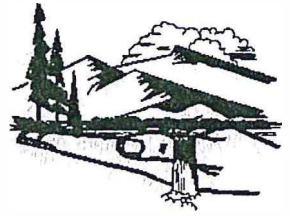




Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor



Todd Parfitt, Director

March 7, 2017

~~Mr. Bill Lawson~~
~~Director, Environmental Services~~
~~PacifiCorp~~
~~1407 W. North Temple, Suite 330~~
~~Salt Lake City, UT 84116~~

Permit No. P0021110

~~Dear Mr. Lawson:~~

~~The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of PacifiCorp's (CMP000574) application to modify monitoring, recordkeeping, and reporting (MRR) conditions that apply to Unit 3 at the Naughton Power Plant (F000647) for best available retrofit technology (BART). PacifiCorp also requested that the Division revise the dates for the end of coal firing and the start of natural gas firing for Unit 3 to align with the requirements of the Wyoming Regional Haze State Implementation Plan (SIP).~~

~~Following this agency's proposed approval of the request as published on December 15, 2016, and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed permitting action, and an opportunity for a public hearing. The Division received three (3) comment letters during the public comment period, all in support of the proposed permitting action. Therefore, on the basis of the information provided to us, approval of the permitting action for the Naughton Plant as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:~~

- ~~1. That authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being constructed or installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rules, standards, permits or orders.~~
- ~~2. That all substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as conditions of this permit.~~
- ~~3. PacifiCorp shall contact the Title V Operating Permit Program to supplement the operating permit application for this facility to include applicable requirements from this permit, in accordance with Chapter 6, Section 3(c)(iii) of the WAQSR.~~
- ~~4. Notifications, reports, and correspondence associated with this permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.~~

5. ~~This condition shall supersede the requirements for initial performance testing for Unit 3 NO_x and particulate matter after conversion to natural gas firing within Condition 11 of Air Quality Permit MD-14506 and Condition 6 of Air Quality Permit MD-15946. Testing of Unit 3 for NO_x and particulate matter after conversion to natural gas firing shall be conducted in accordance with the conditions of this permit.~~
6. That PacifiCorp shall provide written notification of the commencement of construction to convert Unit 3 to natural gas firing within thirty (30) days of commencement. Beginning the first semi-annual period after construction is commenced, PacifiCorp shall submit semi-annual progress reports on the construction to convert Unit 3 to natural gas firing within sixty (60) days of the end of each semi-annual period.
7. Effective upon permit issuance, this condition shall supersede Condition 13.iii of Air Quality Permit MD-14506 relative to the 30-day rolling average of NO_x emissions from Unit 3, and the lb/MMBtu limits from Condition 5 of Air Quality Permit MD-15946 and Air Quality Permit P0021918. Effective upon conversion of Naughton Unit 3 to natural gas firing, emissions from Naughton Unit 3 shall not exceed the levels below. The limits shall apply at all times, including startups, shutdowns, emergencies, and malfunctions.

| Unit | Pollutant | lb/MMBtu |
|------|------------------------------------|-----------------------|
| 3 | NO _x | 0.12 (30-day rolling) |
| 3 | PM/PM ₁₀ ^(a) | 0.008 ^(b) |

^(a) Total PM/PM₁₀.

8. Effective upon permit issuance, this condition shall supersede Condition 7 of Air Quality Permit MD-15946. This condition shall also supersede Condition 11 of Air Quality Permit MD-14506 relative to the 30-day rolling average for NO_x emissions from Unit 3. Upon the conversion of Naughton Unit 3 to natural gas firing, PacifiCorp shall maintain, calibrate, and operate a continuous emission monitoring system (CEMS), in full compliance with the requirements found at 40 CFR part 75, to accurately measure NO_x, diluent, and stack gas volumetric flow and/or the natural gas flow rate from Unit 3.
9. The CEMS required by Condition 8 of this permit shall be used to calculate the hourly average NO_x emission rate in lb/MMBtu for any hour in which natural gas is combusted in Unit 3. At the end of each operating day, PacifiCorp shall calculate and record a new 30-day rolling average emission rate in lb/MMBtu from the arithmetic average of all valid hourly emission rates from the CEMS for the current operating day and the previous 29 successive operating days to demonstrate compliance 30-day rolling average emission limits for NO_x in Condition 7. An hourly average NO_x emission rate in lb/MMBtu is valid only if the minimum number of data points, as specified in 40 CFR part 75, is acquired by both the pollutant concentration monitor (NO_x) and the diluent monitor (O₂ or CO₂). Data reported to meet this permit condition shall not include data substituted using the missing data substitution procedures of subpart D of 40 CFR part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR part 75.

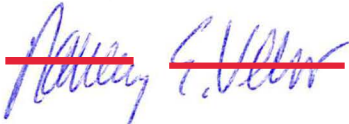
10. Effective upon permit issuance, the requirements of this condition shall supersede the portions of Conditions 6, 18, and 21 of Air Quality Permit MD-14506 and Condition 11 of Air Quality Permit MD-15946 that pertain to particulate matter testing for Unit 3 after conversion to natural gas firing. Within sixty (60) days of the conversion of Naughton Unit 3 to natural gas firing, and on an annual basis thereafter, PacifiCorp shall conduct stack testing to demonstrate compliance with the Unit 3 particulate matter limits in Condition 7. The testing shall measure particulate emissions using EPA Method 5, 5B, 5D, 17, and 202, as appropriate, in 40 CFR part 60, Appendix A. A test shall consist of three (3) runs, with each run at least 120 minutes in duration and each run collecting a minimum sample of sixty (60) dry standard cubic feet. Results shall be reported in lb/MMBtu.
11. Prior to any testing required by this permit, a test protocol shall be submitted to the Division for approval, at least thirty (30) days prior to testing. Notification should be provided to the Division at least fifteen (15) days prior to any testing. Results of the tests shall be submitted to this office within forty-five (45) days of completing the tests.
12. Following the conversion of Naughton Unit 3 to natural gas firing, PacifiCorp shall submit quarterly excess emissions reports for Unit 3 NO_x emissions no later than the 30th day following the end of each calendar quarter. Excess emissions are defined as emissions that exceed the emissions limits specified in Condition 7. The reports shall include the magnitude, date(s), and duration of each period of excess emissions, specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the unit, the nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted. When no excess emissions have occurred, such information shall be stated in the quarterly reports.
13. Following the conversion of Naughton Unit 3 to natural gas firing, PacifiCorp shall submit quarterly CEMS performance reports, to include dates and duration of each period during which the CEMS was inoperative (except for zero and span adjustments and calibration checks), reasons(s) why the CEMS was inoperative and steps taken to prevent recurrence, and any CEMS repairs or adjustments. PacifiCorp shall also submit results of any CEMS performance tests required by CFR part 75. When the CEMS has not been inoperative, repaired, or adjusted during the reporting period, such information shall be stated in the quarterly reports.
14. PacifiCorp shall submit results of any particulate matter stack tests conducted for demonstrating compliance with the particulate matter limits in Condition 7 within sixty (60) calendar days after completion of the test.
- ~~15. Effective upon permit issuance, this condition shall supersede Condition 7 of Air Quality Permit MD-14506. Opacity shall be limited as follows:~~
 - ~~i. Units 1-2:~~
 - ~~1. No greater than forty percent (40%) opacity of visible emissions.~~
 - ~~a. Limit shall apply during all operating periods.~~
 - ~~Unit 3:~~
 - ~~1. No greater than twenty percent (20%) opacity for visible emissions.~~
 - ~~a. Limit shall apply during all operating periods.~~

- ~~16. Effective upon permit issuance, this condition shall supersede Condition 8 of Air Quality Permit MD-14506.~~
 - ~~i. Authorization for SO₂ injection on Unit 3 shall remain in effect until start-up of Unit 3 after natural gas conversion.~~
17. PacifiCorp shall maintain the following records relative to Unit 3 for at least five (5) years following the Unit 3 gas conversion, and shall be made available to the Division upon request:
 - i. All CEMS data, including the date, place, and time of sampling or measurement; parameters sampled or measured; and results.
 - ii. Records of quality assurance and quality control activities for emissions measuring systems including, but not limited to, any records required by 40 CFR part 75.
 - iii. Records of all major maintenance activities conducted on emission units, air pollution control equipment, and CEMS.
 - iv. Any other CEMS records required by 40 CFR part 75.
 - v. Records of all particulate stack test results.
18. Effective upon permit issuance, this condition shall supersede Condition 15 of Air Quality Permit MD-14506. Effective January 30, 2019, Naughton Unit 3's heat input shall be limited to 12,964,800 MMBtu based on 12-month rolling average of hourly heat input values. Compliance with the heat input limited will be determined using a 40 CFR Part 75 certified CEMS and the procedures for determining heat input per 40 CFR Part 75.
19. Effective upon permit issuance, this condition shall supersede Condition 20 of Air Quality Permit MD-14506. PacifiCorp Energy shall remove the coal pulverizers on Unit 3 from service no later than January 30, 2019. PacifiCorp Energy shall provide written notification to the Division of the actual date of pulverizer removal within thirty (30) days of such date.
- ~~20. Effective upon permit issuance, this condition shall supersede Condition 21 of Air Quality Permit MD-14506. PacifiCorp Energy shall complete the conversion of Naughton Unit 3 to natural gas no later than June 30, 2019.~~
21. At all times, PacifiCorp shall maintain Unit 3, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.
- ~~22. Nothing in the conditions of this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with requirements of these conditions if the appropriate performance or compliance test procedures or method had been performed.~~
- ~~23. All conditions from previously issued Air Quality Permits MD-14506 and MD-15946 shall remain in effect unless specifically superseded by a condition of this permit.~~
24. All conditions from previously issued Air Quality Permits MD-14506 and MD-15946 shall remain in effect and conditions of this permit shall become invalid if, at any time, the Federal Implementation Plan for regional haze for Wyoming (Fed. Reg. Vol. 79, No. 20, January 30, 2014) is found to be invalid.

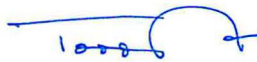
~~It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Conditions 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within sixty (60) days of permit issuance per Section 16, Chapter I, General Rules of Practice and Procedure, Department of Environmental Quality.~~

~~If we may be of further assistance to you, please feel free to contact this office.~~

~~Sincerely,~~

A handwritten signature in blue ink, appearing to read "Nancy E. Vehr", written over a horizontal red line.

~~Nancy E. Vehr
Administrator
Air Quality Division~~

A handwritten signature in blue ink, appearing to read "Todd Parfitt", written over a horizontal red line.

~~Todd Parfitt
Director
Dept. of Environmental Quality~~



Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

June 20, 2014

~~Mr. William K. Lawson
Director, Environmental Services
PacifiCorp Energy
1407 W. North Temple, Suite 330
Salt Lake City, UT 84116~~

Permit No. MD-15946

~~Dear Mr. Lawson:~~

~~The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of PacifiCorp Energy's application to modify the Naughton Power Plant by converting Unit 3 from a coal-fired electric generating unit to a natural gas-fired unit. Unit 3 will cease to burn coal on or before January 1, 2018, and the conversion to natural gas will be completed by June 30, 2018. Converting the unit to fire solely on natural gas will reduce emissions of nitrogen oxides, particulate matter, and sulfur dioxide more than retrofitting the unit with selective catalytic reduction and installing a new fabric filter. The Division will accept conversion of Unit 3 to natural gas as an alternative to installing and operating controls determined to be best available retrofit technology (BART) under Chapter 6, Section 9 of the Wyoming Air Quality Standards and Regulations. The Naughton Power Plant is located in sections 32 and 33, T21N, R116W, approximately four (4) miles southwest of Kemmerer, in Lincoln County, Wyoming.~~

~~Following this agency's proposed approval of the request as published May 15, 2014 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments have been received. Therefore, on the basis of the information provided to us, approval to modify the Naughton Power Plant as described in the application is hereby granted pursuant to Chapter 6, Sections 2 and 9 of the regulations with the following conditions:~~

- ~~1. That authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being constructed or installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rules, standards, permits or orders.~~
- ~~2. That all substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as conditions of this permit.~~
- ~~3. That PacifiCorp shall modify their Operating Permit in accordance with Chapter 6, Section 9(e)(vi) and Chapter 6, Section 3 of the WAQSR.~~
- ~~4. All notifications, reports and correspondence associated with this permit shall be submitted to the Stationary Source Compliance Program Manager, Air Quality Division, 122 West 25th Street, Cheyenne, WY 82002 and a copy shall be submitted to the District Engineer, Air Quality Division, 510 Meadowview Drive, Lander, WY 82520.~~



5. Effective upon permit issuance, this condition shall supersede portions of Condition 7 of Air Quality Permit MD-6042A2 as it pertains to Naughton Unit 3. Effective upon completion of the initial performance tests to verify the emission levels below, as required by Condition 6 of this permit, emissions from Naughton Unit 3 shall not exceed the levels below. The NO_x and PM/PM₁₀ limits shall apply during all operating periods.

| Unit | Pollutant | lb/MMBtu | lb/hr | tpy |
|------|------------------------------------|-----------------------|------------------------|-------|
| 3 | NO _x | 0.08 (30-day rolling) | 250.0 (30-day rolling) | 519.0 |
| 3 | PM/PM ₁₀ ^(a) | 0.008 ^(b) | 30.0 ^(b) | 52.0 |

^(a) Total PM/PM₁₀.

^(b) ~~Averaging period is 1 hour as determined by 40 CFR 60.46 and an applicable Reference Method Test.~~

6. That initial performance tests be conducted, in accordance with Chapter 6, Section 2(j) of the WAQSR, within 30 days of achieving a maximum design rate but not later than 90 days following initial start-up of Naughton Unit 3 after conversion to natural gas and a written report of the results be submitted. If a maximum design rate is not achieved within 90 days of start-up, the Administrator may require testing be done at the rate achieved and again when a maximum rate is achieved.

- ~~7. Effective upon permit issuance, this condition shall supersede portions of Condition 9 of Air Quality Permit MD-6042A2 as it pertains to Naughton Unit 3. Performance tests shall consist of the following:~~

~~Naughton Unit 3:~~

~~NO_x Emissions Compliance with the NO_x 30-day rolling average shall be determined using a continuous emissions monitoring system (CEMS) certified in accordance with 40 CFR part 75.~~

~~PM/PM₁₀ Emissions Testing shall follow 40 CFR 60.46 and EPA Reference Test Methods 1-5 and 202, or an equivalent EPA Reference Method.~~

~~Testing required by the Chapter 6, Section 3, Operating Permit may be submitted to satisfy the testing required by this condition.~~

- ~~8. Prior to any testing required by this permit, a test protocol shall be submitted to the Division for approval, at least 30 days prior to testing. Notification should be provided to the Division at least 15 days prior to any testing. Results of the tests shall be submitted to this office within 45 days of completing the tests.~~

9. ~~Effective upon permit issuance, this condition shall supersede portions of Condition 12 of Air Quality Permit MD-6042A2 as it pertains to Naughton Unit 3. Compliance with the NO_x limits set forth in this permit for Naughton Unit 3 shall be determined with data from the continuous monitoring systems required by 40 CFR Part 75 as follows.~~

A) ~~Exceedances of the NO_x limits shall be defined as follows:~~

- i) ~~Any 30-day rolling average which exceeds the lb/MMBtu NO_x limits as calculated using the following formula:~~

$$\bar{E}_{avg} = \frac{\sum_{h=1}^n (C)_h}{n}$$

~~Where:~~

~~\bar{E}_{avg} = Weighted 30-day rolling average emission rate (lb/MMBtu).~~

~~C = 1-hour average emission rate (lb/MMBtu) for hour " h " calculated using valid data from the CEM equipment certified and operated in accordance with Part 75 and the procedures in 40 CFR part 60, appendix A, Method 19. Valid data shall meet the requirements of WAQSR, Chapter 5, Section 2(j). Valid data shall not include data substituted using the missing data procedure in subpart D of Part 75, nor shall the data have been bias adjusted according to the procedures of Part 75.~~

~~n = The number of unit operating hours in the last 30 successive boiler operating days with valid emissions data meeting the requirements of WAQSR, Chapter 5, Section 2(j). A "boiler operating day" shall be defined as any 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time at the steam generating unit.~~

- ii) ~~Any 30-day rolling average which exceeds the lb/hr NO_x limits as calculated using the following formula:~~

$$\bar{E}_{avg} = \frac{\sum_{h=1}^n (C)_h}{n}$$

~~Where:~~

~~\bar{E}_{avg} = Weighted 30-day rolling average emission rate (lb/hr).~~

~~$C =$ 1-hour average emission rate (lb/hr) for hour " h " calculated using valid data (output concentration and average hourly volumetric flowrate) from the CEM equipment certified and operated in accordance with Part 75. Valid data shall meet the requirements of WAQSR, Chapter 5, Section 2(j). Valid data shall not include data substituted using the missing data procedure in subpart D of Part 75, nor shall the data have been bias adjusted according to the procedures of Part 75.~~

~~$n =$ The number of unit operating hours in the last 30 successive boiler operating days with valid emissions data meeting the requirements of WAQSR, Chapter 5, Section 2(j). A "boiler operating day" shall be defined as any 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time at the steam generating unit.~~

- ~~B) PacifiCorp shall comply with all reporting and record keeping requirements as specified in WAQSR Chapter 5, Section 2(g) and 40 CFR part 60, subpart D. All excess emissions shall be reported using the procedures and reporting format specified in WAQSR Chapter 5, Section 2(g).~~
- ~~10. PacifiCorp shall use EPA's Clean Air Markets reporting program to convert the monitoring system data to annual emissions. PacifiCorp shall provide substituted data according to the missing data procedures of 40 CFR Part 75 during any period of time that there is not monitoring data. All monitoring data must meet the requirements of WAQSR, Chapter 5, Section 2(j).~~
- ~~11. Effective upon permit issuance, this condition shall supersede Condition 14 of Air Quality Permit MD-6042A2 as it pertains to Naughton Unit 3. Compliance with the PM/PM₁₀ limits set forth in Condition 5 of this permit shall be determined with data from testing for PM conducted annually, or more frequently as specified by the Administrator, following 40 CFR 60.46 and EPA Reference Test Methods 1-5 and 202, or an equivalent EPA Reference Method. Testing required by the Chapter 6, Section 3 Operating Permit may be submitted to satisfy the testing required by this condition.~~
- ~~12. Records required by this permit shall be maintained for a period of at least five (5) years and shall be made available to the Division upon request.~~
- ~~13. Effective upon permit issuance, this condition shall supersede Condition 18 of Air Quality Permit MD-6042A2. PacifiCorp Energy shall remove the coal pulverizers on Unit 3 from service no later than January 1, 2018. PacifiCorp Energy shall provide written notification to the Division of the actual date of pulverizer removal from service within 30 days of such date.~~
- ~~14. PacifiCorp Energy shall complete the conversion of Naughton Unit 3 to natural gas prior to June 30, 2018, and conduct the initial performance tests required in Condition 6 of this permit no later than 90 calendar days after initial startup of Unit 3 after natural gas conversion.~~

15. ~~All conditions from previously issued Air Quality Permit MD-6042A2 shall remain in effect unless specifically superseded by a condition of this permit.~~

~~It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 3 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within sixty (60) days of permit issuance per Section 16, Chapter I, General Rules of Practice and Procedure, Department of Environmental Quality.~~

~~If we may be of further assistance to you, please feel free to contact this office.~~

~~Sincerely,~~

~~Steven A. Dietrich~~

~~Steven A. Dietrich~~
~~Administrator~~
~~Air Quality Division~~

~~Todd Parfitt~~

~~Todd Parfitt~~
~~Director~~
~~Dept. of Environmental Quality~~

cc: Greg Meeker