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## CALVERT CLIFFS NUCLEAR POWER PLANT

November 10, 2010

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  
Update to Request for Additional Information Response Regarding Generic  
Letter 2004-02 (TAC Nos. MC4672 and MC4673)

**REFERENCES:**

- (a) Letter from G. H. Gellrich (CCNPP) to Document Control Desk (NRC), dated July 23, 2010, Request for Additional Information Regarding Generic Letter 2004-02
- (b) Letter from D. V. Pickett (NRC) to G. H. Gellrich (CCNPP), dated April 12, 2010, Request for Additional Information re: Generic Letter 2004-02 Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 – (TAC Nos. MC4672 and MC4673)

In Reference (a), we provided responses to an information request from the Nuclear Regulatory Commission (NRC) (Reference b). Subsequent to our submittal, the NRC has requested clarification regarding our response to Request for Additional Information (RAI) 21. Our clarification is provided below.

Based on our response to RAI 21 regarding sump level calculation methodology, the NRC staff indicates that they could not conclude that the calculation was performed such that a realistic or conservative estimate of sump level would result. Specifically, the calculation did not account for holdups including water droplets in transit from the spray nozzles, holdups on vertical surfaces due to condensation, holdups on horizontal surfaces, or shrinkage of water volume due to Reactor Coolant System inventory cooling. Instead the calculation uses a 1/16 inch holdup across the containment cross-section. The NRC staff does not find this 1/16 inch allowance to adequately account for the potential holdups listed above.

However, the NRC staff accepts that our plan to increase water level in the sump would, if successful, offset any potential non-conservatism in the calculation. Without further consideration of an appropriate

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water holdup in the water level calculation, the NRC staff has indicated that our use of the planned increased sump water level in the net positive suction head calculation would not be acceptably conservative.

To ensure this offset (between sump water level and water holdup in Containment) remains valid, we are revising the sump water level calculation to include appropriate water holdups. This will allow any sump water level increases realized from other modifications to be used in the net positive suction head calculation because of the conservative nature of the sump water level calculation.

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 :

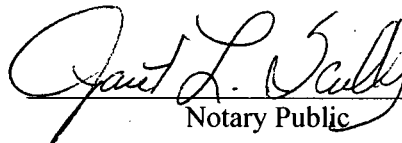
I, George H. Gellrich, being duly sworn, state that I am Vice President - Calvert Cliffs Nuclear Power Plant, LLC (CCNPP), and that I am duly authorized to execute and file this response on behalf of CCNPP. To the best of my knowledge and belief, the statements contained in this document are true and 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 10<sup>th</sup> day of November, 2010.



My Commission Expires:

  
Notary Public  
March 1, 2011  
Date

GHG/PSF/bjd

cc: D. V. Pickett, NRC  
W. M. Dean, NRC

Resident Inspector, NRC  
S. Gray, DNR