



April 25, 2018

The Honorable James Richard Perry
Secretary of the Energy
United States Department of Energy
1000 Independence Ave, SW
Washington, DC 20585

Re: Report on Yorktown Units 1 and 2 Operations Pursuant to Order No. 202-18-3

Dear Secretary Perry:

Pursuant to Order No. 202-18-3 (the “Order”) issued March 13, 2018 by the Secretary of Energy (“Secretary”), PJM Interconnection, L.L.C. (“PJM”) and Virginia Electric and Power Company (“Dominion Energy Virginia”) respectfully submits the attached report regarding a test run of Yorktown Units 1 and 2 on April 11, 2018 in accordance with the Secretary’s directive to “report all dates on which Yorktown Unites 1 and 2 are operated as well as the estimated emissions and water usage data associated with their operations.”¹

In the PJM application submitted June 13, 2017 (incorporated by reference in the PJM February 28 Renewal Application), PJM explained that emissions from the plant would occur at times outside of periods where PJM dispatches the Yorktown units for reliability.² These times include basic and periodic maintenance activities, and compliance related activities, undertaken to ensure the units remain reliable and capable of operating when necessary. These activities are consistent with normal operating procedures and good engineering practices, and include operating equipment for maintenance testing and reliability check out, testing of fuel systems, tuning of units, required emissions or operational testing, and

¹ Order at page 2. The Order is for the period March 14 to June 11, and directs the emission report to be submitted every two weeks. April 25 is the end of the third two week period.

² PJM Application at page 13, incorporated by reference in the February 28 PJM Renewal Application at page 1.

other operating procedures. Without performing these activities Dominion Energy Virginia may not be prepared to run the Yorktown Units when directed by PJM to ensure system reliability.

On April 11, for approximately 7 hours, Dominion Energy Virginia tested equipment on the Yorktown Units as part of an effort to ensure reliability of these two units when called upon by PJM to provide grid stability. This testing included running sub-systems and firing of ignitors and warm up burners to functionally test and verify operation for start-up. Dominion Energy Virginia did not fire the boiler for any extended period but just long enough to cycle through all the ignitors and warm up the burners. Dominion Energy Virginia tests each unit individually; the first run was the unit 1 reliability test and the second run was the unit 2 reliability test run. The two tests differed in duration due to troubleshooting of equipment issues for the start-up as well as working through some opacity issues that is commonplace when a boiler sits for a period of time and ash settles in the ductwork. The Yorktown generators did not generate any power transmitted to the grid during the test.

Dominion Energy Virginia plans for testing the units depends on whether PJM dispatches the units and they operate. If PJM dispatches the units and they run, Dominion Energy Virginia plans on conducting these tests 2-1/2 to 3 months after the last run.

Attachment 1 to this report is the Yorktown Power Station Bi-weekly Emissions Data for April 3 to April 16 that shows the actual runtime and air emissions data for the period in pounds per hour and total tons for NO_x, SO₂, CO₂, PM₁₀, lead, mercury, HCl, and HF. This spreadsheet includes hourly runtime data for the equipment for the Yorktown units, and raw and calculated data showing emissions data associated with operations of the equipment. Pounds per million Btu and pounds per trillion Btu calculations are not provided with this submittal as these values would not be meaningful for the limited hours of run time observed during this period.

NO_x and SO₂ emissions are based on valid hours of Continuous Emissions Monitoring System (CEMS) data for the period. PM-10 emissions are based on the emission factor derived from the July 21, 2017 stack test (0.0168 lbs/mmBtu corrected to 0.1143 lbs/mmBtu calculated for PM-10 filterable plus condensable). CO₂ emissions are based on valid CEMS hours for the operating period. All other

emissions were calculated using emission factors from AP-42, Fifth Edition, Volume 1, Chapter 1: External Combustion Sources and calculated hourly coal consumption in tons.³

Attachment 2 of this report is entitled “Yorktown Power Station April 11 Circulating Water Usage.” This report provides the intake circulating water usage for the test of the Yorktown units.

PJM and Dominion Energy Virginia respectfully submits the information in this report be accepted by the Secretary as compliant with the Order’s directives to report all dates on which Yorktown Units 1 and 2 are operated well as the estimated and actual emissions and water usage data associated with their operations.

Respectfully submitted,

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³ Mercury and lead emissions were calculated using AP-42, Table 1.1-18. CO emissions were calculated using emission factors from AP-42, Table 1.1-3. Total HAP metals and individual HAP metals are not provided because MATS Table 2 (40 CFR 63, Subpart UUUUU) provides for compliance with either the PM limit or total non-mercury HAP metals limits or individual HAP metals. Dominion Energy Virginia is providing PM-10 emissions for the purposes of MATS. HCl and HF emissions were calculated using emission factors from AP-42, Table 1.1-15.