

**FILED**

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**Jim Ruby, Executive Secretary  
Environmental Quality Council**

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Department of Environmental Quality

**BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
STATE OF WYOMING**

In the Matter of: )  
Basin Electric Power Cooperative ) Docket No. 10-2802  
Air Quality Permit No. MD-6047 )  
BART Permit: Laramie River Station )

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**AFFIDAVIT OF COLE ANDERSON IN RESPONSE TO  
BASIN ELECTRIC'S MOTION FOR SUMMARY JUDGMENT**

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STATE OF WYOMING )  
 ) ss.  
County of Laramie )

I, Cole Anderson, being first duly sworn, deposes and says as follows:

1. I am over the age of 21 and am competent to make this affidavit.
2. The facts and matters stated herein are within my personal knowledge, and are true and correct.
3. I have a Bachelor of Science degree in Chemical Engineering from the University of Wyoming, issued in May of 2001.
4. I have worked as a New Source Review permit engineer for the Wyoming Department of Environmental Quality since August of 2001 and currently serve in this

capacity. I have participated in the technical review of three Prevention of Significant Deterioration reviews for power plants and numerous minor source permitting actions.

5. My current job responsibilities include: organizing, directing, and reviewing air quality permit applications under the New Source Review (NSR) program, negotiating technical requirements necessary to protect air quality and to assure compliance with rules and regulations of the DEQ, serving as lead permit engineer on projects, including Best Available Retrofit Technology (BART); enhancing and maintaining the DEQ's databases; and improve NSR work practices.

6. I reviewed the BART application (AP-6047) for Basin Electric's Laramie River Station; provided comment on DEQ/AQD's BART analysis for Laramie River Station, but did not write the analysis; reviewed comments on the DEQ/AQD's proposed BART determinations for Laramie River Station; provided input on the DEQ/AQD's decision documents and responses to comments related to the Laramie River Station's BART determinations.

7. References I consulted in drafting the BART analysis and determine BART were Appendix Y to Part 51, as published Wednesday, July 6, 2005, in the Federal Register, pages 39104-39172; EPA's RACT/BACT/LAER Clearinghouse; BART applications for PacifiCorp's Naughton, Jim Bridger, Dave Johnston, and Wyodak power plants; State of Oregon's DEQ BART Report for the Boardman Power Plant (December 19, 2008 version); A letter from the EPA mentioning installations of selective catalytic reduction (SCR) as BART for several power plants in Wyoming; Basin Electric's NSR

permit application for the Dry Fork Station AP-3546; Wyoming Air Quality Standards and Regulations Chapter 6, Sections 2 and 9, and Chapter 14, Sections 1, 2, 3, and 5; and comments received during the public comment period.

8. The DEQ/AQD met with Basin Electric in the fall and winter of 2008, and participated in conference calls with Basin Electric in the spring of 2009, to discuss the BART applications, including installation of SCR.

9. During the meetings and calls, Basin Electric expressed concern that installing SCR on an existing boiler was not the same as installing it on a new boiler, but Basin Electric did not revise the information in their application that installation of SCR was technically feasible and that the associated emissions level achieved by installing SCR was 0.07 pounds per million British Thermal Units (lb/MMBtu), which Basin Electric modeled in their associated visibility analysis. They did not provide another NOx emissions level for SCR operation or provide supporting information, such as a revised visibility analysis, to evaluate such level.

10. After reviewing the information provided by Basin Electric in application AP-6047, the DEQ/AQD initially considered BART to be low NOx burners with overfire air and SCR on all three units at Laramie River Station. This conclusion was based on considering (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any pollution equipment in use or in existence at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility - all five statutory factors in their entirety. It was noted that both the cost effectiveness

and incremental cost effectiveness for installing SCR were reasonable and, in the absence of EPA prescribed visibility improvement standards, the modeled visibility improvements from installing SCR were the most significant. A true and correct copy of DEQ/AQD charts reflecting the DEQ/AQD's initial impression is attached hereto as Ex. 8. The associated emissions level from the application of SCR, 0.07 lb/MMBtu, was the level proposed in Basin's BART application AP-6047 and accepted by the DEQ/AQD.

11. In reviewing the plain language of the four prescribed factors used in selecting the Reasonable Progress Goals (RPG), for which the Long term Strategy (LTS) is designed to achieve, and contrasting them to the five statutory factors used to evaluate control technologies under BART, it is clear they are almost identical. There is one additional RPG factor mentioned: "the time necessary for compliance", which is indirectly addressed in a BART review since the EPA made the determination that BART controls must be installed within five years of SIP approval. There are two additional factors included in a BART analysis: (1) "any pollution control equipment in use at the source" and (2) "the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology". A source-specific visibility analysis addressing visibility improvement from the application of emission control(s) is not a statutory factor in a four factor RPG analysis. However, since the applicant and the DEQ/AQD conducted visibility analyses showing improvement from control installation, as part of BART, the DEQ/AQD can clearly demonstrate that installation of these controls, including SCR, will help Wyoming attain the established Reasonable Progress

Goals, which is the purpose of LTS. Cost of compliance is a common factor for RPG and BART, and the DEQ/AQD has already determined that installing SCR is reasonable (DEQ/AQD's BART Application Analysis AP-6047, page 11) and the DEQ/AQD's supporting conclusions for BART did not say installing SCR is unreasonable (Id., pages 42-43). Therefore, when evaluating SCR under BART, the DEQ/AQD also addressed the four statutory factors of a LTS analysis and by incorporating the findings into a federally enforceable permit, the application of SCR can be relied upon in the LTS.

DATED this 27 day of July, 2010.

Cole Anderson  
Cole Anderson  
NSR Engineer – DEQ/AQD

State of Wyoming            )  
  ) ss.  
County of Laramie            )

Subscribed and sworn before me by Cole Anderson on this 27<sup>th</sup> day of July, 2010.

Witness my hand and official seal.



Kaycee K. McMullin  
Notary Public

My commission expires on: April 25, 2012