01

This attachment contains the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 1 Nine-Month Supplemental (Post-Outage) Response to Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems." The attachment supplements our nine-month initial submittal (Reference 1) for the previously identified sections of piping for the subject systems located in the Unit 1 Auxiliary Building, that were inadvertently omitted from the scope of the walkdowns. As described in Reference 2, those inadvertently omitted sections of piping for the subject systems were the horizontal runs of the Unit 1 safety injection (SI) discharge piping and two horizontal runs of refueling water tank (RWT) normal suction piping.

The following information is provided in this attachment:

a) A description of the results of evaluations that were performed on the previously incomplete activities.

b) A description of any additional corrective actions determined necessary to assure system operability and compliance with the quality assurance criteria in 10 CFR Part 50, Appendix B, Sections III, V, XI, XVI, and XVII and the licensing basis and operating license, including a schedule and a basis for that schedule.

c) A summary of any changes or updates to previous corrective actions, including any schedule change and the basis for the change.

The following systems were determined to be in the scope of the generic letter for CCNPP:

- Safety injection (SI) system
- Shutdown cooling (SDC) system
- Containment spray (CS) system
- Relevant flow path in the charging system when used for high pressure safety injection (HPSI)

For the purposes of this submittal, the term Emergency Core Cooling System (ECCS) refers to the combination of the SI and SDC systems. The relevant portion of the charging system includes that piping used for providing a HPSI flow path for hot leg injection via pressurizer spray post-loss-of-coolant accident. The ECCS, CS, and the portion of the charging system noted above are hereinafter referred to as "the subject systems" when referenced collectively.

The original conclusions documented in our nine-month response (Reference 1) with respect to the licensing basis evaluation, testing evaluations, and corrective action evaluations have not changed. This supplement will only discuss the results of those design evaluation reviews conducted subsequent to our nine-month response associated with previously uncompleted activities (i.e., for the inadvertently omitted piping in CCNPP Unit 1 described in Reference 2).

As committed in Reference 2, we have completed the evaluation of the inadvertently omitted portions of the subject systems and have concluded that these systems are Operable, as defined in our Technical Specifications. Further, the subject systems are in conformance with our commitments to the applicable draft General Design Criteria, as stated in our Updated Final Safety Analysis Report.

A. EVALUATION RESULTS

1. Licensing Basis Evaluation

Licensing basis documents for the subject systems were reviewed as discussed in Reference 1. That review included the licensing basis documents for the inadvertently omitted piping. The review did not result in any new corrective actions determined necessary to ensure compliance with the applicable quality assurance criteria of 10 CFR Part 50, Appendix B, our licensing bases, or our operating license with respect to the subject systems.

2. Design Evaluation

a. Design Basis Document Review

Review of the design basis documents (including calculations and engineering evaluations) and vendor technical manuals, with respect to gas accumulation in the subject systems are summarized in Reference 1. That review included design basis documents for the inadvertently omitted piping described in this attachment. As discussed in Reference 1, no corrective actions were determined necessary to ensure compliance with the applicable quality assurance criteria of 10 CFR Part 50, Appendix B, our licensing bases, or our operating license with respect to the subject systems as a result of the design bases document review.

b. System Confirmation Walkdows and Inspections

Confirmatory walkdowns and inspections for the inadvertently omitted sections of piping for the subject systems located in the Unit 1 Auxiliary Building (horizontal runs of the Unit 1 SI discharge piping and two horizontal runs of RWT normal suction piping) have been performed. The results of the confirmatory walkdowns and inspections were as follows:

For the Unit 1 SI discharge piping horizontal runs:

As committed in Reference 2, the confirmatory walkdowns and inspections for the horizontal runs of the Unit 1 SI discharge piping were performed during on-line maintenance prior to December 31, 2009 (the walkdowns and inspections were performed in November 2009). As stated in Reference 2, *"The discharge piping designed high points (inverted loop seals) were inspected and found full. Also, points along this piping that had the potential for gas collection due to back leakage and stripping have been inspected and found full. Based on this, it is reasonable that subtle high points along horizontal runs of the same piping are also full."* The walkdowns and inspections performed in November 2009 confirmed that those subtle high points along horizontal runs of the same piping were full. No air was found. Therefore, all required walkdowns and inspections for these piping runs are now completed.

For the two horizontal runs of RWT normal suction piping:

As discussed in Reference 2 *"The RWT supply headers flow horizontally or down vertically to the common ECCS/CS suction headers at the (-) 6" elevation. There are no designed high points in these pipe runs. The portions of the missed piping in the West Penetration Room represents a small portion of the overall pipe runs. The balance of these pipe runs have been inspected and local (high points of horizontal runs) high points have been found full. Also, we have not observed issues with gas ingestion from RWT suction piping. Based on the above, it is reasonable that the subject sections of horizontal runs are also full."*

As stated in Reference 3, *during a recent unscheduled (forced) Unit 1 outage (July 2009), dose rates in the 27' West Penetration Room were significantly reduced allowing the examinations of the subject RWT normal suction piping to be completed. No air was found in the subject piping including the local high points.*

Therefore, all required walkdowns and inspections for these piping runs are now completed.

c. Vent Valves

No additional vent valves were required as a result of the confirmatory walkdowns performed on the remaining sections of the subject systems piping located in the Unit 1 Auxiliary Building (horizontal runs of the Unit 1 SI discharge piping and two horizontal runs of RWT normal suction piping).

As discussed in Reference 1, new vent valves were required in the subject systems including locations in inaccessible areas. Therefore, during the spring 2010 Unit 1 refueling outage, nine new vent valves were installed. Two were identified as corrective actions in Reference 1, Table 1 (vent valve added at 11 CS header and vent valve added in 11 HPSI where gas had been discovered a second time). To accommodate system fill and vents and on line maintenance, we elected to install seven new vents in SI discharge piping high point locations.

d. Procedures

There were no new procedures or procedure revisions required as a result of the evaluations performed for the subject systems.

B. DESCRIPTION OF NECESSARY ADDITIONAL CORRECTIVE ACTIONS

There were no new corrective actions identified.

C. CORRECTIVE ACTION UPDATES

The status of Unit 1 corrective actions identified in Reference 1 are shown in Table A below:

Table A
Status of Unit 1 Corrective Actions

Issue	Corrective Action	Scheduled Completion Date
11 CS Header. Need vent at location identified during drawing review.	Add vent.	Complete
Discovered gas in 11 HPSI second time. Vent not in high point.	Add vent. Change procedure.	Complete
Void found in SI discharge elbow (Unit 1 Containment). Flushed piping, eliminated void and reinspected.	Change procedure.	Complete

D. CONCLUSION

We have evaluated the previously unevaluated portions of the subject systems located in CCNPP Unit 1 and have concluded that these systems are Operable.

REFERENCES:

1. Letter from Mr. J. A. Spina (CCNPP) to Document Control Desk (NRC), dated October 14, 2008, Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"
2. Letter from Mr. J. A. Spina (CCNPP) to Document Control Desk (NRC), October 10, 2008, Three-Month Supplemental Response to NRC Generic Letter 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems
3. Letter from Mr. E. D. Dean (CCNPP) to Document Control Desk (NRC), dated August 28, 2009, Change in Alternative Course of Action Schedule Described in Our Three-Month Supplemental Response to NRC Generic Letter 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems