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CALVERT CLIFFS
NUCLEAR POWER PLANT

October 6, 2011

Maryland Department of the Environment
Water Supply Program
1800 Washington Boulevard, Suite 450
Baltimore, MD 21230

ATTENTION: Mr. Saeid Kasraei

SUBJECT: Calvert Cliffs Nuclear Power Plant
September 2011 Monthly Domestic Water and Disinfectant Residual Monitoring
Reports

REFERENCES:

- (a) Code of Maryland Regulations, COMAR 26.04.01.26
- (b) Letter from N. Reilman (MDE) to Public Water Systems and Laboratories, Chlorine Residual Monitoring and Reporting for 2010, dated September 23, 2010

In accordance with References (a) and (b), enclosed are the Monthly Domestic Water and Disinfectant Residual Monitoring Reports for Calvert Cliffs Nuclear Power Plant.

Should you have questions regarding this matter, please contact me at (410) 495-5219 or Mr. Scott Strickland at (410) 495-2318.

Very truly yours,

Douglas E. Lauver
Director - Licensing

DEL/CAN/bjd

Enclosures: Monthly Operating Record (2 pages)
Domestic Water Log (2 pages)
Disinfectant Residual Monitoring Report Form (2 pages)

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ENCLOSURES

Monthly Operating Record (2 pages)

Domestic Water Log (2 pages)

Disinfectant Residual Monitoring Report Form (2 pages)

Monthly Operating Record

Calvert County Maryland, Calvert Cliffs Nuclear - Owner Controlled Area
 PWSID#: 104-0055 Monthly Operating Record for Sep-11

| Date | Time | Tech | FAC (ppm) | TRC (ppm) | Cl ₂ Stroke | Cl ₂ Tank Level (gallons) | Signet Totalizer (gallons) | APU Totalizer (gallons) | Vessel AΔP | Vessel BΔP | Inlet Pressure | Outlet Pressure | Field Kit Arsenic (ppb) | Comments |
|-----------|-------|------|-----------|-----------|------------------------|--------------------------------------|----------------------------|-------------------------|------------|------------|----------------|-----------------|-------------------------|----------|
| 9/1/2011 | 10:00 | CWH | 0.40 | 0.41 | 20% | 15 | | | | | | | | SEE LOG |
| 9/2/2011 | 12:00 | CWH | 0.43 | 0.46 | | | | | | | | | | |
| 9/6/2011 | 9:30 | JP | 0.37 | 0.41 | 20% | 14 | 51569 | 9847236 | 0 | 0 | 70 | 70 | | |
| 9/7/2011 | 8:00 | CWH | 0.52 | 0.60 | | | | | | | | | | SEE LOG |
| 9/8/2011 | | CWH | | | | | | | | | | | | SEE LOG |
| 9/9/2011 | 12:00 | CWH | 0.51 | 0.57 | | | | | | | | | | SEE LOG |
| 9/12/2011 | 16:00 | CWH | 0.35 | 0.39 | | | | | | | | | | |
| 9/13/2011 | 11:00 | CWH | 0.38 | 0.39 | 30% | 13 | 72863 | 9872260 | 0 | 0 | 68 | 66 | | SEE LOG |
| 9/14/2011 | 9:35 | TB | 0.37 | 0.39 | | | | | | | | | | |
| 9/15/2011 | 8:30 | TB | 0.32 | 0.35 | | | | | | | | | | |
| 9/16/2011 | 8:00 | TB | 0.34 | 0.36 | 30% | 9 | 207109 | 10032539 | 0 | 0 | 68 | 66 | | |
| 9/19/2011 | 12:30 | CWH | 0.33 | 0.40 | 30% | 15 | 291116 | 10141208 | 0 | 0 | 70 | 68 | | SEE LOG |
| 9/20/2011 | 10:00 | JP | 0.35 | 0.41 | | | | | | | | | | |
| 9/21/2011 | 14:30 | JP | 0.33 | 0.34 | | | | | | | | | | |
| 9/22/2011 | 8:45 | CWH | 0.38 | 0.42 | | | | | | | | | | |
| 9/23/2011 | 9:45 | TB | 0.41 | 0.43 | 30% | 12 | 443400 | 10329028 | 0 | 0 | 68 | 68 | | |
| 9/26/2011 | 15:00 | JP | 0.31 | 0.34 | | | | | | | | | | SEE LOG |
| 9/27/2011 | 14:05 | TB | 0.35 | 0.37 | | | | | | | | | | |
| 9/28/2011 | 13:45 | TB | 0.32 | 0.34 | 30% | 10 | 482007 | 10381666 | 0 | 0 | 70 | 68 | | |
| 9/29/2011 | 14:00 | CWH | 0.37 | 0.41 | | | | | | | | | | |
| 9/30/2011 | 13:15 | CWH | 0.34 | 0.37 | 30% | 7 | 500355 | 10405845 | 0 | 0 | 70 | 68 | | |
| | | | | | | | | | | | | | | |
| HIGH | | | 0.52 | 0.60 | | | 500355 | 10405845 | | | | | | |
| LOW | | | 0.31 | 0.34 | | | 51569 | | | | | | | |
| AVG | | | 0.37 | 0.41 | | | 292631 | | | | | | | |
| TOTAL | | | | | | | 500355 | 14138434 | | | | | | |

This report is submitted in accordance with Comar 26.04.01.26. I certify that this report is truthful to the best of my knowledge and belief.

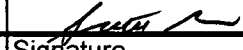
| | | | |
|---------------------|----------------|-----------------|-----------|
| Scott G. Strickland | 6944 | 8/1/2013 | 10/3/2011 |
| Supt Drinking Water | License Number | Expiration Date | Signature |

Monthly Operating Record

Calvert County Maryland, Calvert Cliffs Nuclear- Protected Area
 PWSID#: 104-0002 Monthly Operating Record for Sep-11

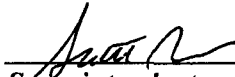
| Date | Time | Tech | FAC (ppm) | TRC (ppm) | Cl ₂ Stroke | Cl ₂ Tank Level (gallons) | Signet Totalizer (gallons) | APU Totalizer (gallons) | Vessel AΔP | Vessel BΔP | Inlet Pressure | Outlet Pressure | Field Kit Arsenic (ppb) | Comments |
|-----------|-------|------|-----------|-----------|------------------------|--------------------------------------|----------------------------|-------------------------|------------|------------|----------------|-----------------|-------------------------|----------|
| 9/1/2011 | 9:00 | CWH | 1.08 | 1.10 | 10% | | | | | | | | | |
| 9/2/2011 | 11:30 | TB | 0.67 | 0.69 | | | | | | | | | | |
| 9/6/2011 | 12:30 | CWH | 0.81 | 0.86 | 10% | 9 | 0 | 912630 | 1 | 0 | 88 | 88 | | |
| 9/7/2011 | 11:05 | TB | 0.59 | 0.61 | | | | | | | | | | |
| 9/8/2011 | 10:30 | TB | 0.46 | 0.49 | 10% | 9 | 0 | 915707 | 2 | 0 | 88 | 84 | | |
| 9/9/2011 | 9:00 | CWH | 0.52 | 0.53 | | | | | | | | | | |
| 9/12/2011 | 10:35 | TB | 0.38 | 0.41 | 10% | 9 | 0 | 917119 | 1 | 0 | 88 | 85 | | |
| 9/13/2011 | 9:00 | CWH | 0.42 | 0.47 | | | | | | | | | | |
| 9/14/2011 | 11:35 | TB | 0.45 | 0.46 | | | | | | | | | | |
| 9/15/2011 | 9:50 | TB | 0.42 | 0.45 | | | | | | | | | | |
| 9/16/2011 | 9:30 | TB | 0.79 | 0.82 | 10% | 9 | 0 | 920221 | 1 | 0 | 88 | 86 | | |
| 9/19/2011 | 12:20 | TB | 0.43 | 0.45 | | | | | | | | | | |
| 9/20/2011 | 13:00 | JP | 0.45 | 0.49 | 10% | 9 | 0 | 921669 | 1 | 0 | 90 | 90 | | |
| 9/21/2011 | 14:00 | JP | 0.40 | 0.43 | | | | | | | | | | |
| 9/22/2011 | 10:30 | CWH | 0.41 | 0.42 | 10% | 9 | 0 | 922749 | 1 | 0 | 90 | 90 | | |
| 9/23/2011 | 7:45 | TB | 0.42 | 0.44 | 10% | | 0 | | | | | | | |
| 9/26/2011 | 14:30 | JP | 0.33 | 0.34 | 10% | 8 | 0 | 924589 | 1 | 0 | 90 | 90 | | |
| 9/27/2011 | 11:00 | JP | 0.35 | 0.38 | | | | | | | | | | SEE LOG |
| 9/28/2011 | 8:45 | JP | 0.47 | 0.51 | | | | | | | | | | |
| 9/29/2011 | 12:30 | TB | 0.36 | 0.39 | | | | | | | | | | |
| 9/30/2011 | 13:25 | TB | 0.34 | 0.37 | 10% | 7 | 0 | 927475 | 1 | 0 | 88 | 88 | | |
| | | | | | | | | | | | | | | |
| HIGH | | | 1.08 | 1.10 | | | 0 | 927475 | | | | | | |
| LOW | | | 0.33 | 0.34 | | | 0 | | | | | | | |
| AVG | | | 0.50 | 0.53 | | | 0 | | | | | | | |
| TOTAL | | | | | | | 0 | 4371909 | | | | | | |

This report is submitted in accordance with Comar 26.04.01.26. I certify that this report is truthful to the best of my knowledge and belief.

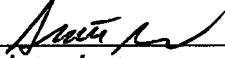
| | | | |
|---------------------|----------------|-----------------|---|
| Scott G. Strickland | 6944 | 8/1/2013 |  |
| Supt Drinking Water | License Number | Expiration Date | Signature |

Office Complex Domestic Water Log, 104-0055

| <i>Date/Time</i> | <i>Initials</i> | <i>Entry</i> |
|-----------------------|-----------------|--|
| 9/1/2011 10:00:00 AM | CWH | Batched sodium hypochlorite to 15 gallons. |
| 9/7/2011 8:00:00 AM | CWH | Lost power to domestic water pumps and LMI pump 12:00. Drinking water super intendent contacted MDE |
| 9/8/2011 | CWH | Domestic water pumps still do not have power.No flow to grab sample. Only one flow reading this week. CR initiated. |
| 9/9/2011 12:00:00 PM | CWH | Domestic water restored. Temporary power to both chlorine and arsenic skids. |
| 9/13/2011 11:00:00 AM | CWH | Permanent Power restored to skid walkdowns complete. Increased stroke to 30% |
| 9/19/2011 12:30:00 PM | CWH | Batched sodium hypochlorite to 15 gallons. |
| 9/26/2011 | JP | Called Facilities, high flow in the OCA system is due to a cooling system valve stuck open. The valve has been repaired. |

| | | |
|---|--------------|-----------------|
|  | 6944 | 8/1/2013 |
| <i>Superintendent</i> | <i>Lic.#</i> | <i>Exp Date</i> |

PA Domestic Water Log, 104-0002

| <i>Date/Time</i> | <i>Initials</i> | <i>Entry</i> |
|---|-----------------|--|
| 9/27/2011 11:00:00 AM | JP | Replaced LMI pump tubing and injector. |
|  | 6944 | 8/1/2013 |
| <i>Superintendent</i> | <i>Lic.#</i> | <i>Exp. Date</i> |

Mail to:

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATER SUPPLY PROGRAM**

1800 Washington Blvd. STE 450 Baltimore, Maryland 21230-1708
(410) 537-3729 (800) 633-6101 ext. 3729 <http://www.mde.state.md.us>

DISINFECTANT RESIDUAL MONITORING REPORT FORM

This report must be received quarterly by the 10th day of the month following the end of the quarter. Results of invalidated samples are not to be included on this report form.

System Name: Calvert Cliffs Nuclear Power Plant- Owner Controlled Area

PWSID: 104-0055

Reporting Period: Ending Year: 2011

| | | | |
|------------------------------|---------------------------------|------------------------------|-------------------------------------|
| Record for: | January 1 - December 31 | Report Due January 10 | <input type="checkbox"/> |
| | April 1 - March 31 | Report Due April 10 | <input type="checkbox"/> |
| <i>(Check 1 Period Only)</i> | July 1 - June 30 | Report Due July 10 | |
| | October 1 - September 30 | Report Due October 10 | <input checked="" type="checkbox"/> |

Disinfectant (Check One)

Free Chlorine

Combined Chlorine

Chlorite

| Month/Year | | Average Residual Concentration (ppm) | Quarterly Average (ppm) | Annual Average (ppm) |
|------------|------|--------------------------------------|-------------------------|----------------------|
| July | 2011 | 0.51 | 0.46 | 0.55 |
| August | 2011 | 0.46 | | |
| September | 2011 | 0.41 | | |
| October | 2010 | 0.47 | 0.50 | |
| November | 2010 | 0.51 | | |
| December | 2010 | 0.52 | | |
| January | 2011 | 0.64 | 0.65 | |
| February | 2011 | 0.88 | | |
| March | 2011 | 0.44 | | |
| April | 2011 | 0.54 | 0.59 | |
| May | 2011 | 0.49 | | |
| June | 2011 | 0.74 | | |

Mail to:

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DISINFECTANT RESIDUAL MONITORING REPORT FORM

This report must be received quarterly by the 10th day of the month following the end of the quarter. Results of invalidated samples are not to be included on this report form.

System Name: Calvert Cliffs Nuclear Power Plant- Protected Area

PWSID: 104-0002

Reporting Period: Ending Year: 2011

| | | | |
|------------------------------|---------------------------------|------------------------------|-------------------------------------|
| Record for: | January 1 - December 31 | Report Due January 10 | <input type="checkbox"/> |
| | April 1 - March 31 | Report Due April 10 | <input type="checkbox"/> |
| <i>(Check 1 Period Only)</i> | July 1 - June 30 | Report Due July 1 | <input type="checkbox"/> |
| | October 1 - September 30 | Report Due October 10 | <input checked="" type="checkbox"/> |

Disinfectant (Check One)

- Free Chlorine
- Combined Chlorine
- Chlorite

| Month/Year | | Average Residual Concentration (ppm) | Quarterly Average (ppm) | Annual Average (ppm) |
|------------|------|--------------------------------------|-------------------------|----------------------|
| July | 2011 | 0.63 | 0.65 | 0.55 |
| August | 2011 | 0.80 | | |
| September | 2011 | 0.53 | | |
| October | 2010 | 0.46 | 0.44 | |
| November | 2010 | 0.44 | | |
| December | 2010 | 0.41 | | |
| January | 2011 | 0.50 | 0.62 | |
| February | 2011 | 0.81 | | |
| March | 2011 | 0.55 | | |
| April | 2011 | 0.41 | 0.49 | |
| May | 2011 | 0.49 | | |
| June | 2011 | 0.56 | | |