



**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

**Application Analysis
A0002380**

November 30, 2016

NAME OF FIRM:	PacifiCorp Energy (CMP000574)
NAME OF FACILITY:	Naughton Power Plant (F000647)
FACILITY LOCATION:	Sections 32 and 33, T21N, R116W Lincoln County, Wyoming
TYPE OF OPERATION:	Coal-Fired Electric Generating Plant
RESPONSIBLE OFFICIAL:	Bill Lawson, Environmental Services Director
MAILING ADDRESS:	1407 W. North Temple, Suite 330 Salt Lake City, Utah 84116
TELEPHONE NUMBER:	(801) 220-4581
REVIEWERS:	James (Josh) Nall, Air Quality Scientist Alicia Boltz, Air Quality Engineer

1. PURPOSE OF APPLICATION

On July 20, 2015, PacifiCorp submitted an application to the Division of Air Quality (Division) of the Wyoming Department of Environmental Quality to modify monitoring, recordkeeping, and reporting (MRR) conditions that apply to Unit 3 at the Naughton Power Plant for best available retrofit technology (BART).

Per Air Quality Permit MD-14506, Unit 3 at the Naughton Power Plant will cease to burn coal on or before January 1, 2018, and a conversion to natural gas firing will be completed by June 30, 2018. The Division has accepted conversion of Unit 3 to natural gas as an alternative to installing and operating controls determined to be BART under Chapter 6, Section 9 of the Wyoming Air Quality Standards and Regulations (WAQSR). PacifiCorp is requesting the incorporation of MRR requirements from the Federal Implementation Plan (FIP) for regional haze for Wyoming¹ for permits pertaining to BART requirements for Unit 3 at Naughton.

The MRR requirements from the regional haze FIP include a condition that permitted emission limits “shall apply at all times, including startups, shutdowns, emergencies, and malfunctions.” This language will be included in the Division’s proposed conditions for this permitting action at the request of PacifiCorp (letter to Division Administrator dated July 7, 2015), and as an exception to the Division’s standard practice. Chapter 1, Section 5 of the WAQSR requires that operators report excess emissions from unavoidable equipment malfunctions, and allows for enforcement discretion on the part of the Division based on the operator’s report. Under this framework, the standard practice for the Division is to require that permitted emission limits apply “at all times”, and to rely on Chapter 1, Section 5 of the WAQSR to review excess emissions that result from emergencies and/or malfunctions.

¹ Fed. Reg. Vol. 79, No. 20, January 30, 2014

Per letter dated October 21, 2016, PacifiCorp requested that the Division change the dates for the end of coal burning and the start of natural gas firing for Naughton Unit 3. To align the timing of the Naughton Unit 3 gas conversion with the Wyoming Regional Haze State Implementation Plan (SIP), PacifiCorp is requesting that the Division modify Condition 21 of Air Quality Permit MD-14506 to reflect that PacifiCorp will have, at a minimum, until June 30, 2019, to complete the Naughton Unit 3 gas conversion. In addition, PacifiCorp requested that the Division modify Condition 20 of MD-14506 to reflect that the unit will be allowed to continue to operate on coal under the current permit conditions (which have required the unit to operate at a reduced load since April 2015) until January 30, 2019.

The EPA approved Wyoming's Regional Haze SIP for the Naughton plant on January 30, 2014, and in accordance with that approval, emission controls determined to represent BART for the Naughton plant would be required by January 30, 2019. Because the Division has accepted conversion of Unit 3 to natural gas as an alternative to installing and operating controls determined to be BART, the Division will utilize this permitting action to require that PacifiCorp complete the Naughton Unit 3 gas conversion by June 30, 2019 and that coal firing for Unit 3 cease by no later than January 30, 2019.

2. RELATED PERMITTING ACTIONS

On July 5, 2013, the Division issued air quality permit MD-14506 to modify the Naughton Power Plant by reducing permitted emissions from Unit 3 and converting the unit from a coal fired electric generating unit to a natural gas fired unit in 2018. The permit was issued at the request of PacifiCorp after they conducted an evaluation of the feasibility of installing and operating the BART-determined controls. Based on the results of the evaluation, PacifiCorp determined that converting Naughton Unit 3 to a natural gas fired unit is a viable alternative to installing selective catalytic reduction and a full-scale fabric filter.

On June 20, 2014, the Division issued air quality permit MD-15946 to accept conversion of Unit 3 to natural gas as an alternative to installing and operating controls determined to be BART under Chapter 6, Section 9 of the Wyoming Air Quality Standards and Regulations.

3. PROPOSED PERMIT CONDITIONS

The Division proposes to issue an Air Quality permit to PacifiCorp for Naughton Unit 3 with the following conditions:

1. 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. 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 SO₃ 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.