

September 12, 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 & 2 Operations Pursuant to Order Nos. 202-18-4 & 202-18-5

Dear Secretary Perry:

Pursuant to Order No. 202-18-4 dated June 8, 2018 (“June Order”) and Order No. 202-18-5 dated September 5, 2016 (“September Order”) by the Secretary of Energy (“Secretary”), PJM Interconnection, L.L.C. (“PJM”) and Virginia Electric and Power Company (“Dominion”) respectfully submit the attached air emissions report and water usage report regarding PJM’s dispatch of Yorktown Units 1 and 2 from August 28 through September 10, including the periods needed to startup and ramp down the units. This report is submitted in accordance with the Secretary’s directive in the June Order that every two weeks PJM and Dominion are to “report all dates between June 12, 2018 and September 9, 2018, on which Yorktown Units 1 and/or 2 are operated, and the associated air emissions and water usage data for those dates.”¹ This report is also submitted in accordance with a similar directive in the September Order that every two weeks PJM and Dominion are to “report all dates between September 10, 2018 and December 8, 2018, on which Yorktown Units 1 and/or 2 are operated, and the associated air emissions and water usage data for those dates.”²

In both orders, the Secretary determined “that an emergency continues to exist in the North Hampton Roads area of Virginia due to a shortage of electric energy and a shortage of facilities for the generation of electric energy.”³ The Secretary also found in both orders that the issuance of the orders will meet the emergency and serve the public interest as required by Federal Power Act Section 202(c).⁴

¹ June Order at page 2.

² September Order at page 2.

³ June Order at page 1; September Order at page 1.

⁴ *Id.*

In doing so, the Secretary directed Dominion to operate Yorktown Units 1 and/or 2 as directed by PJM only as needed to ensure grid reliability for a 90-day period of June 12 through September 9, 2018 and for the 90-day period September 10 and December 8, 2018.⁵

As shown in the August 29 report regarding PJM's dispatch of the Yorktown Units 1 and 2 for the period August 14 through August 27, Unit 2 was operating at 23:59 hundred hours on August 27, 2018. On August 30 at approximately 21 hundred hours, PJM directed Unit 2 off line, and the unit was off line at approximately 22 hundred hours. On September 3 at approximately 8:00 hundred hours, PJM dispatched Unit 2 on line, the unit was on line at approximately 12:00 hundred hours, and Unit 2 was operating at 23:59 hundred hours on September 10, the end of the reporting period. On September 6 PJM directed Unit 1 on line at approximately 7:00 hundred hours, and Unit 1 came on line and operated until approximately 20 hundred hours on September 7, 2018.

Attachment 1 to this report is the Yorktown Power Station Bi-Weekly Mass Emissions for August 28 through September 10 that shows the actual runtime and air emissions data for Units 1 and 2. This spreadsheet includes hourly runtime data for Yorktown Units 1 and 2, hourly gross Megawatt (MW) outputs, and raw and calculated data showing air emissions data associated with operations of Yorktown Units 1 and 2.⁶

The information in Attachment 1 reports Yorktown Units 1 and 2 hourly emissions of PM-10 and SO₂ in pounds per hour, and mercury in pounds per hour, for the operating period beginning August 28 through September 10. Additionally for the same time period, Attachment 1 provides Units 1 and 2 hourly emissions of NO_x in pounds per hour, greenhouse gases (as CO₂) in tons per hour, lead in pounds per hour, HCl in pounds per hour, HF in pounds per hour, and CO in pounds per hour. 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

⁵ June Order at page 2; September Order at page 2.

⁶ The Yorktown units can emit pollution while not generating MWs (*e.g.* during standby, startup and shutdown sequences). Thus, Attachment 1 shows the MW output during the period Yorktown Units 1 and 2 provided power to the grid including startup and shutdown processes, and it shows the emissions data for operations of Units 1 and 2 including times when the unit was not generating power.

(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.⁷

Attachment 2 to this report is the Yorktown Units 1 and 2 August 28 through September 10 Circulating Water Usage report for the unit operations required by the Orders. Operation of cooling water pumps extends over a period of time longer than unit operation to facilitate cooling of plant components that support the boiler and turbine. As a general rule cooling water will start to be pumped before the unit is started and continue to be pumped until the turbine metal temperature is less than 300 °F. Sometimes additional cooling water is necessary to complete proper cool down of auxiliary equipment and lubrication fluids after the turbine metal reaches 300 °F, as was the case with the operations of the Yorktown Units August 28 through September 10. As shown in Attachment 2, water circulated through Unit 2 from August 28 through September 3, and September 4 through September 10. Also shown in Attachment 2, water circulated through Unit 1 September 6 through September 10, and for the period August 28 through August 30 to balance thermal discharge from Unit 2.

PJM and Dominion respectfully submit the information in this report be accepted by the Secretary as compliant with the Secretary's directives in the June Order and September Order that every two weeks PJM and Dominion are to report all dates on which Yorktown Units 1 and/or 2 are operated for the period August 28 through September 10, and the associated air emissions and water usage data for those dates.

⁷ 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 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.

Respectfully submitted,

/s/Michael C. Regulinski

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