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April 13, 2016

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**

**Quarterly Report - Compliance Filing**

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 you will find an original and seven (7) copies.

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

131 PU-11-165 Filed 04/13/2016 Pages: 9  
Compliance filing - Big Stone Air Quality Control System Project Report  
Otter Tail Power Company  
Kirk Phinney, AQCS Commissioning Mgr.  
133 PU-11-163 Filed 04/13/2016 Pages: 9  
Compliance filing - Big Stone Air Quality Control System Project Report  
Otter Tail Power Company  
Kirk Phinney, AQCS Commissioning Mgr.

Darrell Nitschke

April 13, 2016

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If you have any questions regarding this report, please contact me at (605) 862-6306 or at [kphinney@otpc.com](mailto:kphinney@otpc.com).

Sincerely,

*/s/ KIRK PHINNEY*

Kirk Phinney

Manager, Generation Services

jch

Enclosures

By electronic filing and US mail

c: Tamie A. Aberle (by email)

**BIG STONE PLANT  
AIR QUALITY CONTROL SYSTEM PROJECT  
QUARTERLY REPORT**

**TO THE  
NORTH DAKOTA PUBLIC SERVICE COMMISSION**

**FOR THE  
PERIOD JANUARY 1, 2016 THROUGH MARCH 31, 2016**



**April 13, 2016**

Otter Tail Power Company submits this report on the Big Stone Plant Air Quality Control System (AQCS) Project in compliance with the North Dakota Public Service Commission May 9, 2012 Order in Case Nos. PU-11-163 & PU-11-165, ordering paragraph 2.

This report describes progress made on the project during the period ending March 31, 2016. Specifically, in compliance with the above-referenced Order, this report includes information on the status of the United States Environmental Protection Agency (EPA) review of the South Dakota Regional Haze State Implementation Plan (SIP); it describes the types and amounts of costs incurred on the project to date; and it describes changed circumstances that are expected to affect the cost, schedule or installation of the AQCS Project.

## **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**

Actual construction of the project was completed in the third quarter of 2015. During this past quarter activity has centered on contract closeouts, addressing project punchlist items, and demolition of the old baghouse, ID fans, and ash silo. Systems were declared commercially operational on December 29, 2015 and overall Unit reliability has not been impacted from the new equipment. There are several operational guarantees that are still being addressed, including long-term reliability/availability and SCR operating conditions. These will be monitored and assessed, and any problems will be resolved over the coming months.

Costs incurred through March 31, 2016 can be broken down into the following general categories:

<b>Category</b>	<b>Costs Through March 31, 2016</b>
<b>Equipment/Material Procurement:</b>	\$105.7M
<b>Construction:</b>	\$212.2M
<b>Engineering/Field Engineering Support:</b>	\$24.5M
<b>Owners Cost:</b>	\$14.9M
<b>Total:</b>	<b>\$357.3M</b>

(Project costs identified do not include individual company costs.)

Equipment and Material Procurement: All owner-procured material for the project, such as the flue-gas desulfurization system equipment, selective catalytic reduction catalyst, induced draft fans and their motors, transformers, structural steel, ductwork, ammonia handling equipment and the Distributed Control System.

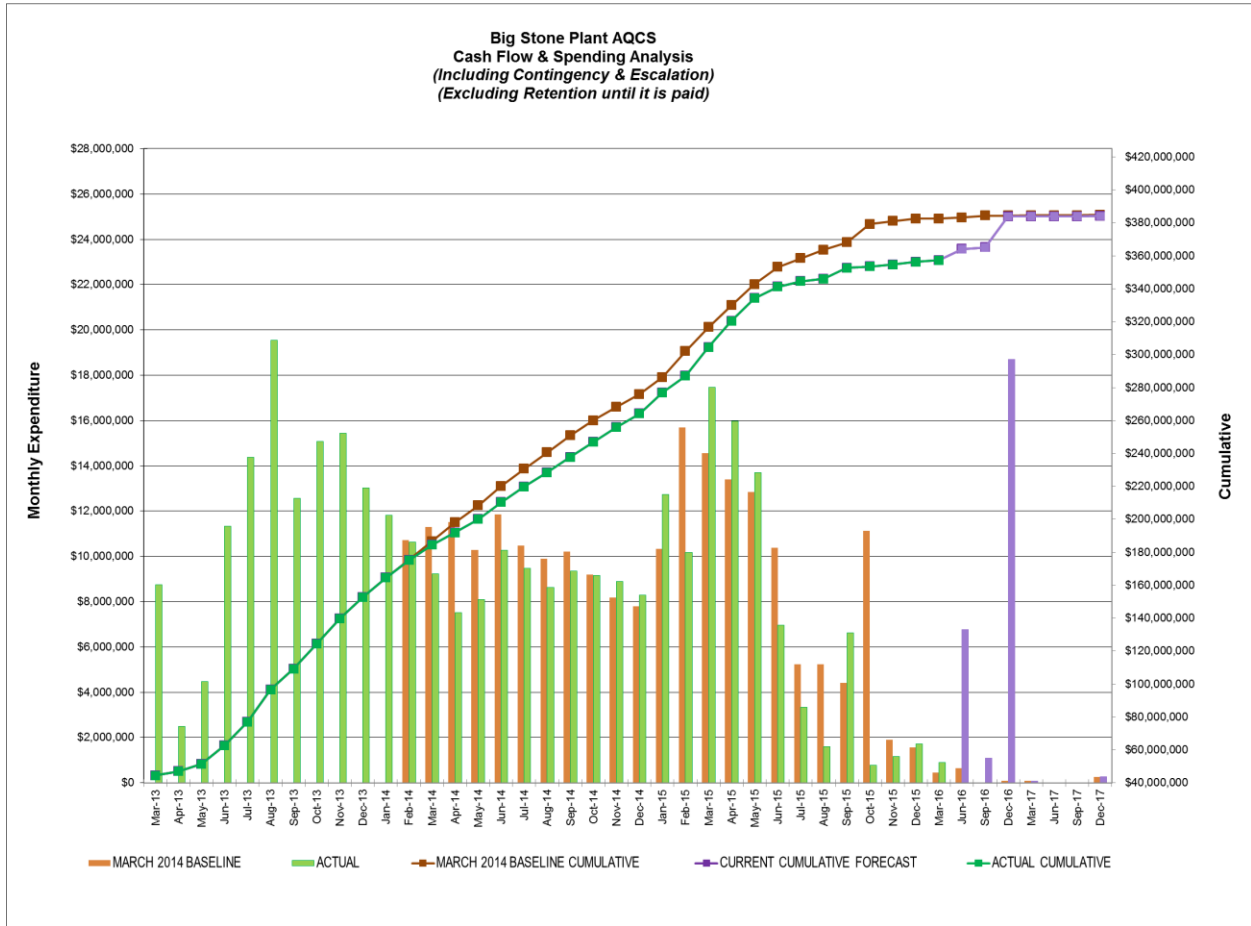
Construction: Payments made to Graycor (the General Work Contractor), site preparation work, testing work, surveying work and work to remove equipment that is no longer needed or which needs to be moved.

Engineering and Field Engineering Support: Engineering and procurement work done by Sargent & Lundy (Project engineer) and engineering field support for construction and commissioning.

Owners Cost: Items such as labor for project development and construction management, and such things as insurance, legal costs, permitting, office space and equipment; also spare parts and consumables used during testing and commissioning.

As described in previous quarterly reports, the project budget was reviewed in early 2013 and then again in early 2014. Following both reviews the projected project budget was reduced. The original project budget was \$491M; it was reduced in 2013 to \$405M and again reduced to \$384M in 2014.

Actual project cash flow and spending through March 31, 2016 and forecast through project completion, is illustrated on the following graph:



The following photographs illustrate various construction activities on the project during the quarter.

### Baghouse Demolition

Before



After



### Concrete Demolition



## Ash Silo Demolition



## Scrap Steel Being Processed for Shipment



Safety is very important to us. To construct the project over 2.3 million man hours were invested with only one lost time incident and an OSHA rate of approximately 0.88. This is an accomplishment of which we are very proud.

### **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, on June 29, 2015 the U.S. Supreme Court held that EPA must consider cost, including cost of compliance, before deciding whether Regulation is appropriate and necessary. On December 15, 2015 the U.S. Court of Appeals for the District of Columbia Circuit ruled that the MATS rule should be remanded to EPA without vacatur in order to address the Supreme Court decision. The D.C. Circuit noted that EPA has represented it is on track to issue a final finding by April 15, 2016. Therefore, the MATS rule remains in effect while the rule is remanded for further proceedings. The rule as issued requires the Big Stone Plant to reduce mercury emissions, which can be controlled by adding Activated Carbon Injection (ACI) to the project. The estimated cost to add ACI as a standalone project was \$5M. Because of the synergies of installing the system at the same time as the AQCS, the owners installed the ACI system as part of the scope of the AQCS Project. The final installed cost of the ACI system was \$3.8M and this cost is included in the incurred cost table above.

Construction is now 100 percent complete and the project is in operation. There are some costs that remain to be finalized but it is not anticipated the budget will be exceeded. There is always the possibility that some unknown problem will arise, but with three months of commercial operations behind us the odds are getting lower all the time.

### **Summary**

The Project was declared commercially operational on December 29, 2015, completing six years of effort. Final project closeout, minor project punchlist items, and demolition of obsolete facilities will continue. There is nothing foreseen that will keep the project from coming in at, or under budget.