COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

February 25, 2015

Ms. Cathy C. Taylor
Director, Electric Environmental Services
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Dominion – North Anna Power Station
Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0052451

Dear Ms. Taylor:

Thank you for your correspondence dated August 7, 2014, providing the Station Operating Procedures (SOP) for skimmer gate adjustments required in Part I.D.3 of the aforementioned VPDES permit. The Department of Environmental Quality (DEQ) has reviewed the SOP, and offers the following comments:

- The subject VPDES permit requires submittal of a summary description of the SOP procedures for approval. While we understand and appreciate the safety concerns associated with operation of the Lake Anna dam, the submitted document does not provide sufficient detail and instructions for understanding the skimmer gate adjustment procedures. As such, we recommend that the SOP be updated to include more direct discussion of the processes and procedures in place to make and validate these adjustments. The comments below can be used to help guide and develop additional details that should be included in the SOP.

- The cover letter of the SOP indicates that the trending of flow release data will be performed for twelve months to validate minimum skimmer gate height. This flow accuracy validation is a procedure that should be incorporated into the SOP document. It is also requested that this validation period include gage calibrations conducted when flows are released through Skimmer Gate 1 only, Skimmer Gate 2 only, and other relevant scenario's that will help to characterize various flow release conditions. Additionally, we agree that an initial twelve-month period is appropriate for planning purposes. However, if data are highly variable, the various flow release conditions are not captured during calibration periods, or if otherwise appropriate, the period may need to be extended to better characterize the trending relationship. This may require longer than a 12-month period to plan and implement. Finally, this step should be periodically revisited to ensure the continued validity of the results. We suggest this process be planned for a twelve month period once every five years.

- After consultation with the United States Geological Survey (USGS), DEQ recommends that the USGS Richmond office be notified of any changes of recorded flows from the gaging station that do not correspond to the expected flow at plus or minus ten percent (10%) rather than plus or minus twenty percent (20%) as stated in the current SOP. This recommendation is based on staff's understanding that, on average, the

accuracy of gage stations, such as the gage on the North Anna River downstream of the Lake Anna dam (USGS01670400), is plus or minus ten percent.

- Please indicate the basis of the accuracy of the flows generated by the small hydro unit. The SOP indicates that the small hydro unit provides a minimum 40 cfs discharge. Please indicate, or provide reference to, the accuracy of this flow value.

- There is continued reference to a skimmer gate height of 1.3 feet below lake surface elevation. Please provide the basis for this determination.

- The SOP indicates that station personnel will continue to monitor the flows of the USGS gage station. Please clarify the frequency at which the flows will be monitored and the method(s) by which they will be recorded and maintained.

- There are no details concerning the planned skimmer gate heights to be implemented during flow reductions below 20 cfs. Is it intended that the USGS flow gage will become the primary determining factor at these lower flows? Does Dominion intend on using planned skimmer gate heights with the flow gage as a check on the accuracy? Please clarify.

- Dominion should include any clear operating rules in this summary description of the SOP. For example, if it is accurate to state that the skimmer gate(s) will not be operated at a minimum depth less than that determined through the validation process, then this guideline should be included for station personnel, DEQ and the public to understand the procedures.

Please update the SOP to reflect the changes noted above and submit to the Northern Regional Office by March 27, 2015, for final review and approval. Should you have any questions, please do not hesitate to contact me at (703) 583-3843 or bryant.thomas@deq.virginia.gov, or Susan Mackert at (703) 583-3853 or susan.mackert@deq.virginia.gov.

Respectfully,

Bryant Thomas
Water Permits and Planning Manager

cc: Ken Roller (via email – kenneth.roller@dom.com)
Mike Whalen (via email – mp.whalen@dom.com)