



March 13, 2019

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 No. 202-18-6

Dear Secretary Perry:

Pursuant to Order No. 202-18-6 dated December 6, 2018 (“Order”) by the Secretary of Energy (“Secretary”), PJM Interconnection, L.L.C. (“PJM”) and Virginia Electric and Power Company (“Dominion Energy Virginia”) respectfully submit the attached air emissions report and water usage report regarding operations of Yorktown Units 1 and 2 from February 26 to March 8, 2019 including the periods needed to startup and ramp down the units. This report is submitted in accordance with the Secretary’s directive in the Order that every two weeks PJM and Dominion Energy Virginia are to report all dates on which Yorktown Units 1 and/or 2 are operated, and the associated air emissions and water usage data for those dates.¹

In the Order, 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.”² The Secretary also found that the issuance of the order will meet the emergency and serves the public interest as required by Federal Power Act Section 202(c).³ In doing so, the Secretary directed Dominion Energy Virginia 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 December 9, 2018 through March 8, 2019 in the Order.⁴

¹ Order at page 2.
² Order at page 1.
³ *Id.*
⁴ Order at page 2.

On June 16, 2017, the Secretary issued the Order No. 202-17-2 that directed, among other things, PJM and Dominion Energy Virginia to develop and implement a dispatch methodology for purposes of operating the Yorktown Units. On June 27, 2017 PJM submitted the PJM Dispatch Methodology and DOE in its Order 202-18-2 dated December 13, 2017 directed Dominion Energy Virginia to continue to comply with the methodology.⁵

As reported in the February 27, 2019 emissions and water report, pursuant to Section 6 of the PJM Dispatch Methodology,⁶ on February 25 the operations of the Yorktown Units 1 and 2 were started at approximately 11 hundred hours, and the operations continued through the end of that reporting period. On February 26 Unit 1 came on line at approximately 07 hundred hours and tripped off line approximately 11 hours later. Unit 1 did not restart. Also on February 26 Unit 2 came on line at approximately 02 hundred hours, and finished the run on February 27 at approximately 22 hundred hours.

Attachment 1 to this report is the Yorktown Power Station Bi-Weekly Mass Emissions for February 26 through March 11 that shows the actual runtime and air emissions data for Units 1 and 2.⁷ 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 2.⁸

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. Additionally, 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

⁵ Order 202-18-2 at 2. Additionally, the Order directs Dominion to continue to comply with the dispatch methodology.

⁶ Section 6 of the PJM Dispatch Methodology provides that Yorktown Units 1 and 2 may require basic periodic and compliance related activities, which activities include operating equipment for maintenance testing and reliability check out, testing of fuel systems, tuning of units, required emissions or operational testing, and emptying of coal bunkers. This section further provides that Dominion Energy Virginia will determine the need for the activity and PJM will study the PJM system conditions to determine whether the conditions permit the operation of the units.

⁷ The Order expired on March 8, 2019, but this report provides data through March 11 due to the Dominion's recordkeeping and reporting method.

⁸ 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.

pounds per hour, HCl in pounds per hour, HF in pounds per hour, and CO in pounds per hour. NOx 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.⁹

Attachment 2 to this report is the Yorktown Units 1 and 2 February 26 through March 11, 2019 Circulating Water Usage report for unit operations as required by the Order.¹⁰ 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, as was the case with the operations of the Yorktown Units for this reporting period. Additionally, water will continue to be pumped after the unit shuts as 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 for this reporting period. As reported in the February 27, 2019 emissions and water report, water pumping started February 22 and continued through approximately 3:40 hundred hours on March 3, 2019.

PJM and Dominion Energy Virginia respectfully submit the information in this report be accepted by the Secretary as compliant with the Secretary's directive in the Order that every two weeks PJM and Dominion Energy Virginia are to report all dates on which Yorktown Units 1 and/or 2 are operated for the period February 26 to March 8, 2019 and the associated air emissions and water usage data for those dates.

⁹ 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.

¹⁰ See footnote 7.

Respectfully submitted,

/s/Michael C. Regulinski

Michael C. Regulinski
Managing General Counsel
Dominion Energy Services, Inc.
120 Tredegar Street, RS-2
Richmond, Virginia 23219
Phone: (804) 819-2794
Email: michael.regulinski@dominionenergy.com

Steven R. Pincus
Associate General Counsel
PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497
Phone: 610-666-4370
Email: pincus@pjm.com

cc: Pat Hoffman, U.S. Department of Energy
Catherine Jereza, U.S. Department of Energy
Rakesh Batra, U.S. Department of Energy
Casey Roberts, Sierra Club Environmental Law Program