

# CONSENT ORDER NO.: CO-SIP-C-2019-13

[This page intentionally left blank.]



---

west virginia department of environmental protection

---

Division of Air Quality  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

Austin Caperton, Cabinet Secretary  
dep.wv.gov

**COMPLIANCE ORDER BY CONSENT  
ISSUED UNDER THE  
AIR POLLUTION CONTROL ACT  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 5, SECTION 4**

TO: Kentucky Power Company  
Mitchell Power Station  
c/o Debra L. Osborne  
Vice President – Generation Assets  
Suite 800, Laidley Tower  
500 Lee Street East  
Charleston, WV 25301

DATE: December 2, 2019  
ORDER NO.: CO-SIP-C-2019-13  
FACILITY ID NO.: 051-00005

**INTRODUCTION**

This Compliance Order is issued by consent between the Director of the Division of Air Quality (hereinafter, “Director”), under the authority of West Virginia Code, Chapter 22, Article 5, Section 1 et seq. and Kentucky Power Company (“Company”).

**FINDINGS OF FACT**

In support of this Order, the Director hereby finds the following:

1. Kentucky Power Company (“Kentucky Power”) operates the Mitchell Power Station (“Mitchell”), an electric generating station located near Moundsville, West Virginia in Marshall County. Mitchell includes two (2) coal-fired boilers, Unit 1 nominally rated at 8,590 MMBtu/hour at full load and Unit 2 nominally rated at 8,481 MMBtu/hr at full load, each venting through a separate flue, both contained within a common shell.
2. Kentucky Power has installed and certified and is required to operate and maintain an SO<sub>2</sub> continuous emissions monitoring system (CEMS) according to the requirements of 40 CFR Part 75 (Part 75) and meet the ongoing quality assurance requirements of Part 75.

Promoting a healthy environment.

3. On June 22, 2010, the U.S. Environmental Protection Agency (USEPA) published a revised primary sulfur dioxide (SO<sub>2</sub>) national ambient air quality standard (NAAQS), establishing a new 1-hour standard at a level of 75 parts per billion (ppb), based on a 3-year average of the annual 99<sup>th</sup> percentile of 1-hour daily maximum concentrations. The effective date of the 2010 SO<sub>2</sub> NAAQS was August 23, 2010. [75 FR 35520]
4. On August 5, 2013, USEPA published designations for nonattainment areas in locations where existing air quality monitoring data from 2009-2011 indicated violations of the 2010 SO<sub>2</sub> NAAQS. The Clay, Franklin and Washington Tax Districts in Marshall County (“Marshall Area”) were designated as nonattainment. Designations were effective October 4, 2013. [78 FR 47191]
5. On April 15, 2015, the WV Department of Environmental Protection, Division of Air Quality (DAQ) submitted a clean data request for the Marshall Area based on air monitoring data certified in EPA’s Air Quality System (“AQS”) for the 2011-2013 period, with a design value of 59 ppb at the monitor on which the nonattainment designations were based.
6. On May 6, 2015, the DAQ submitted the 2011 Base Year SO<sub>2</sub> inventory for the Marshall Area, which included a total of 34,157 tons of SO<sub>2</sub>, to USEPA as a Revision to the State Implementation Plan (SIP). Point source emissions accounted for 34,022 tons (99.6%) of the 2011 SO<sub>2</sub> emissions in the Marshall Area.
7. On July 31, 2015, the USEPA approved the 2011 Base Year Emissions Inventory for the Marshall Area for the 2010 1-hour SO<sub>2</sub> NAAQS by direct final rule [80 FR 45613].
8. In the 2011 base year SO<sub>2</sub> point source emissions inventory Mitchell accounted for 4,519 tons (13.28%), the Ohio Power Company’s Kammer plant (Kammer) accounted for 16,712 tons (49.12%), the PPG Industries, Inc. Natrium Plant (PPG) accounted for 6,759 tons (19.78%) and the Rain CII Carbon, LLC, Moundsville Calcining Plant (Rain Carbon) accounted for 6,031 tons (17.69%) of the total point source SO<sub>2</sub> emissions. Subsequent to 2011 Kammer and Rain Carbon permanently ceased operations, and PPG ceased burning coal and switched to burning natural gas, limiting their annual SO<sub>2</sub> emissions to 2.73 tons [R14-0027D]. Accordingly, by 2016, over 29,499 tons of SO<sub>2</sub> in the 2011 base inventory associated with point sources have been permanently removed from the inventory, reducing total SO<sub>2</sub> emissions in the inventory by over 75%.
9. On September 23, 2015, in a letter to Mr. William F. Durham, Director of the DAQ, the USEPA “determined that while the Marshall Area has three years of clean SO<sub>2</sub> data, the demonstration provided by the West Virginia Department of Environmental Protection is not sufficient to show that the monitor is located at the area of maximum concentration. Because of this, EPA believes it is not appropriate to make a determination of attainment

in accordance with the SO<sub>2</sub> clean data policy at this time.”

10. As of August 6, 2016, Mitchell is the only significant point source of SO<sub>2</sub> emissions that is currently operating in the Marshall Area.
11. On October 7, 2016, Kentucky Power submitted a protocol for the AERMOD air dispersion modeling to be used to demonstrate attainment with the 2010 SO<sub>2</sub> NAAQS.
12. On October 10, 2016, DAQ approved the protocol as submitted by Kentucky Power on October 7, 2016. Based on subsequent discussions with DAQ, the protocol was revised on November 30, 2016.
13. On December 12, 2016 Kentucky Power submitted AERMOD modeling results which demonstrate compliance with the 2010 1-hour SO<sub>2</sub> NAAQS with an hourly SO<sub>2</sub> emission rate of 0.60 lb SO<sub>2</sub>/MMBtu, which equates to a total of 10,242.6 lb SO<sub>2</sub>/hr from Mitchell Units 1 and 2.
14. On December 7, 2016, Kentucky Power submitted a statistical analysis demonstrating the comparable stringency of the 0.60 lb SO<sub>2</sub>/MMBtu emission rate to a 30-operating day rolling average emission rate of 6,177.85 lb/hr from Mitchell Units 1 and 2.
15. On December 21, 2016, Kentucky Power and WVDEP entered into Consent Order CO-SIP-C-2016-31 which established a total maximum SO<sub>2</sub> emission limitation 6,175 lb/hr on a 30-operating day rolling average basis for Mitchell Units 1 and 2.
16. On March 14, 2017, Kentucky Power and WVDEP entered into Consent Order CO-SIP-C-2017-04A(2016), which superseded CO-SIP-C-2016-31.
17. On July 5, 2019, without conceding that its prior modeling demonstration was deficient in any way, Kentucky Power submitted an additional AERMOD dispersion modeling analysis to be used to demonstrate attainment with the 2010 SO<sub>2</sub> NAAQS.
18. On July 23, 2019, WVDEP submitted the additional modeling analysis to the United States Environmental Protection Agency (U.S. EPA) for review.
19. On August 23, 2019, U.S. EPA provided comments on the additional modeling analysis. WV DEP has addressed these comments and provided a response to the U.S. EPA via teleconference on September 24, 2019.
20. The July 5, 2019, additional AERMOD modeling analysis submitted by Kentucky Power demonstrates compliance with the 2010 1-hour SO<sub>2</sub> NAAQS at an hourly SO<sub>2</sub> emission rate of 0.31 lb SO<sub>2</sub>/MMBtu, which equates to 5,222.08 lb SO<sub>2</sub>/hr from Mitchell Units 1 and 2.

21. Applying the same statistical analysis as submitted December 7, 2016, the comparable stringency of the 0.31 lb SO<sub>2</sub>/MMBtu emissions rate is a total of 3,149 lb SO<sub>2</sub>/hr on a 30-operating day rolling average basis from Units 1 and 2

### **ORDER FOR COMPLIANCE**

Now therefore, in accordance with Chapter 22, Article 5, Section 1 et seq. of the West Virginia Code, it is hereby agreed between the parties and ORDERED by the Director:

1. Beginning January 1, 2020, and thereafter, the SO<sub>2</sub> emissions from Mitchell Units 1 and 2 shall be limited to a total maximum of 3,149 lb/hr on a 30-operating day rolling average basis.
2. Kentucky Power shall use the CEMS installed, certified, operated and maintained in accordance with Part 75 to demonstrate compliance with the SO<sub>2</sub> emission limitations of this Consent Order. The compliance demonstration shall use only unadjusted, quality-assured SO<sub>2</sub> concentration values in the emissions calculations. Kentucky Power shall not apply bias adjustment factors to the Part 75 SO<sub>2</sub> data and shall not use Part 75 substitute data values.
3. Kentucky Power shall calculate and record a 30-operating day rolling average SO<sub>2</sub> emission rate in the units of the standard (lbs/hr), updated after each new boiler operating day. Each 30-operating day rolling average emission rate is the average of all of the valid hourly SO<sub>2</sub> emission rates in the 30-operating day period. The first 30-operating day rolling average shall be calculated for the period starting with the first operating day after the compliance date of the order and ending 30-operating days later.
4. Kentucky Power must operate the monitoring system and collect data at required intervals at all times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control periods and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. Kentucky Power is required to implement monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.
5. Kentucky Power shall report to the Director any exceedance of the 30-operating day rolling average SO<sub>2</sub> emission rate limit within five (5) business days after the exceedance occurs.
6. Kentucky Power shall submit semiannual compliance reports to the Director concerning emissions from Mitchell Units 1 and 2. The reporting periods shall be from January 1<sup>st</sup> to June 30<sup>th</sup> for the 1<sup>st</sup> half of the calendar year and July 1<sup>st</sup> to December 31<sup>st</sup> for the 2<sup>nd</sup> half of the year. The first semiannual report under this compliance agreement shall be submitted by August 14, 2020, covering the operating period January 1, 2020 through June

30, 2020. Subsequent semiannual compliance reports shall be submitted no later than the 45<sup>th</sup> day after the end of the reporting period. All reports shall be submitted electronically to the Director via email to [DEPAirQualityReports@wv.gov](mailto:DEPAirQualityReports@wv.gov). Such reports shall contain the following information:

- a. If a deviation from the 30-boiler operating day emission limit occurs, submit a brief description of the deviation, the duration of the deviation, and the cause of the deviation.
  - b. If there are no deviations from the 30-boiler operating day emission limitation, the semiannual compliance report shall include a statement that there were no deviations from the emission limitation during the reporting period.
  - c. A monitoring system performance report containing a summary of the monitoring system availability, expressed as a percentage of operating time for the reporting period.
  - d. Certification by a Responsible Official that the reported information is true, accurate, and complete, as required by 45 CSR 30-4.4.
7. Recordkeeping and Reporting specified under this compliance agreement shall be considered sufficient to meet 45 CSR 10 recordkeeping and reporting requirements, as they pertain to 45 CSR 10 SO<sub>2</sub> emission limitations.

#### **OTHER PROVISIONS**

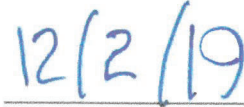
1. This Consent Order supersedes and replaces Consent Order CO-SIP-C-2017-04A(2016), which is hereby terminated and revoked as of January 1, 2020.
2. Kentucky Power hereby waives its right to appeal this Order under the provisions of Chapter 22, Article 5, Section 1 of the Code of West Virginia. Under this Order Kentucky Power agrees to take all actions required by the terms and conditions of this Order and consents to and will not contest the Director's jurisdiction regarding this Order. However, Kentucky Power does not admit to any factual and legal determinations made by the Director and reserves all rights and defenses available regarding liability or responsibility in any proceedings regarding matters other than proceedings, administrative or civil, to enforce this Order.
3. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving Kentucky Power of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject Kentucky Power to penalties and injunctive relief in accordance with the applicable law.
4. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall

remain in full force and effect.

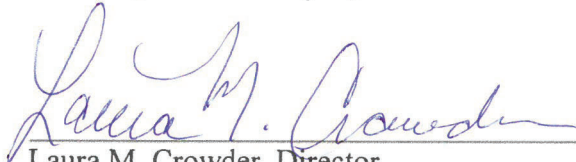
5. This Order is binding on Kentucky Power, its successors and assigns.



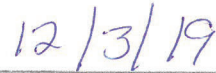
Debra L. Osborne, Vice President – Generation Assets  
Kentucky Power Company



Date



Laura M. Crowder, Director  
Division of Air Quality



Date