COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Ms. Paula Hamel
Director, Generation Environmental Services
Dominion Resource Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Registration No. 70225

Dear Ms. Hamel:

The Department of Environmental Quality (DEQ) has completed its review of Dominion's NOx Reasonably Available Control Technology (RACT) analysis (dated April 15, 2016) and supplemental information, specifically as the analysis pertains to Dominion's Possum Point Power Station (PPPS) Unit 5.

PPPS Unit 5 has a nominal generating capacity of 840 MW, and Dominion has chosen to meet 40 CFR 63 Subpart UUUUU requirements as a limited-use liquid oil-fired unit by the application of an annual capacity factor when burning oil of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period. Unit 5 has the largest capacity for electrical generation of any electrical generating unit (EGU) in the Metropolitan Washington, D.C. area. When operating near capacity, daily emissions of NOx from Unit 5 are much greater than any other unit, either electric generating or industrial, in the Northern Virginia Ozone Non-Attainment Area. Data from the EPA's Clean Air Markets Division (CAMD) show a clear tendency for Unit 5 to operate on days of ozone exceedances (examining years 2010-2015) since Unit 5 tends to operate on peak electrical demand days. When operating on those days, it has significant daily NOx emissions (13-20 tons per day).

DEQ evaluated the control options Dominion presented in the RACT analysis against (1) the RACT requirements in 9 VAC 5 Chapter 40, Part II, Article 51 – a.k.a. Rule 4-51 and 40 CFR §51.100 (o), (2) estimated impacts of Unit 5 on ozone levels, and (3) Virginia's obligation to meet the 2008 National Ambient Air Quality Standard (NAAQS) for ozone as well as the obligation to meet the revised (and lower) 2015 NAAQS for ozone.

As a result of this evaluation, DEQ has determined that the installation and operation of selective non-catalytic reduction (SNCR) on PPPS Unit 5 meets the requirements of RACT as provided in Rule 4-51 and 40 CFR §51.100 (o). This determination is based on the following information as provided in part by Dominion:

- In its RACT analysis, Dominion has stated that installing and operating SNCR on PPPS Unit 5 is technically feasible.

- As currently configured and dispatched, Unit 5 cannot consistently meet the "Presumptive RACT" NO_X emission rates provided in Rule 4-51 (i.e., 0.25 lb NOx/mmBtu). In order to meet the presumptive RACT rate, the unit would need to either operate under certain capacity restrictions (e.g., less than ≈700 MW) as detailed in Dominion's RACT analysis, or the unit would need to operate after installation of NOx control technology such as SNCR.

- Installation of SNCR will allow Unit 5 to consistently achieve emission rates equal to or below the presumptive RACT NOx rate under all operating conditions. In addition, use of SNCR based on the source-specific RACT analysis in lieu of the presumptive RACT NO_X rate would provide the necessary NO_X reductions needed to improve air quality. While the presumptive RACT emission rate of 0.25 lbs NO_X/mmBtu associated with oil-fired EGUs is less than the current NO_X limitation for this unit, hourly data as reported to CAMD show that only rarely would a 0.25 lbs NO_X/mmbtu limitation result in actual environmental benefit, and in those situations, the benefit would be minimal. The Northern Virginia/Metropolitan Washington D.C. Ozone Non-Attainment Area needs actual and significant emission reductions in order to achieve and maintain healthy air quality and compliance with both the 2008 and 2015 federal ozone NAAQS. Installation of SNCR on Unit 5 will result in actual and significant NOx emission reductions beyond the presumptive RACT rate. These emissions reductions satisfy DEQ's RACT obligations for the 2008 ozone NAAQS, and pending EPA approval, RACT obligations for the 2015 ozone NAAQS. DEQ does not support the use of a presumptive RACT limitation for Unit 5.

- DEQ estimates measurable benefit (i.e., reductions) in ozone concentrations resulting from the application of SNCR on Unit 5, compared to the current base-case configuration. Metropolitan Washington D.C.'s estimated 2015 emissions from all on-road vehicles (such as passenger vehicles, heavy duty trucks, buses, and motorcycles) are 128.3 tons NOx/day. Reported daily emissions from Unit 5 on high energy demand days are as high as 25 tons NOx/day and are equivalent to nearly 20% of the 2015 daily emissions from transportation in this area, one of the most heavily trafficked and congested areas in the United States.

- Of the remaining control options that Dominion evaluated in its top-down RACT analysis, SNCR is the most cost effective technology (in terms of dollars per ton of NOx removed). The calculated cost per ton removed is over $20,000. While this cost is higher than typically determined as RACT, it is justified in this unique case because the unit operates on high ozone days. Moreover, achieving significant NOx reductions from Unit 5 is essential since EPA published a new, more stringent, ozone NAAQS in December 2015. The 2015 ozone NAAQS lowered the standard to 0.070 ppm, and preliminary 2014-2016 air quality data for the Metropolitan Washington D.C. region are above this standard. For the Metropolitan Washington D.C. region to achieve healthy air quality and comply with the 2015 ozone NAAQS, summertime air quality must improve. Reductions in NOx from Unit 5 that are achievable with SNCR are needed to help the area reach this goal.

  Under this new 2015 ozone standard, Unit 5 will again be subject to RACT requirements. Application of an emissions rate that reflects the use of SNCR on Unit 5 as RACT for the 2008 ozone NAAQS will allow the use of a RACT certification in lieu of a full, top-down

analysis for Unit 5's 2015 ozone NAAQS RACT obligation, pending EPA approval. EPA has applied this approach for implementing the 2008 ozone standard (80 Fed. Reg. 12279) and has signaled its intent to maintain this approach in its recently proposed 2015 ozone NAAQS implementation rule and guidance that was published on November 17, 2016 (81 Fed. Reg. 81279). DEQ supports this approach that allows the determination that installation of SNCR on PPPS Unit 5 to meet RACT requirements for the 2008 ozone standard and would not require a new RACT determination for the 2015 standard.

- NO_X reductions from Unit 5 will also help Virginia meet Clean Air Act requirements regarding §110(a)(2)(D)(i)(I), also known as the "Good Neighbor" provisions. These provisions require that states reduce their significant contributions to downwind areas that are not experiencing healthy air quality.

DEQ is looking forward to working with Dominion to install SNCR as RACT on PPPS Unit 5. Timely implementation of SNCR will help Virginia meet its obligations to attain and maintain the NAAQS for ozone and is consistent with Dominion's longstanding commitment to operate in an environmentally responsible manner.

Regarding next steps, please provide DEQ's Northern Regional Office a permit application, including Form 7, for a state operating permit (per 9 VAC 5-80-800 C. 2) for the use of SNCR controls on Unit 5. This application should include, at a minimum, a compliance timeline for retrofitting Unit 5 with SNCR and interim measures that Dominion will use to mitigate NO_X emissions from Unit 5 until the SNCR system is operational.

To ensure expeditious processing of this permit, please supply this application by December 30, 2016. Timely processing of the RACT permit is essential to support DEQ's efforts to redesignate the Northern Virginia/Metropolitan Washington D.C. 2008 ozone NAAQS nonattainment area to maintenance/attainment for that standard as well as DEQ's efforts to improve air quality such that the area complies with the 2015 ozone NAAQS. Submittal of this application will ensure Dominion's compliance with requirements in Rule 4-51.

If you have any questions on the RACT process, please do not hesitate to contact James LaFratta by phone at 703-583-3928.

Respectfully,

Thomas A. Faha
Regional Director

cc: Mr. Scott Lawton, Dominion
Mr. Michael Dowd, VDEQ