BEFORE THE ENVIRONMENTAL QUALITY COUNCIL STATE OF WYOMING

RESPONSE TO BASIN ELECTRIC'S MO	TION FOR	R SUMMARY JUDGMENT
BART Permit: Laramie River Station)	
Air Quality Permit No. MD-6047)	
Basin Electric Power Cooperative)	Docket No. 10-2802
In the Matter of:)	

Permit MD-6047, dated 12/31/09

EXHIBIT 21



Department of Environmental Quality

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



John Corra, Director

December 31, 2009

Mr. Robert Eriksen Sr. Environmental Compliance Administrator Basin Electric Power Cooperative 1717 East Interstate Avenue Bismarck, ND 58503-0564

> Permit No. MD-6047 (BART Permit for the Laramie River Station)

Dear Mr. Eriksen:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of the application from Basin Electric Power Cooperative (Basin Electric) for a Best Available Retrofit Technology (BART) permit for the three coal-fired boilers at the Laramie River Station. The Laramie River Station is located at 347 Grayrocks Road, approximately five miles northeast of the town of Wheatland in Platte County, Wyoming.

Following the Division's proposed approval of the permit as published June 3, 2009, a 65-day public notice period ran from June 3, 2009 to August 6, 2009, and a public hearing was held on August 6, 2009 at 1 p.m. at the Platte County Library, located at 904 9th Street in Wheatland. Comments were received on the proposed permit and those comments have been considered by the Division in the final permit. Therefore, on the basis of the information provided to the Division, a BART permit is hereby granted pursuant to Chapter 6, Sections 2 and 9 of the Wyoming Air Quality Standards and Regulations (WAOSR) with the following conditions:

- 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.
- 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 superseded by a specific condition of this permit, are incorporated herein by this reference and are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 Basin Electric 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, at the same address.

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5. Effective upon completion of the performance tests to verify the emission levels below, as required by Condition 6 of this permit, emissions from Laramie River Station Units 1 through 3 shall not exceed the levels below. PM/PM₁₀ lb/hr and tpy limits shall apply during all operating periods. PM/PM₁₀ lb/MMBtu limits shall apply during all operating periods except startup. Startup begins with the introduction of fuel oil into the boiler and ends no later than the point in time when the electricity generators are put online.

Pollutant	lb/MMBtu	lb/br	fpy.
703.4 (a)	0.020	Unit 1: 193	Unit 1: 844
PM/PM ₁₀ ^(a)	0.030	Unit 2: 193 Unit 3: 198	Unit 2: 844 Unit 3: 867

⁽a) Filterable portion only

- 6. That no later than 90 days after permit issuance PM/PM₁₀ performance tests shall be conducted on Units 1-3 and a written report of the results be submitted. If a maximum design rate is not achieved within 90 days of permit issuance, the Administrator may require testing be done at the rate achieved and again when a maximum rate is achieved.
- 7. Effective upon completion of the initial performance tests to verify the emission levels below, as required by Condition 8 of this permit, emissions from Laramie River Station Units 1 through 3 shall not exceed the levels below. The NO_x limits shall apply during all operating periods.

Pollutant	Ib/MMBtu	lb/hr	tpy
NO _x	0.23 (30-day rolling)	Unit 1: 1,348	Unit 1: 5,343
		Unit 2: 1,348	Unit 2: 5,343
		Unit 3: 1,386	Unit 3: 5,493
		(all 30-day rolling)	(all 12-month rolling)

- 8. That initial NO_x 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, 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.
- 9. Performance tests shall consist of the following:

Coal-fired Boilers (Laramie River Station Units 1 through 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 60.

PM/PM₁₀ Emissions - Testing shall follow 40 CFR 60.46 and EPA Reference Test Methods 1-4 and 5.

Testing required by the WAQSR Chapter 6, Section 3 operating permit may be submitted to satisfy the testing required by this condition.

- 10. Prior to any performance 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.
- 11. Basin Electric shall comply with all requirements of the Regional SO₂ Milestone and Backstop Trading Program in accordance with Chapter 14, Sections 2 and 3, of the WAOSR.
- •12. After the installation or upgrade of control equipment, compliance with the limits set forth in this permit for the coal-fired boilers (Laramie River Station Units 1 through 3) shall be determined with data from the existing 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 of NO_x emissions which exceeds the lb/MMBtu limits calculated in accordance with the compliance provisions and monitoring requirements of §60.48Da and §60.49Da. The definition of "boiler operating day" shall be consistent with the definition as specified in 40 CFR part 60, subpart Da.
 - ii. Any 30-day rolling average calculated using valid data (output concentration and average hourly volumetric flowrate) from the existing CEM equipment which exceeds the lb/hr NO_x limit established in this permit. Valid data shall meet the requirements of WAQSR, Chapter 5, Section 2(j) and follow the compliance provisions and monitoring requirements of §60.48Da and §60.49Da. The 30-day average emission rate shall be calculated as the arithmetic average of hourly emissions with valid data during the previous 30-day period. The definition of "boiler operating day" shall be consistent with the definition as specified in 40 CFR part 60, subpart Da.
 - iii. Any 12-month rolling emission rate which exceeds the tpy NO_x limit as calculated using the following formula:

$$E = \frac{\sum_{h=1}^{n} (C)_h}{2.000}$$

Where:

- C = 1-hour average emission rate (lb/hr) for hour "h" calculated using data from the CEM equipment required by 40 CFR Part 75. For monitoring data not meeting the requirements of WAQSR, Chapter 5, Section 2(j), Basin Electric shall provide substituted data for an emissions unit according to the missing data procedures of 40 CFR Part 75 during any period of time that there is not monitoring data.
- E = 12-month rolling emission rate (tpy).

- b. Basin Electric 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).
- Compliance with the PM/PM₁₀ limits set forth in this permit for the coal-fired boilers (Laramie River Units 1-3) 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 1-4 and 5. Testing required by the WAQSR Chapter 6, Section 3 operating permit may be submitted to satisfy the testing required by this condition.
- 14. 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.
- 15. Basin Electric shall install new low NO_x burners with overfire air on Units 1 through 3, in accordance with the Division's BART determination, and conduct the initial performance tests required in Condition 8 no later than December 31, 2012 for Unit 1; December 31, 2013 for Unit 2; and December 31, 2014 for Unit 3.
- Basin Electric shall submit permit applications for the installation of additional add-on NO_x control on two units at the Laramie River Station to the Division no later than two (2) years prior to installation, under the Long-Term Strategy of the Wyoming §308 Regional Haze State Implementation Plan. It shall include an analysis of the four statutory factors and the associated visibility impacts from the application of each proposed NO_x control and resulting emission levels. This application shall address each add-on NO_x control as a system of continuous emissions reduction achieving the lowest viable NO_x emission, not to exceed a maximum of 0.07 lb/MMBtu on a 30-day rolling average as measured by a certified CEM. Additional add-on NO_x control shall be installed and operational on one (1) unit by December 31, 2018 and on a second unit by December 31, 2023.

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. Attention must be given to Chapter 14, Sections 2 and 3 of the Wyoming Air Quality Standards and Regulations, which detail the requirements for compliance with condition 11. 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,

cc:

David A. Finley Administrator

Air Quality Division

John V. Corra

Director

Dept. of Environmental Quality

Glenn Spangler/AQD Cheyenne