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April 9, 2013

Mr. Darrell Nitschke
Director of Administration/Executive Secretary
North Dakota Public Service Commission
State Capitol
Bismarck, ND 58505

**RE: Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc.**
**Application for Advance Determination of Prudence Big Stone Air Quality Control System Project**
**Case No. PU-11-163**

**Otter Tail Power Company Application for Advance Determination of Prudence**
**Big Stone Air Quality Control System Project**
**Case No. PU-11-165**

**Compliance Filing - Report**

Dear Mr. Nitschke:

On May 9, 2012 the North Dakota Public Service Commission issued a Findings of Fact Conclusions of Law and Order Granting Advance Determination of Prudence in the above described cases. In compliance with ordering paragraph 2, Otter Tail Power Company hereby submits the Big Stone Air Quality Control System Project Report. This report has been electronically filed. Enclosed are one original and seven (7) copies.

I have been authorized by Montana-Dakota Utilities Co. to file this report in both cases described above.

If you have any questions regarding this report, please contact me at 218-739-8648 or at mrolfes@otpco.com.

Sincerely,

*/s/ Mark Rolfes*
Mark Rolfes, P.E.
Manager, Generation Development

wao
Enclosures
By electronic filing and US mail
c: Tamie A. Aberle (by email)

# Big Stone Plant
# Air Quality Control System Project
# Quarterly Report

**Period January 1, 2013 to March 31, 2013**

**April 9, 2013**

In compliance with the Commission Order the following information is being presented for their review.

## Section I

**Status of the United States Environmental Protection Agency's ("EPA") review of the South Dakota Regional Haze State Implementation Plan ("SIP")**

On March 29, 2012, the Administrator for EPA Region 8 signed as a final rule the approval of South Dakota's Regional Haze SIP. The final rule was published in the *Federal Register* on April 26, 2012 and became effective on May 29, 2012.

## Section II

**Types and amounts of project cost actually incurred**

Total project costs actually incurred through March 31, 2013 are approximately $45M. (Excluding individual company regulatory costs)

Approximately $16M has been spent for project development, project management and engineering.

Procurements for surveying, geo-technical investigation, Flue Gas Desulfurization ("FGD") system, Selective Catalytic Reduction ("SCR") catalyst, Induced Draft Fans, Induced Draft Fan motors and Variable Frequency Drives, Boiler modification, site preparation, dampers, auxiliary transformers, ammonia supply equipment and Activated Carbon Injection ("ACI") equipment have cost approximately $29M of the total.

The largest single contract is the General Work Contract. This contractor (Graycor Industrial Constructors) will procure construction material such as concrete, wire and conduit and then construct the facilities. This contract will constitute approximately 38% of the entire project costs. Graycor has begun mobilization to the site and began working the last half of the month of March 2013.

Graycor was selected to be the contractor for the project through an extensive bidding process that evaluated cost, experience, safety, commercial terms, management and technical competence. As part of the process, owners of other projects Graycor built were contacted or visited to verify Graycor's claims and past performance. Graycor was ranked best in all the evaluations.

## Section III

### Any changed circumstances that will affect cost or project installation

The EPA has issued the Mercury and Air Toxic Standards ("MATS") rule, also known as the utility Maximum Achievable Control Technology ("MACT") rules, which require control of hazardous air pollutants. While the final rule has been issued, several petitions for review have been filed in United States District Court which could ultimately delay its effective date. The rule as issued requires the Big Stone Plant to reduce mercury emissions, which can be controlled by adding ACI to the project. The estimated cost to add ACI as a standalone project is $5M. Because of the synergies of installing the system at the same time as the AQCS, the owners have decided to include the ACI system as part of the scope of the AQCS Project. Because of the synergies captured by doing construction at the same time as the AQCS Project, we have only increased the projected cost of the AQCS Project by $2.1M to account for the ACI system.

Procurement activity is nearing completion for the project. At this time over 90 percent of the project costs are under contract.

With the signing of the agreement with the General Work Contractor we have completed all major contracts except for the distributed control system procurement. Because of this we conducted a major review of the budget and projected cash flow for the project. The results of that investigation yielded a revised projected budget of $405,175,000. This is a reduction of $86,322,400, approximately 17.5 percent of the original budget.

The large reduction in the original budget is a result of the following four factors:

Prudent design/engineering modifications is the first factor, accounting for approximately 45 percent of the reduction. Through prudent engineering and hard work, there have been a number of changes in the design and specifications resulting in considerable cost savings without compromising the performance or operability of the project. Examples are changes to the requirements and design of the boiler modifications which eliminated major structural changes originally contemplated. Another example is the reuse of the plant's 13.8Kv switchgear that was recently replaced. This reuse eliminates the need for a new plant substation and transformer to feed the AQCS Project. These and other changes yielded the largest share of the reductions.

The second factor is the project delivery method, timing and market conditions. This accounts for approximately 35 percent of the reduction. With the combination of the project delivery method, General Work Contract target pricing methodology, and a "buyer's market" we have been able to take advantage of many very competitive situations that have often yielded bid prices below the expected market. This was not coincidental. We selected the project delivery method to allow us to get to the market at the right time, and we have aggressively pushed ahead to try and be in the market during this opportune time.

The third factor is project management. Otter Tail Power Company ("Otter Tail") has taken on the duties of construction management for the project. With a project delivery method focused on having a single contractor for the construction of the AQCS equipment, the partners felt

Otter Tail could take on the construction management of the project rather than using a third party. We have added very experienced people to the project staff to ensure that this is a success. This change accounts for approximately 13 percent of the reduction.

The final factor is a change to the contingency for the project. Being at a point where so much of the project is under contract we went through an extensive effort to evaluate the contingency needed for the rest of the project. The outcome was a lowering of the contingency level for the project that accounts for about 7 percent of the reduction.

It must be remembered that construction only started days ago and we have two and a half years ahead of us. Because of this there are still many unknowns and potential challenges ahead of us. But the work that has been done to date and the careful review of the project justifies a reduction in the anticipated project costs.

**Summary**

The Big Stone AQCS Project is currently on schedule with construction starting March 18th, 2013. We have reassessed the overall project, and have reduced its projected cost by approximately 17.5 percent for a new project budget of $405,175,000.