

**BEFORE THE
PUBLIC SERVICE COMMISSION OF THE STATE OF NORTH DAKOTA**

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| MONTANA-DAKOTA UTILITIES CO., A) | |
| DIVISION OF MDU RESOURCES) | |
| GROUP, INC.) | DOCKET NO. PU-11-163 |
| APPLICATION FOR ADVANCE) | |
| DETERMINATION OF PRUDENCE) | |
| BIG STONE AIR QUALITY CONTROL) | |
| SYSTEM PROJECT) | |
|) | |
|) | |
| OTTER TAIL POWER COMPANY) | |
| APPLICATION FOR ADVANCE) | DOCKET NO. PU-11-165 |
| DETERMINATION OF PRUDENCE) | |
| BIG STONE AIR QUALITY CONTROL) | |
| SYSTEM PROJECT) | |

REBUTTAL TESTIMONY
OF
TERRY GRAUMANN
ON BEHALF OF
OTTER TAIL POWER COMPANY
and MONTANA-DAKOTA UTILITIES CO.

November 8, 2011

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| Docket No. PU-11-163/ PU-11-165 OTP/MDU-110 |
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1 I. INTRODUCTION AND QUALIFICATIONS

2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3 A. My name is Terry Graumann. My business address is Otter Tail Power Company, 215
4 South Cascade Street, Fergus Falls, Minnesota, 56538-0496.

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6 Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

7 A. I am the Manager, Environmental Services for Otter Tail Power Company ("Otter Tail"
8 or the "Company").

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10 Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

11 A. I graduated in 1972 from Tabor College, Hillsboro, Kansas, with a Bachelor of Arts
12 Degree in Natural Sciences. I began my employment with Otter Tail in 1973, providing
13 environmental compliance support in Otter Tail's Power Production Department. My
14 responsibilities included review and implementation of environmental regulations,
15 development of compliance strategies, data collection and development of permit
16 applications. I was given additional responsibilities in 1978 as the Supervisor of
17 Environmental Engineering. In 1994, I was named Manager of the Environmental
18 Services Department, which is my current role. During my tenure, I have personally
19 completed or supervised numerous permit applications and permit renewals in the areas
20 of air quality, solid waste, and water quality, including permitting for the existing Big
21 Stone Generating Plant ("Big Stone Plant" or "Big Stone").

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23 Q. FOR WHOM ARE YOU PROVIDING TESTIMONY?

24 A. I am providing testimony on behalf of Otter Tail and Montana-Dakota Utilities Co.

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1 Q. WHY IS BART REQUIRED BY THE STATE OF SOUTH DAKOTA?

2 A. Both the emission limits and the BART requirements established under the South Dakota
3 Regional Haze Rule are necessary to comply with the requirements of the federal Clean
4 Air Act ("CAA"). The CAA establishes a national goal of remedying and preventing
5 impairment of visibility from man-made air pollution in specified "Class I" areas of the
6 United States. These Class I areas include the Theodore Roosevelt National Park. Under
7 the federal Regional Haze Rule promulgated pursuant to the CAA, (40 C.F.R.§§ 51.300
8 to 51.309, CAA § 169A(b)(2)), state environmental agencies are required to submit State
9 Implementation Plans ("SIPs"), which consist of strategies to reduce emissions
10 contributing to regional haze and progress benchmarks toward meeting the goal of no
11 man-made visibility impairment in Class I areas by 2064.

12
13 Q. WHO IS RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING THE SOUTH
14 DAKOTA REGIONAL HAZE SIP?

15 A. The South Dakota Department of Environment and Natural Resources ("DENR") is
16 responsible for developing the South Dakota SIP. Based on extensive technical analysis,
17 the South Dakota DENR determined the following control technology constitutes BART
18 for the Big Stone Plant: a Selective Catalytic Reduction with Separated Overfire Air
19 ("SCR/SOFA") for control of nitrogen oxide, a semi-dry or dry Flue Gas Desulfurization
20 ("FGD") for reducing sulfur dioxide, and a baghouse to control particulate matter. The
21 proposed AQCS consists of the control technology identified as BART by the South
22 Dakota DENR.

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24 Q. HAS THE SOUTH DAKOTA DENR SUBMITTED THE SOUTH DAKOTA
25 REGIONAL HAZE SIP TO EPA?

26 A. Yes. The South Dakota Regional Haze SIP was submitted to EPA on January 21, 2011.

1 Q. HAS THERE BEEN A RESPONSE BY EPA TO THE REGIONAL HAZE SIP
2 SUBMITTED BY SOUTH DAKOTA?

3 A. Yes. EPA Region 8 made comments regarding certain technical issues. In response, the
4 South Dakota DENR submitted a revised Regional Haze SIP to EPA on September 19,
5 2011. The revisions clarified testing, monitoring, and recordkeeping requirements; and
6 reporting requirements relating to periods of startup, shutdown and malfunction. The
7 revisions do not impact South Dakota's BART determination or control technology
8 selection that make up the AQCS.

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10 Q. HAS EPA PROVIDED ANY INDICATION OF ITS EVALUATION OF THE SOUTH
11 DAKOTA DENR'S BART DETERMINATION?

12 A. Yes. In an August 2011 email, EPA staff advised me that EPA is "supportive of the
13 State's [BART] determination." The August email is attached as Exhibit ___ (TG-1) to
14 my testimony. In addition, the EPA did not offer any opposition to South Dakota's
15 control technology selection in the comments it filed with the DENR, as discussed above.

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17 Q. DO YOU HAVE ANY EXPECTATION ABOUT WHEN EPA WILL ACT ON THE
18 SOUTH DAKOTA REGIONAL HAZE SIP?

19 A. Yes. In the same August email, EPA staff stated the agency plans to finalize its action on
20 the South Dakota SIP by March 29, 2012.

21

22 Q. BY WHAT DATE WILL THE AQCS NEED TO BE INSTALLED AT THE BIG
23 STONE PLANT?

24 A. Based on the information provided by EPA in the August 2011 email referenced above,
25 the latest date by which the owners of Big Stone can achieve BART compliance will
26 likely be early 2017. However, according to the South Dakota Regional Haze Rule, the

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1 Big Stone owners are required to make the necessary upgrades “as expeditiously as
2 practicable.”

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IV. CONCLUSION

5 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

6 A. Yes, it does.

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From: Morales.Monica@epamail.epa.gov
Sent: Thursday, September 01, 2011 4:07 PM
To: TGraumann@otpc.com
Subject: Re: South Dakota Regional Haze SIP Approval

Mr. Graumann,

Our schedule for acting on South Dakota's Regional Haze State Implementation Plan is to propose our action by November 29, 2011 and finalize our action by March 29, 2012. A lawsuit was filed by several environmental groups against EPA on August 29, 2011, directing EPA to move forward with actions on state Regional Haze plans. As you are aware, we made no adverse comments concerning South Dakota's Best Available Control Technology determination for nitrogen oxides (NOx) of selective catalytic reduction (SCR) for Otter Tail Power Company's Big Stone Unit 1 during any of the State's public comment periods. Thus, we are supportive of the State's determination.

Monica S. Morales, Unit Chief
Air Quality Planning Unit
Air Program (8P-AR)
U.S. EPA Region 8
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Denver, CO 80202-1129
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From: <TGraumann@otpc.com>
To: Monica Morales/R8/USEPA/US@EPA
Date: 08/23/2011 02:22 PM
Subject: South Dakota Regional Haze SIP Approval

Ms. Morales:

I would appreciate an update on the EPA schedule for approval of the South Dakota Regional Haze State Implementation Plan.

Thank you

Regards,

Terry Graumann
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