

Exhibit No.: 162  
Issue: LaCygne Environmental Retrofit  
Project In-Service Testing  
Witness: Robert N. Bell  
Type of Exhibit: True-Up Direct Testimony  
Sponsoring Party: Kansas City Power & Light Company  
Case No.: ER-2014-0370  
Date Testimony Prepared: July 7, 2015

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO.: ER-2014-0370**

**TRUE-UP DIRECT TESTIMONY**

**OF**

**ROBERT N. BELL**

**ON BEHALF OF**

**KANSAS CITY POWER & LIGHT COMPANY**

Kansas City, Missouri

July 2015

KCP&L Exhibit No. 162  
Date 7/20/15 Reporter Jenni  
File No. ER-2014-0370

**TRUE-UP DIRECT TESTIMONY**

**OF**

**ROBERT N. BELL**

**Case No. ER-2014-0370**

1 **Q: Please state your name and business address.**

2 A: My name is Robert N. Bell. My business address is 1200 Main Street, Kansas City,  
3 Missouri 64105.

4 **Q: Are you the same Robert N. Bell who pre-filed Direct Testimony in this matter?**

5 A: Yes, I am.

6 **Q: What is the purpose of your True-Up Direct Testimony?**

7 A: To give an update regarding the completion of the in-service testing.

8 **COMPLETION OF IN-SERVICE TESTING**

9 **Q: Have the Company and Staff reached agreement regarding the in-service criteria?**

10 A: Yes, Kansas City Power & Light Company and the Missouri Public Service Commission  
11 Staff ("Staff") reached mutual agreement regarding the in-service criteria for the La  
12 Cygne Project. Staff acknowledged this agreement in their "Errata to Revenue  
13 Requirement Cost of Service Report" filed in this docket on April 9, 2015. The mutually  
14 agreed in-service criteria are attached as Schedule RNB-10.

15 **Q: Has the Company successfully achieved the in-service criteria?**

16 A: Yes.

1 **Q: What are the actual in-service dates for the environmental retrofit equipment at La**  
2 **Cygne?**

3 A: As of March 24, 2015, La Cygne Unit 2 and Common equipment is in-service. As of  
4 April 30, 2015, La Cygne Unit 1 equipment is in-service.

5 **Q: Is any documentation available to substantiate the in-service?**

6 A: Yes. In-Service Testing Reports for Unit 2/Common and Unit 1 are attached as  
7 Schedules RNB-11 and RNB-12.

8 **Q: Does that conclude your True-Up Direct Testimony?**

9 A: Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of Kansas City Power & Light )  
Company's Request for Authority to Implement ) Case No. ER-2014-0370  
A General Rate Increase for Electric Service )

**AFFIDAVIT OF ROBERT N. BELL**

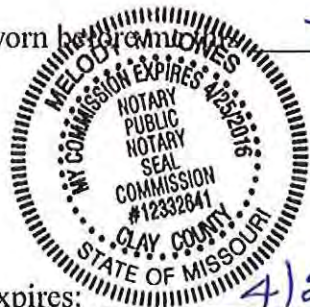
**STATE OF MISSOURI** )  
  ) ss  
**COUNTY OF JACKSON** )

Robert N. Bell, being first duly sworn on his oath, states:

1. My name is Robert N. Bell. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Senior Director – Construction.
2. Attached hereto and made a part hereof for all purposes is my True-Up Direct Testimony on behalf of Kansas City Power & Light Company consisting of two (2) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.
3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

  
\_\_\_\_\_  
Robert N. Bell

Subscribed and sworn before me on this 7<sup>th</sup> day of July, 2015.



  
\_\_\_\_\_  
Notary Public

My commission expires: 7/25/2016

## **In-Service Criteria for La Cygne Unit 1 Environmental Upgrades**

### **PM10 Compliance – La Cygne Unit 1**

1. All major construction work for Unit 1 is complete.
2. All preoperational tests for Unit 1 have been successfully completed.
3. PM10 filterable: Unit 1 shall demonstrate its ability to operate at or above 90% of its nominal gross output of 810MW (729MW – 810MW) with emissions that contain on average 0.013 lb/mmBTU or less as measured by the continuous emission monitoring systems (CEMS) over a continuous four (4) hour period.
4. PM10 filterable: Unit 1 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 810MW (648MW – 810MW) with emissions that contain on average 0.014 lb/mmBTU or less as measured by the CEMS over a continuous 120-hour period.
5. PM10 total: Unit 1 shall demonstrate its ability to operate at or above 90% of its nominal gross output of 810MW (729MW – 810MW) with emissions that contain on average 0.022 lb/mmBTU or less as measured by the CEMS over a continuous four (4) hour period.
6. PM10 total: Unit 1 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 810MW (648MW – 810MW) with emissions that contain on average 0.023 lb/mmBTU or less as measured by the CEMS over a continuous 120-hour period.
7. CEMS are operational and demonstrate the capability of monitoring the PM10 emissions to satisfy the parameters in items (3), (4), (5) and (6) above.

## **SO<sub>2</sub> Compliance – La Cygne Unit 1**

1. All major construction work for Unit 1 is complete.
2. All preoperational tests for Unit 1 have been successfully completed.
3. Unit 1 shall demonstrate its ability to operate at or above 93% of its nominal gross output of 810MW (753MW – 810MW) with emissions that contain on average 0.055 lb/mmBTU or less (or 97.8% removal, whichever is less stringent) as measured by the continuous emission monitoring systems (CEMS) over a continuous four (4) hour period.
4. Unit 1 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 810MW (648MW – 810MW) with emissions that contain on average 0.058 lb/mmBTU or less (or 97.7% removal, whichever is less stringent) as measured by the CEMS over a continuous 72-hour period.
5. Unit 1 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 810MW (648MW – 810MW) with emissions that contain on average 0.07 lb/mmBTU or less as measured by the CEMS over a continuous 120-hour period. Successful completion of items (4) and (5) may, but are not required to, occur concurrently.
6. CEMS are operational and demonstrate the capability of monitoring the SO<sub>2</sub> emissions to satisfy the parameters in items (3), (4) and (5) above.

## **NOx Compliance – La Cygne Unit 1**

The SCR met the established in-service criteria and placed into service in 2007, and therefore is not part of the scope for Unit 1.

## **In-Service Criteria for La Cygne Unit 2 and Common Environmental Upgrades**

### **PM10 Compliance – La Cygne Unit 2 and Common**

1. All major construction work for Unit 2 and Common is complete.
2. All preoperational tests for Unit 2 and Common have been successfully completed.
3. PM10 filterable: Unit 2 shall demonstrate its ability to operate at or above 90% of its nominal gross output of 715MW (644MW – 715MW) with emissions that contain on average 0.013 lb/mmBTU or less as measured by the continuous emission monitoring systems (CEMS) over a continuous four (4) hour period.
4. PM10 filterable: Unit 2 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 715MW (572MW – 715MW) with emissions that contain on average 0.014 lb/mmBTU or less as measured by the CEMS over a continuous 120-hour period.
5. PM10 total: Unit 2 shall demonstrate its ability to operate at or above 90% of its nominal gross output of 715MW (644MW – 715MW) with emissions that contain on average 0.022 lb/mmBTU or less as measured by the CEMS over a continuous four (4) hour period.
6. PM10 total: Unit 2 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 715MW (572MW – 715MW) with emissions that contain on average 0.023 lb/mmBTU or less as measured by the CEMS over a continuous 120-hour period.
7. CEMS are operational and demonstrate the capability of monitoring the PM10 emissions to satisfy the parameters in items (3), (4), (5) and (6) above.



## **SO<sub>2</sub> Compliance – La Cygne Unit 2 and Common**

1. All major construction work for Unit 2 and Common is complete.
2. All preoperational tests for Unit 2 and Common have been successfully completed.
3. Unit 2 shall demonstrate its ability to operate at or above 93% of its nominal gross output of 715MW (665MW – 715MW) with emissions that contain on average 0.055 lb/mmBTU or less (or 97.8% removal, whichever is less stringent) as measured by the continuous emission monitoring systems (CEMS) over a continuous four (4) hour period.
4. Unit 2 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 715MW (572MW – 715MW) with emissions that contain on average 0.058 lb/mmBTU or less (or 97.7% removal, whichever is less stringent) as measured by the CEMS over a continuous 72-hour period.
5. Unit 2 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 715MW (572MW – 715MW) with emissions that contain on average 0.07 lb/mmBTU or less as measured by the CEMS over a continue 120-hour period. Successful completion of items (4) and (5) may, but are not required to, occur concurrently.
6. CEMS are operational and demonstrate the capability of monitoring the SO<sub>2</sub> emissions to satisfy the parameters in items (3), (4) and (5) above.

## **NOx Compliance – La Cygne Unit 2 and Common**

1. All major construction work for Unit 2 and Common is complete.
2. All preoperational tests for Unit 2 and Common have been successfully completed.
3. Unit 2 shall demonstrate its ability to operate at or above 93% of its nominal gross output of 715MW (665MW – 715MW) with emissions that contain on average 0.055 lb/mmBTU or less as measured by the continuous emission monitoring systems (CEMS) over a continuous four (4) hour period.
4. Unit 2 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 715MW (572MW – 715MW) with emissions that contain on average 0.058 lb/mmBTU or less as measured by the CEMS over a continuous 72-hour period.
5. Unit 2 shall demonstrate its ability to operate at or above 80% of its nominal gross output of 715MW (572MW – 715MW) with emissions that contain on average 0.07 lb/mmBTU or less as measured by the CEMS over a continuous 120-hour period. Successful completion of items (4) and (5) may, but are not required to, occur concurrently.
6. CEMS are operational and demonstrate the capability of monitoring the NOx emissions to satisfy the parameters in items (3), (4) and (5) above.

# IN-SERVICE TESTING REPORT

## La Cygne Unit 1

B&V PROJECT NO. 166817

Missouri Case No. ER-2014-0370

PREPARED FOR



Kansas City Power & Light



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## 1.0 Executive Summary

Kansas City Power & Light Company (KCP&L) performed in-service testing of the Unit 1 La Cygne Air Quality Control (AQC) equipment during the period from April 2, 2015 through April 30, 2015. Tested AQC equipment for Unit 1 is limited to particulate and sulfur dioxide (SO<sub>2</sub>) control equipment as nitrogen oxide (NO<sub>x</sub>) control equipment was previously installed on Unit 1 and placed into service in 2007. KCP&L previously consulted the Staff of the Missouri Public Service Commission (MPSC) to develop in-service test criteria that established specific construction and performance conditions that the La Cygne Unit 1, Unit 2 and Common plant related AQC equipment had to meet in order to demonstrate that the environmental control equipment was in-service and “used and required to be used” for service to KCP&L’s customers. As of April 30, 2015, KCP&L successfully achieved each in-service criterion for Unit 1.

## 2.0 La Cygne Project Description and Background

La Cygne Generating Station Unit 1 operates at a nominal capacity of 810 MW and burns subbituminous Powder River Basin (PRB) coal blended with bituminous coal up to an 85% PRB / 15% bituminous blend. It has its own flue contained in the Common concrete shell. The unit is located at the La Cygne Generating Station near La Cygne, Kansas.

The La Cygne Environmental Retrofit Project included the addition of state of the art environmental controls on the existing unit that meets or exceeds Best Available Control Technology standards at the time the permit was issued. The Unit 1 AQC equipment arrangement upon completion of the Environmental Retrofit Project will include a previously installed selective catalytic reduction (SCR) system, a pulse-jet fabric filter (PJFF), induced draft (ID) fans, a wet flue gas desulfurization (WFGD) system, and a dual-flue chimney (single common chimney shell shared with Unit 2 with a separate flue for each unit). Additional equipment, commonly shared by Unit 1 and Unit 2 and essential to the operation of the AQC equipment on both units, is referred to as Common equipment. This equipment includes, but is not limited to, auxiliary power, fire protection, potable water, and gypsum, limestone, and fly ash handling equipment. Further discussion of the in-service of Common equipment is included in the Unit 2 and Common In-Service Testing Report.

## 3.0 In-Service Test Criteria and Procedures

The new La Cygne Unit 1 AQC equipment provides control for two distinct criteria air emissions: SO<sub>2</sub> and particulate matter (PM) less than 10 microns as both filterable (PM<sub>10F</sub>) and total (PM<sub>10T</sub>), each with distinct in-service criteria. The two main control systems for these emission types include the PJFF for particulate removal and the WFGD for SO<sub>2</sub> removal, although some of the control equipment does provide co-beneficial removal of other air emissions. Control of each of the two emission types is necessary to meet the in-service criteria in order for the AQC equipment to be considered in-service. In-service criteria, attached to this Report as Attachment A, includes: (1) Completion of all major construction work for Unit 1; (2) Successful completion of all pre-operational tests; and (3) AQC equipment had to successfully meet certain in-service performance criteria.

The in-service criteria contained specific 4-hour, 72-hour and 120-hour testing requirements for SO<sub>2</sub> emissions, and 4-hour and 120-hour testing requirements for PM<sub>10F</sub> and PM<sub>10T</sub> emissions. The in-service criteria included requirements that the 4-hour particulate testing be executed at greater than or equal to 90 percent design load (729 MW), the 4-hour SO<sub>2</sub> testing be executed at greater than or equal to 93 percent design load (753 MW), and the 72-hour SO<sub>2</sub> testing along with all 120-hour testing be executed at greater than or equal to 80 percent design load (648 MW). In-service

criterion required that the Continuous Emission Monitoring System (CEMS) be operational and demonstrate the capability of monitoring  $PM_{10F}$ ,  $PM_{10T}$  and  $SO_2$  emission levels.

The final tie-in of the Unit 1 AQC equipment was completed during the La Cygne Spring 2015 outage. La Cygne Environmental Partners (LEP), the Engineer-Procure-Construct (EPC) contractor for the Environmental Retrofit Project, completed necessary construction and pre-operational tests on the AQC systems to support unit start-up on March 25, 2015. Attachment B - La Cygne Unit 1 Construction Completion & Commissioning Status provides the construction completion and commissioning dates of all the major equipment.

Unit 1 operation during the period from April 2, 2015 through April 30, 2015 provided demonstration of compliance with the  $SO_2$  and particulate matter in-service criteria. Several unit boiler outages, unrelated to the AQC equipment, delayed completion of the  $SO_2$  in-service test and particulate matter testing. Particulate matter test runs were conducted by C.E.M. Solutions on April 17 and 18, 2015 to measure  $PM_{10F}$  and  $PM_{10T}$ . Since PM CEMS systems can only measure the filterable portion of  $PM_{10}$  and not the condensable portion of particulate emissions that the EPA also defines as part  $PM_{10T}$ , this testing was necessary to allow the development of a correlation factor between the  $PM_{10F}$  and  $PM_{10T}$  emissions. The PM CEMS uses this correlation factor to calculate the  $PM_{10T}$  emission from the measured  $PM_{10F}$  emission. This  $PM_{10}$  testing is in addition to the PM CEMS correlation testing performed by C.E.M. Solutions that is necessary per EPA regulations to allow development of a correlation curve of the filterable emissions to actual stack measurements. All PM testing was conservatively completed using EPA Method 5B/202 which includes particulate smaller and greater than 10 microns. The practice of using this test method is commonly allowed by regulators as it is easier and more practical to complete as compared to methods that only measure  $PM_{10}$ .

$SO_2$  and PM emission data was measured and stored by the CEMS on 1-minute emission averages. This 1-minute data was collected and used to calculate 10-minute averages as the calculation of 10-minute averages by the CEMS is not a typical EPA reporting format. The use of the 10-minute averages follows the precedent set by the previous in-service testing completed by KCP&L for the Iatan plant. It is noted that the CEMS performs automatic calibrations, ranging in duration from 20 to 30 minutes and hourly probe blowbacks. During those calibration periods and probe blowbacks, in accordance with EPA regulations, the CEMS marks the data as invalid and, as a result, some 10-minute reporting periods can be impacted. General EPA reporting protocol was followed which used all valid data collected during a 10-minute period to determine the 10-minute average. The time stamps on averaging period indicates the end of the averaging period, *i.e.*, an averaging period noted ending in the 10th minute of the hour encompasses the time period of 00:00 through 09:59. All 10-minute averaging periods during which no valid data was collected were marked as "Invalid Data" and that averaging period was excluded from consideration in the operating period. As noted, the exclusion of these invalid data periods is common to normal operation and allowed under EPA protocol. All of these 10-minute operating periods are clearly identified with the note "Invalid Data" in the data presented.

Attachment C provides a summary of the  $PM_{10F}$  and  $PM_{10T}$  correlation testing from the testing contractor, C.E.M. Solutions. This summary includes the correlation factor calculation, results of the PM CEMS correlation verification and results of the Relative Accuracy Test Audit (RATA) testing completed by LEP and their subcontractor, C.E.M. Solutions. C.E.M. Solutions testing has identified that the CEMS achieved provisional acceptance by meeting all EPA 40 CFR Part 75 requirements.

A summary of the in-service criteria and test results is given in Table 1.

**Table 1 MPSC In-Service Criteria and Test Results**

IN-SERVICE CRITERIA	IN-SERVICE EMISSION CRITERIA, LB/MMBTU		IN-SERVICE LOAD CRITERIA, MW	
	CRITERIA LIMIT	ACTUAL TEST MAXIMUM	CRITERIA LIMIT	ACTUAL TEST MINIMUM
4-hour PM <sub>10</sub> filterable emissions at ≥ 90 percent design load (10 min avg)	≤ 0.013	0.008	≥729	732
4-hour PM <sub>10</sub> total emissions at ≥ 90 percent design load (10 min avg)	≤ 0.022	0.017 <sup>(2)</sup>	≥729	732
120-hour PM <sub>10</sub> filterable emissions at ≥80percent design load (10 min avg)	≤ 0.014	0.008	≥648	662
120-hour PM <sub>10</sub> total emissions at ≥ 80 percent design load (10 min avg)	≤ 0.023	0.017 <sup>(2)</sup>	≥648	662
4-hour SO <sub>2</sub> emissions at ≥93 percent design load (10 min avg)	≤ 0.055 <sup>(3)</sup>	0.011	≥753	754
72- hour SO <sub>2</sub> emissions at ≥80 percent design load (10 min avg) <sup>(4)</sup>	≤ 0.058 <sup>(4)</sup>	0.041	≥648	669
120-hour SO <sub>2</sub> emissions at ≥80 percent design load (10 min avg) <sup>(4)</sup>	≤ 0.07	0.050	≥648	662

Notes:

1. 72 hour and 120 hour test periods may, but are not required to, occur concurrently.
2. Using correlation factor of PM<sub>10F</sub> to PM<sub>10T</sub> total emissions as determined by previous testing and implemented in the PM CEMS.
3. The less strict requirement of this limit or a 97.8 removal efficiency criterion was to be met. The removal efficiency requirement is stricter and not required to be met based on the fuels burned for this testing.
4. The less strict requirement of this limit or a 97.7 removal efficiency criterion was to be met. The removal efficiency requirement is stricter and not required to be met based on the fuels burned for this testing.

Each of the tests listed in Table 1 are described in more detail in the subsequent sections of this report. Note that all times reported in this report and attachments are based on Central Standard Time as the CEMS clock does not adjust for daylight savings time.

## 4.0 In-Service Particulate Reduction Test and Results

The completion of major construction of the various PJFF subsystems occurred prior to the first fire of the Unit after completing its outage. The pre-operational tests of the various PJFF subsystems (*i.e.*, fabric filter compartments, dampers, damper controls, air compressors, thermocouples and differential pressure transmitters, pulse jet air system and ash removal system) were completed prior to the initial operation of the fabric filter in March 2015. Operating personnel pre-coated the fabric filter bags in accordance with the manufacturer's recommendations prior to flue gas first being emitted to the fabric filter. Boiler unit operations and requirements for other operational tests prevented the in-service emission testing from beginning until April 23, 2015.

### In-Service Particulate Reduction Test Results:

Following the required stack emission testing for the development of the correlation curve for the PM CEMS and the PM<sub>10F</sub> to PM<sub>10T</sub> correlation factor as explained in Section 3, the PM<sub>10</sub> 4-hour testing began at 0230 on April 23, 2015 and ended at 0700 on April 23, 2015, with the PM CEMS providing measurement of the emissions. The maximum PM<sub>10F</sub> measurement for the test period was 0.008 lb/MMBtu with an average of 0.008 lb/MMBtu, while the maximum PM<sub>10T</sub> measurement was 0.017 lb/MMBtu with an average of 0.017 lb/MMBtu. Minimum unit load during the test was 732 MW (representing 90 percent of design load). Attachment D - 4-Hour Particulate Test Results provides the full data from this testing.

The PM<sub>10</sub> 120-hour testing began at 0130 on April 25, 2015 and ended at 0400 April 30, 2015, with the PM CEMS providing measurement of the emissions. The maximum PM<sub>10F</sub> measurement for the test period was 0.008 lb/MMBtu with an average of 0.008 lb/MMBtu, while the maximum PM<sub>10T</sub> measurement was 0.017 lb/MMBtu with an average of 0.017 lb/MMBtu. Minimum unit load during the test was 662 MW (representing 82 percent of design load). Attachment E - 120-Hour Particulate Test Results provides the full data from this testing.

The test data shows that particulate emission controls successfully maintained the emissions at or below the 4-hour criterion limits of 0.013 lb/MMBtu for PM<sub>10F</sub> and 0.022 lb/MMBtu for PM<sub>10T</sub> and the 120-hour testing limits of 0.014 lb/MMBtu for PM<sub>10F</sub> and 0.023 lb/MMBtu for PM<sub>10T</sub>. On this basis, KCP&L satisfied the particulate reduction in-service criterion.

## 5.0 In-Service SO<sub>2</sub> Reduction Test and Results

The completion of major construction of the various absorber and reagent preparation subsystems occurred in March 2015 to allow start-up of Unit 1 in late-March 2015. The pre-operational tests of the various absorber and reagent preparation subsystems (*i.e.*, absorber vessel, recycle pumps, mist eliminator, reagent feed system, absorber bleed system, limestone conveying system, ball mills, reclaim water system, filter feed system, and gypsum dewatering and conveying systems) were completed prior to flue gas first being emitted to the system. Boiler unit operations and requirements for other operational tests prevented the in-service emission testing from beginning until April 2, 2015.

The SO<sub>2</sub> reduction in-service testing began April 2, 2015. The complete data for the SO<sub>2</sub> testing results are provided in Attachment F - 4-Hour SO<sub>2</sub> Test Results, Attachment G - 72-Hour SO<sub>2</sub> Test Results and Attachment H - 120-Hour SO<sub>2</sub> Test Results.



### **In-Service SO<sub>2</sub> Test Results:**

The 4-hour in-service test was started at 1210 April 2, 2015 and concluded at 1610 April 2, 2015. The maximum output of SO<sub>2</sub> at the stack during this period was 0.011 lb/MMBtu and the average SO<sub>2</sub> emission at the stack during this period was 0.010 lb/MMBtu. Minimum unit load was 754 MW (representing 93 percent of design load), while average load was 757 MW. The 10-minute average test data included in Attachment F shows that SO<sub>2</sub> emissions over the 4-hour test were successfully maintained below the in-service criterion limit of 0.055 lb/MMBtu. On this basis, KCP&L satisfied the 4-hour SO<sub>2</sub> reduction in-service criterion.

The 72-hour in-service test was started at 1300 April 17, 2015 and concluded at 1430 April 20, 2015. During this time period, the maximum output of SO<sub>2</sub> at the stack was 0.041 lb/MMBtu and the average SO<sub>2</sub> emission at the stack during this period was 0.029 lb/MMBtu. Minimum load during the test was 669 MW (representing 83 percent of design load), while average load was 742 MW. The 10-minute average test data included in Attachment G shows that SO<sub>2</sub> emissions over the 72-hour test were successfully maintained below the in-service criteria limit of 0.058 lb/MMBtu. On this basis, KCP&L satisfied the 72-hour SO<sub>2</sub> reduction in-service criterion.

The 120-hour in-service test was started at 0130 April 25, 2015 and concluded at 0400 April 30, 2015. During this time period, the maximum output of SO<sub>2</sub> at the stack was 0.050 lb/MMBtu and the average SO<sub>2</sub> emission at the stack during this period was 0.025 lb/MMBtu. Minimum load during the test was 662 MW (representing 82 percent of design load), while the average load was 748 MW. The 10-minute average test data included in Attachment H show that SO<sub>2</sub> emissions over the 120-hour test were successfully maintained below the in-service criteria limit of 0.07 lb/MMBtu. On this basis, KCP&L satisfied the 120-hour SO<sub>2</sub> reduction in-service criterion.

## **6.0 Conclusion**

KCP&L and its contractors have completed all major construction and pre-operational testing of the La Cygne Unit 1 AQC systems. During the period of April 2 through April 30, 2015 the individual testing of the two air emission types, particulate and SO<sub>2</sub>, identified as the in-service criteria, demonstrated the ability of the primary control systems to meet the in-service criteria by fulfilling the 4-hour, 72-hour and 120-hour tests. The CEMS certification tests completed by LEP and their subcontractor, C.E.M. Solutions, demonstrated the ability of the CEMS to measure the SO<sub>2</sub> emissions. PM<sub>10</sub> stack measurements and results submitted by the testing subcontractor, C.E.M. Solutions, provide the necessary data to correlate and demonstrate the ability of the PM CEMS to measure PM<sub>10</sub> emissions. Therefore, the La Cygne Unit 1 AQC Systems have successfully met each of the in-service criteria and as of April 30, 2015 can be declared "used and required to be used" for service to KCP&L's customers.

# Attachment A. In-Service Test Criteria

## MPSC In-Service Criteria for La Cygne Unit 1

### PM10 Compliance – La Cygne Unit 1

1. All major construction work for Unit 1.
2. All preoperational tests for Unit 1 have been successfully completed.
3. PM10 filterable: Unit 1 shall demonstrate its ability to operate at or above 90 percent of its nominal gross output of 810 MW (729 MW – 810 MW) with emissions that contain on average 0.013 lb/mmBTU or less as measured by the continuous emission monitoring systems (CEMS) over a continuous four (4) hour period.
4. PM10 filterable: Unit 1 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 810 MW (648 MW – 810 MW) with emissions that contain on average 0.014 lb/mmBTU or less as measured by the CEMS over a continuous 120 hour period.
5. PM10 total: Unit 1 shall demonstrate its ability to operate at or above 90 percent of its nominal gross output of 810 MW (729 MW – 810 MW) with emissions that contain on average 0.022 lb/mmBTU or less as measured by the CEMS over a continuous four (4) hour period.
6. PM10 total: Unit 1 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 810 MW (648 MW – 810 MW) with emissions that contain on average 0.023 lb/mmBTU or less as measured by the CEMS over a continuous 120 hour period.
7. CEMS are operational and demonstrate the capability of monitoring the PM10 emissions to satisfy the parameters in items (3), (4), (5) and (6) above.

### SO<sub>2</sub> Compliance – La Cygne Unit 1

1. All major construction work for Unit 1 is complete.
2. All preoperational tests for Unit 1 have been successfully completed.
3. Unit 1 shall demonstrate its ability to operate at or above 93 percent of its nominal gross output of 810 MW (753 MW – 810 MW) with emissions that contain on average 0.055 lb/mmBTU or less (or 97.8 percent removal, whichever is less stringent) as measured by the CEMS over a continuous four (4) hour period.
4. Unit 1 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 810 MW (648 MW – 810 MW) with emissions that contain on average 0.058 lb/mmBTU or less (or 97.7 percent removal, whichever is less stringent) as measured by the CEMS over a continuous 72 hour period.

5. Unit 1 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 810 MW (648 MW – 810 MW) with emissions that contain on average 0.07 lb/mmBTU or less (or 97.7 percent removal, whichever is less stringent) as measured by the CEMS over a continuous 120 hour period. Successful completion of items (4) and (5) may, but are not required to, occur concurrently
6. CEMS are operational and demonstrate the capability of monitoring the SO<sub>2</sub> emissions to satisfy the parameters in items (3), (4) and (5) above.

## **Attachment B. Construction Completion & Commissioning Status**

# KCP&L LaCygne Unit 1 Construction Completion & Commissioning Status

Activity ID	Activity Name	Original Duration	% Complete	Start	Finish
<b>T/O Packs: PWR Power T/O Packs</b>					
<b>T/O Packs: PWR.01GRD-01.02 Ground Grid Unit 1 &amp; 2 - Energization</b>					
ST09 01GRD-01 02to	TO System to Start Up [Ground Grid Unit 1 - Energization(01GRD-01 02)]	8	100%	12-20-13 A	12-22-13 A
ST09 01GRD-01 02cs	Ground Checks [Ground Grid Unit 1 - Energization(01GRD-01 02)]	96	100%	02-19-14 A	03-14-14 A
<b>T/O Packs: PWR.01DCU-01.01 Commission System [DC &amp; UPS System Unit 1(01DCU-01.01)]</b>					
ST09 01DCU-01 01to	TO System to Start Up [DC & UPS System Unit 1(01DCU-01.01)]	16	100%	01-09-14 A	01-09-14 A
ST09 01DCU-01 01cs	Commission System [DC & UPS System Unit 1(01DCU-01.01)]	8	100%	04-04-14 A	05-14-14 A
<b>T/O Packs: PWR.01AUX-01.01 Unit 1 Aux Transformer</b>					
ST09 01AUX-01 01to	TO System to Start Up [Unit 1 Aux Transformer(01AUX-01.01)]	16	100%	01-15-14 A	01-17-14 A
ST09 01AUX-01 01ek	Energize and Soak [Unit 1 Aux Transformer(01AUX-01.01)]	8	100%	03-21-14 A	03-21-14 A
<b>T/O Packs: PWR.01EMB-01.01 13.8 KV BUS 11A and 11B</b>					
ST09 01EMB-01 01to	TO System to Start Up [13.8 KV Bus 11A and 11B(01EMB-01.01)]	16	100%	01-15-14 A	01-17-14 A
ST09 01EMB-01 01es	Energize Switchgear Bus [13.8 KV Bus 11A and 11B(01EMB-01.01)]	8	100%	05-15-14 A	05-15-14 A
<b>T/O Packs: PWR.01EMB-02.01 Unit 1 MV BUS 1G and 1H (6.9KV)</b>					
ST09 01EMB-02 01to	TO System to Start Up [Unit 1 MV BUS 1G and 1H(01EMB-02.01)]	16	100%	03-25-14 A	03-26-14 A
ST09 01EMB-02 01es	Energize Switchgear Bus [Unit 1 MV BUS 1G and 1H(01EMB-02.01)]	8	100%	06-24-14 A	06-24-14 A
<b>T/O Packs: PWR.01ELS-02.01 Unit 1 LV Bus Absorber - 480V</b>					
ST09 01ELS-02 01to	TO System to Start Up [Unit 1 LV Bus Absorber(01ELS-02.01)]	16	100%	03-25-14 A	03-26-14 A
ST09 01ELS-02 01es	Energize SWGR [Unit 1 LV Bus Absorber(01ELS-02.01)]	24	100%	06-03-14 A	06-05-14 A
<b>T/O Packs: PWR.01ELM-02.01 LV MCC's 12A/13A - Absorber Unit 1 - 480V</b>					
ST09 01ELM-02 01to	TO System to Start Up [LV MCC's 12A/13A-Absorber Unit 1(01ELM-02.01)]	16	100%	03-25-14 A	03-26-14 A
ST09 01ELM-02 01em	Energize MCC [LV MCC's 12A/13A-Absorber Unit 1(01ELM-02.01)]	16	100%	06-17-14 A	06-18-14 A
<b>T/O Packs: PWR.01ELS-01.01 Unit 1 LV Bus FF-ABS - 480V</b>					
ST09 01ELS-01 01to	TO System to Start Up [Unit 1 LV Bus FF(01ELS-01.01)]	16	100%	02-11-14 A	02-12-14 A
ST09 01ELS-01 01mi	Commission [Unit 1 LV Bus FF(01ELS-01.01)]	24	100%	05-28-14 A	05-30-14 A
<b>T/O Packs: PWR.01ELM-01.01 LV MCC's 14A/15A - FF Unit 1 - 480V</b>					
ST09 01ELM-01 01to	TO System to Start Up [LV MCC's 14A/15A-FF Unit 1(01ELM-01.01)]	16	100%	07-02-14 A	07-02-14 A
ST09 01ELM-01 01em	Energize MCC [LV MCC's 14A/15A-FF Unit 1(01ELM-01.01)]	32	100%	07-21-14 A	07-24-14 A
<b>T/O Packs: PWR.02HTR-01.01 Unit 2 Heat Trace</b>					
ST09 02HTR-01 01to	TO System to Start Up [Heat Trace (02HTR-01.01)]	16	100%	03-10-15 A	03-11-15 A
ST09 02HTR-01 01cp	Commission [Heat Trace (02HTR-01.01)]	40	100%	11-24-14 A	03-25-15 A
<b>T/O Packs: WTR Water T/O Packs</b>					
<b>T/O Packs: WTR.01EDS-02.01 Unit 1 Plant Drains- Lime Area</b>					
ST09 01EDS-02 01to	TO System to Start Up [Unit 1 Plant Drains-Lime Area(01EDS-02.01)]	8	100%	10-03-14 A	10-03-14 A
ST09 01EDS-02 01cs	Commission System [Unit 1 Plant Drains-Lime Area(01EDS-02.01)]	16	100%	11-25-14 A	11-26-14 A
<b>T/O Packs: WTR.01EDS-01.01 Unit 1 Plant Drains-AQCS</b>					
ST09 01EDS-01 01to	TO System to Start Up [Unit 1 Plant Drains-AQCS(01EDS-01.01)]	16	100%	04-29-14 A	04-29-14 A
ST09 01EDS-01 01cs	Commission System [Unit 1 Plant Drains-AQCS(01EDS-01.01)]	16	100%	05-08-14 A	05-09-14 A
<b>T/O Packs: WTR.01FD-01.01 Floor Drains - Unit 1</b>					
ST09 01FD-01 01to	TO System to Start Up [Floor Drains - Unit 1(01FD-01.01)]	16	100%	08-08-14 A	08-08-14 A
ST09 01FD-01 01mc	Mechanical Equip Pre-Comm Checks [Floor Drains - Unit 1(01FD-01.01)]	24	100%	11-17-14 A	11-19-14 A
ST09 01FD-01 01el	Electrical Equip Pre-Comm Checks [Floor Drains - Unit 1(01FD-01.01)]	24	100%	11-17-14 A	11-19-14 A
<b>T/O Packs: WTR.00AQW-01.01 AQCS Pond Water</b>					
AQC2001	T/O AQCS Pond Pumps to Start Up	20	100%	03-20-15 A	03-21-15 A
AQC2005	Commission AQCS Pond Pumps	40	100%	04-26-15 A	04-28-15 A
<b>T/O Packs: WTR.00SDS-01.01 Sanitary Drains System</b>					
ST09 00SDS-01 01to	TO System to Start Up [Sanitary Drain(00SDS-01.01)]	16	100%	03-23-15 A	03-24-15 A
ST09 00SDS-01 01cs	Commission System [Sanitary Drain(00SDS-01.01)]	16	100%	04-15-15 A	04-17-15 A
<b>T/O Packs: ASH Fly Ash T/O</b>					
<b>T/O Packs: ASH.01ADC-01.02 Unit 1 Hoppers &amp; Transport Piping</b>					
ST09 01ADC-01 02to	TO System to Start Up [Unit 1 Hoppers & Transport Piping (01ADC-01.02)]	16	100%	07-03-14 A	07-03-14 A
ST09 01ADC-01 02cs	Commission System [Unit 1 Hoppers & Transport Piping (01ADC-01.02)]	40	100%	09-25-14 A	01-02-15 A
<b>T/O Packs: ASH.01ADC-01.04 Unit 1 Unloading/Disposal</b>					
ST09 01ADC-01 04to	TO System to Start Up [Unloading/Disposal Unit 1 (01ADC-01.04)]	16	100%	08-20-14 A	08-20-14 A
ST09 01ADC-01 04cs	Commission System [Unloading/Disposal Unit 1 (01ADC-01.04)]	16	100%	04-08-15 A	04-17-15 A
<b>T/O Packs: ASH.00ADC-01.02 Spare Filter Separator</b>					
ST09 00ADC-01 02to	TO System to Start Up [Spare Filter Separator(00ADC-01.02)]	16	100%	09-05-14 A	09-05-14 A
ST09 00ADC-01 02cs	Commission System [Spare Filter Separator(00ADC-01.02)]	8	100%	04-08-15 A	04-17-15 A
<b>T/O Packs: FFS Fabric Filter T/O</b>					
<b>T/O Packs: FFS.01FFS-01.02 Unit 1 Cleaning Air Blowers</b>					
ST09 01FFS-01 02to	TO System to Start Up [Unit 1 Seal Air Blowers(01FFS-01.02)]	16	100%	08-19-14 A	08-19-14 A
ST09 01FFS-01 02cs	Commission System [Unit 1 Seal Air Blowers(01FFS-01.02)]	40	100%	11-24-14 A	03-06-15 A
<b>T/O Packs: FFS.01FFS-01.01 Unit 1 Fabric Filter</b>					
ST09 01FFS-01 01to	TO System to Start Up [Unit 1 Fabric Filter (01FFS-01.01)]	16	100%	08-19-14 A	08-19-14 A
ST09 01FFS-01 01ch	Commission Fabric Filters [Unit 1 Fabric (01FFS-01.01)]	40	100%	03-09-15 A	03-18-15 A
<b>T/O Packs: FAN ID Fan T/O Packs</b>					
<b>T/O Packs: FAN.01IDF-03.02 Fan 1C LO/Hyd system</b>					
ST09 01IDF-03 02to	TO System to Start Up [Fan 1C LO/Hyd System(01IDF-03.02)]	16	100%	08-22-14 A	08-22-14 A
ST09 01IDF-03 02cs	Commission System [Fan 1C LO/Hyd System(01IDF-03.02)]	40	100%	11-06-14 A	11-12-14 A
<b>T/O Packs: FAN.01IDF-02.02 Fan 1B LO/Hyd system</b>					
ST09 01IDF-02 02to	TO System to Start Up [Fan 1B LO/Hyd System(01IDF-02.02)]	16	100%	08-22-14 A	08-22-14 A
ST09 01IDF-02 02cs	Commission System [Fan 1B LO/Hyd System(01IDF-02.02)]	40	100%	11-06-14 A	11-12-14 A
<b>T/O Packs: FAN.01IDF-01.02 Fan 1A LO/Hyd system</b>					
ST09 01IDF-01 02to	TO System to Start Up [Fan 1A LO/Hyd System(01IDF-01.02)]	16	100%	08-22-14 A	08-22-14 A
ST09 01IDF-01 02cs	Commission System [Fan 1A LO/Hyd System(01IDF-01.02)]	40	100%	11-06-14 A	11-12-14 A
<b>T/O Packs: FAN.01IDF-01.01 ID Fan 1A</b>					
ST09 01IDF-01 01to	TO System to Start Up [ID Fan 1A(01IDF-01.01)]	16	100%	10-29-14 A	10-30-14 A
ST09 01IDF-01 01of	Operate Fans Pre-Outage [ID Fan 1A(01IDF-01.01)]	16	100%	03-11-15 A	03-12-15 A
<b>T/O Packs: FAN.01IDF-02.01 ID Fan 1B</b>					
ST09 01IDF-02 01to	TO System to Start Up [ID Fan 1B(01IDF-02.01)]	16	100%	10-22-14 A	10-22-14 A
ST09 01IDF-02 01of	Operate Fans Pre-Outage [ID Fan 1B(01IDF-02.01)]	40	100%	03-16-15 A	03-23-15 A
<b>T/O Packs: FAN.01IDF-03.01 ID Fan 1C</b>					
ST09 01IDF-03 01to	TO System to Start Up [ID Fan 1C(01IDF-03.01)]	16	100%	10-22-14 A	10-22-14 A
ST09 01IDF-03 01of	Operate Fans Pre-Outage [ID Fan 1C(01IDF-03.01)]	40	100%	02-24-15 A	02-25-15 A

# KCP&L LaCygne Unit 1 Construction Completion & Commissioning Status

Activity ID	Activity Name	Original Duration	% Complete	Start	Finish
<b>T/O Packs: FGD FGD T/O Packs</b>					
<b>T/O Packs: FGD.01FGD-01.01 Unit 1 Fuel Gas Desulfurization</b>					
ST09 01FGD-01.01to	TO System to Start Up [Unit 1 Fuel Gas Desulfurization(01FGD-01.01)]	16	100%	10-17-14 A	10-17-14 A
ST09 01FGD-01.01cs	Commission System [Unit 1 Fuel Gas Desulfurization(01FGD-01.01)]	40	100%	03-16-15 A	03-20-15 A
<b>T/O Packs: FGD.01ARS-01.01 Unit 1 Absorber Recycle System</b>					
ST09 01ARS-01.01to	TO System to Start Up [Unit 1 Absorber Recycle System(01ARS-01.01)]	16	100%	08-28-14 A	08-28-14 A
ST09 01ARS-01.01cs	Commission System [Unit 1 Absorber Recycle System(01ARS-01.01)]	16	100%	03-16-15 A	03-16-15 A
<b>T/O Packs: FGD.01MEW-01.01 Unit 1 Mist Eliminator WAS Water System</b>					
ST09 01MEW-01.01to	TO System to Start Up [Unit 1 Mist Eliminator Wash Water System(01MEW-01.01)]	16	100%	08-11-14 A	08-11-14 A
ST09 01MEW-01.01cs	Commission System [Unit 1 Mist Eliminator Wash Water System(01MEW-01.01)]	40	100%	03-16-15 A	03-23-15 A
<b>T/O Packs: FGD.01OAS-01.01 Unit 1 Oxidation Air System</b>					
ST09 01OAS-01.01to	TO System to Start Up [Unit 1 Oxidation Air System(01OAS-01.01)]	16	100%	07-30-14 A	07-30-14 A
ST09 01OAS-01.01cs	Commission System [Unit 1 Oxidation Air System(01OAS-01.01)]	16	100%	04-27-15 A	04-28-15 A
<b>T/O Packs: FGD.01ABL-01.01 Unit 1 Absorber Bleed System</b>					
ST09 01ABL-01.01to	TO System to Start Up [Unit 1 Absorber Bleed System(01ABL-01.01)]	16	100%	08-16-14 A	08-16-14 A
ST09 01ABL-01.01cs	Commission System [Unit 1 Absorber Bleed System(01ABL-01.01)]	40	100%	03-16-15 A	03-23-15 A
<b>T/O Packs: GYP Gypsum T/O Packs</b>					
<b>T/O Packs: GYP.01GDS-01.01 Unit 1 Gypsum Dewatering system</b>					
ST09 01GDS-01.01to	TO System to Start Up [Unit 1 Gypsum Dewatering System(01GDS-01.01)]	16	100%	08-07-14 A	08-07-14 A
ST09 01GDS-01.01cs	Commission System [Unit 1 Gypsum Dewatering System(01GDS-01.01)]	40	100%	12-08-14 A	12-12-14 A
<b>T/O Packs: OUT Outage T/O Packs</b>					
<b>T/O Packs: OUT.00WTS-01.02 Water Treatment U1 Outage (Existing Equipment)</b>					
WTR2002	T/O Water Treatment DCS to Start Up	20	100%	03-11-15 A	03-12-15 A
WTR2032	Commission DCS Water Treatment System	120	100%	03-22-15 A	03-28-15 A
<b>T/O Packs: OUT.01GRD-01.01 Unit 1&amp; 2 Ground Grid</b>					
ST09 01GRD-01.01to	TO System to Start Up [Ground Grid Unit 1(01GRD-01.01)]	16	100%	08-19-14 A	08-19-14 A
ST09 01GRD-01.01gc	Ground Checks [Ground Grid Unit 1(01GRD-01.01)]	8	100%	11-03-14 A	11-03-14 A
<b>T/O Packs: OUT.01MRS-01.02 Unit 1 Tie Ins/ Outage (MRS)</b>					
ST09 01MRS-01.02to	TO System to Start Up [Mercury Removal Unit 1 Outage Tie-ins(01MRS-01.02)]	16	100%	03-20-15 A	03-20-15 A
ST09 01MRS-01.02n	Instrumentation Pre-Comm Checks [Mercury Removal Unit 1 Outage Tie-ins(01MRS-01.02)]	8	100%	03-30-15 A	04-17-15 A
ST09 01MRS-01.02mc	Mechanical Equip Pre-Comm Checks [Mercury Removal Unit 1 Outage Tie-ins(01MRS-01.02)]	8	100%	03-30-15 A	04-17-15 A
ST09 01MRS-01.02el	Electrical Equip Pre-Comm Checks [Mercury Removal Unit 1 Outage Tie-ins(01MRS-01.02)]	8	100%	03-30-15 A	04-17-15 A
<b>T/O Packs: OUT.01CEMS-01.01 Unit 1 CEMS</b>					
ST09 01CEM-01.01to	TO System to Start Up [Unit 1 CEMS(01CEM-01.01)]	16	100%	02-12-15 A	02-13-15 A
ST09 01CEM-01.01ct	Certification Testing [Unit 1 CEMS(01CEM-01.01)]	56	100%	03-27-15 A	04-03-15 A
<b>T/O Packs: OUT.01IDF-01.03 Unit 1 Flue Gas Duct and Outage Tie-Ins</b>					
ST09 01IDF-01.03mc	Mechanical Equip Pre-Comm Checks [Unit 1 Flue Gas Duct and Outage Tie-Ins(01IDF-01.03)]	8	100%	03-11-15 A	03-11-15 A
ST09 01IDF-01.03el	Electrical Equip Pre-Comm Checks [Unit 1 Flue Gas Duct and Outage Tie-Ins(01IDF-01.03)]	8	100%	03-11-15 A	03-11-15 A
ST09 01IDF-01.03to	TO System to Start Up [Unit 1 Flue Gas Duct and Outage Tie-Ins(01IDF-01.03)]	16	100%	03-10-15 A	03-11-15 A
ST09 01IDF-01.03n	Instrumentation Pre-Comm Checks [Unit 1 Flue Gas Duct and Outage Tie-Ins(01IDF-01.03)]	8	100%	10-23-14 A	03-13-15 A
<b>T/O Packs: OUT.01CMY01-01 Unit 1 Chimney</b>					
ST09 01CMY-01.01to	TO System to Start Up [Unit 1 Flue Gas Duct and Outage Tie-Ins(01CMY-01.01)]	16	100%	06-25-14 A	06-25-14 A
ST09 01CMY-01.01n	Instrumentation Pre-Comm Checks [Unit 1 Flue Gas Duct and Outage Tie-Ins(01CMY-01.01)]	8	100%	07-14-14 A	07-14-14 A
ST09 01CMY-01.01mc	Mechanical Equip Pre-Comm Checks [Unit 1 Flue Gas Duct and Outage Tie-Ins(01CMY-01.01)]	8	100%	07-14-14 A	07-14-14 A
ST09 01CMY-01.01el	Electrical Equip Pre-Comm Checks [Unit 1 Flue Gas Duct and Outage Tie-Ins(01CMY-01.01)]	8	100%	07-14-14 A	07-14-14 A

## **Attachment C. Continuous Emission Monitoring Verification**



# Relative Accuracy Determination

Test Performed For:  
 KCP&L  
 LaCygne  
 Unit 1  
 RATA  
 Date:4/15/15

Test Performed By:  
 C.E.M. Solutions, Inc.  
 Source Test Team  
 8196 Nieman Road  
 Lenexa, Ks 66214

Run Number	Date of Run	Start Time	Stop Time	Unit Load MW	SO <sub>2</sub> RM DRY ppm	SO <sub>2</sub> CEM DRY ppm	Difference Like ppm
Run 1	15-Apr	7:15:00	8:04:00	700	7.1	10.6	-3.5
Run 2	15-Apr	8:38:00	8:59:00	700	9.3	11.2	-1.9
Run 3	15-Apr	9:19:00	9:40:00	700	9.7	11.5	-1.8
Run 4	15-Apr	10:02:00	10:23:00	700	9.8	11.3	-1.5
Run 5	15-Apr	10:43:00	11:04:00	701	10.1	11.4	-1.3
Run 6	15-Apr	11:31:00	11:52:00	700	10.1	11.5	-1.4
Run 7	15-Apr	12:13:00	12:34:00	700	9.3	10.6	-1.3
Run 8	15-Apr	12:59:00	13:20:00	700	9.7	10.7	-1.0
Run 9	15-Apr	13:40:00	14:01:00	700	9.5	10.5	-1.0
Run 10	15-Apr	14:22:00	14:43:00	701	9.0	10.0	-1.0

Average: 700 9.4 ppm 10.9 ppm -1.6 ppm

**Bias Test (pass/fail): Low Emitter-Passed**  
**Bias Adjustment Factor: 1.000**  
**Method of RA Determination: Part 75, Low Emitter**

Standard Deviation: 0.7484  
 Confidence Coefficient: 0.5353  
 T-Factor: 2.262  
 Number of runs Reported: 10

**Relative Accuracy: 1.570**  
**Maximum RA 15.00**  
**RA Status Passed**

KCP&L La Cygne  
 RATA Results  
 April 15, 2015

C.E.M. Solutions, Inc.  
 Report: 20-8361-01.001  
 Last Updated: 5/23/2015

# Relative Accuracy Determination

Test Performed For:  
 KCP&L  
 LaCygne  
 Unit 1  
 RATA  
 Date:4/15/15

Test Performed By:  
 C.E.M. Solutions, Inc.  
 Source Test Team  
 8196 Nieman Road  
 Lenexa, Ks 66214

Run Number	Date of Run	Start Time	Stop Time	Unit Load MW	CO2 RM DRY % V/V	CO2 CEM DRY % V/V	CO2 Difference Like % V/V
Run 1	15-Apr	7:15:00	8:04:00	700	9.9	10.1	-0.2
Run 2	15-Apr	8:38:00	8:59:00	700	10.1	10.1	0.0
Run 3	15-Apr	9:19:00	9:40:00	700	10.0	10.1	-0.1
Run 4	15-Apr	10:02:00	10:23:00	700	10.0	10.0	0.0
Run 5	15-Apr	10:43:00	11:04:00	701	10.0	10.0	0.0
Run 6	15-Apr	11:31:00	11:52:00	700	10.0	10.0	0.0
Run 7	15-Apr	12:13:00	12:34:00	700	10.0	10.0	0.0
Run 8	15-Apr	12:59:00	13:20:00	700	10.1	10.1	0.0
Run 9	15-Apr	13:40:00	14:01:00	700	10.0	10.0	0.0
Run 10	15-Apr	14:22:00	14:43:00	701	10.2	10.2	0.0
Average:				700	10.0 %	10.1 %	0.0 %

**Bias Test (pass/fail): Passed**  
**Bias Adjustment Factor: 1.000**  
**Method of RA Determination: Part 75, Average RM Value**

Standard Deviation: 0.0675  
 Confidence Coefficient: 0.0483  
 T-Factor: 2.262  
 Number of runs Reported: 10

**Relative Accuracy: 0.8**  
**Maximum RA 10.0**  
**RA Status Passed**

KCP&L La Cygne  
 RATA Results  
 April 15, 2015

C.E.M. Solutions, Inc.  
 Report: 20-8361-01.001  
 Last Updated: 5/23/2015



May 11, 2015

Rick L. Lausman, P.E.  
Air Quality Control Engineer  
B&V Energy  
11401 Lamar Avenue  
Overland Park, KS 66211

Subject: Results of KCP&L LaCygne Unit 1 Total Particulate Testing

Dear Mr. Lausman,

On March 17<sup>th</sup> and 18<sup>th</sup>, 2015 C.E.M. Solutions performed emissions testing for total Particulate Matter (PM) on the Unit 1 exhaust of Kansas City Power & Light (KCP&L) Company's LaCygne Generating Station. Testing was performed while the unit was operating at full load.

#### **Facility Description**

LaCygne Unit 1 is a dry bottom wall fired boiler rated at 810 MW. Primary fuel for Unit No. 1 is blend of approximately 90% Powder River Basin coal and 10% Missouri/Kansas coal. Number 2 fuel oil may be burned as a startup fuel and for low load flame stabilization.

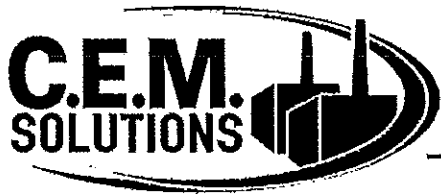
Emissions are controlled from Unit #2 with low NO<sub>x</sub> burners, Selective Catalytic Reduction (SCR) for NO<sub>x</sub>, a wet Flue Gas Desulfurization (FGD) system for SO<sub>2</sub> control, activated carbon injection for mercury (Hg) control, and a baghouse for particulate matter control. Emissions are exhausted through an approximately 604 ft. tall stack.

The facility has a Continuous Emissions Monitoring Systems (CEMS) installed at the stack location, adjacent to the PM test ports. The stack CEMS consists of a dilution extractive NO<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub> system. Flow and Particulates are also monitored at this location on a continuous basis.

#### **Test Methods**

All testing was performed by C.E.M. Solutions in accordance with methods approved by the USEPA. The following discusses the test methods employed.

EPA Method 5B (M5B) was used to determine filterable particulate emissions. Stack gas-samples were extracted isokinetically. Gas samples were extracted from the stack through a nozzle, heated glass lined probe and heated filter to an impinger train. Both the probe and filter were maintained at a nominal temperature of 320° F (± 25° F).



USEPA Method 202 was used to determine condensable particulate matter emissions. Stack gas was extracted isokinetically from the gas stream. Condensable particulate emissions are collected in water dropout impingers and on a Teflon filter, after filterable particulate matter has been removed on the method 5B glass fiber filter. The exit temperature of the Teflon filter was maintained at a temperature below 85° F for the duration of each test.

**Test Results**

PM was measured for a total sampling time of 60 minutes for each of three test runs. Total filterable particulate was determined using U.S. EPA method 5B. For the purposes of this test series, all filterable particulate matter was considered to be 10 microns or less in particle size. Condensable particulate was measured using RM202 concurrent with the M5B tests as part of the filterable particulate sampling train. Table 1 presents the individual test run results and the average of each measured parameter.

**Table 1: Test Results  
KCP&L LaCygne  
Unit 1**

Pollutant	Test Result			
	Run 1	Run 2	Run 3	Average
Date/Time	4/17/2015 15:30 – 16:36	4/17/2015 17:15 – 18:21	4/18/2015 8:55 – 10:05	-
Unit Load (MWe)	776	776	775	776
Filterable Particulate Matter (lb/mmBtu) <sup>a</sup>	0.0039	0.0045	0.0046	0.0043
Condensable Particulate Matter (lb/mmBtu) <sup>a</sup>	0.0021	0.0086	0.0037	0.0048
Total PM <sub>10</sub> (lb/mmBtu) <sup>b</sup>	0.0061	0.0131	0.0083	0.0092

<sup>a</sup> Filterable Particulate was measured using RM5B, Condensable Particulate was measured using RM202  
<sup>b</sup> Sum of Filterable and Condensable PM



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Supporting test data and quality assurance results for the tests performed by C.E.M. solutions are included in a complete test report under separate cover.

Should you have any questions, please do not hesitate to contact me at my office (913) 438-7744 or my cell phone (919) 417-2148.

Sincerely,

Walter Gray  
Source Testing Operations Manager  
Lenexa, Kansas

Determination of Total PM to Filterable PM Correlation Factor  
 Particulate Matter Emissions Summary  
 KCP&L LaCygne -Unit 1  
 April 17 and 18, 2015

Run I.D.	Start Time	End Time	Filterable Particulate Matter (lb/mmBtu)	Condensable Particulate Matter (lb/mmBtu)	Total Particulate Matter (lb/mmBtu)
1	15:30	16:36	0.0041	0.0023	0.0064
2	17:15	18:21	0.0047	0.0092	0.0139
3	8:55	10:05	0.0048	0.0038	0.0086
3 Test Total			0.0136	0.0153	0.0289
3 test average			0.0045	0.0051	0.0096

Determine CF from combined totals

$$\frac{0.02890}{0.01360} =$$

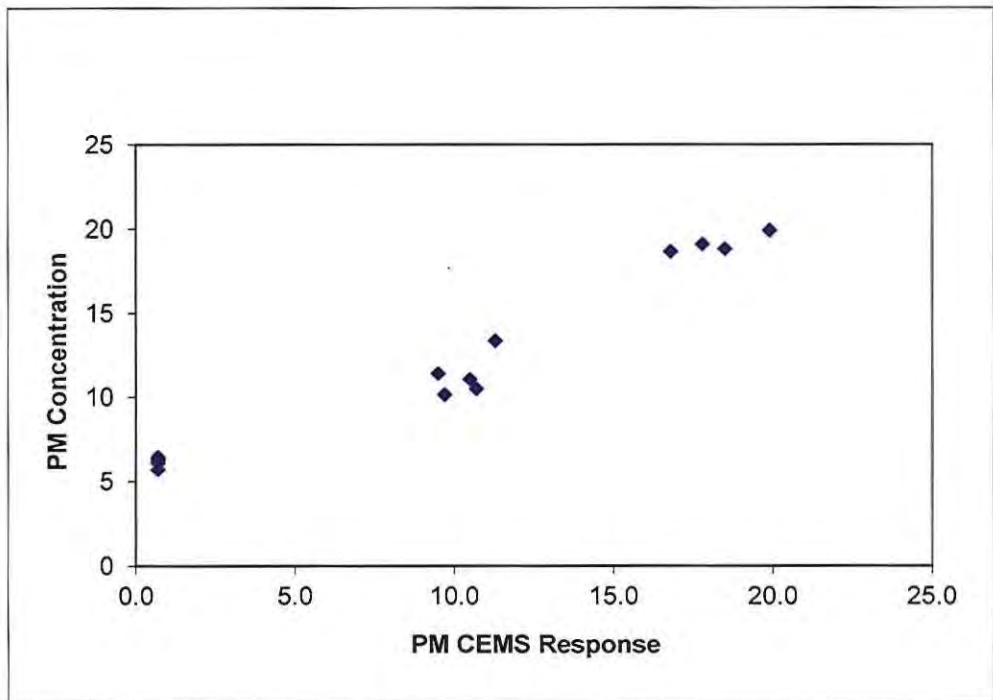
Correlation  
Factor  
2.13

**CORRELATION TEST PM CEMS AND REFERENCE METHOD TEST DATA**

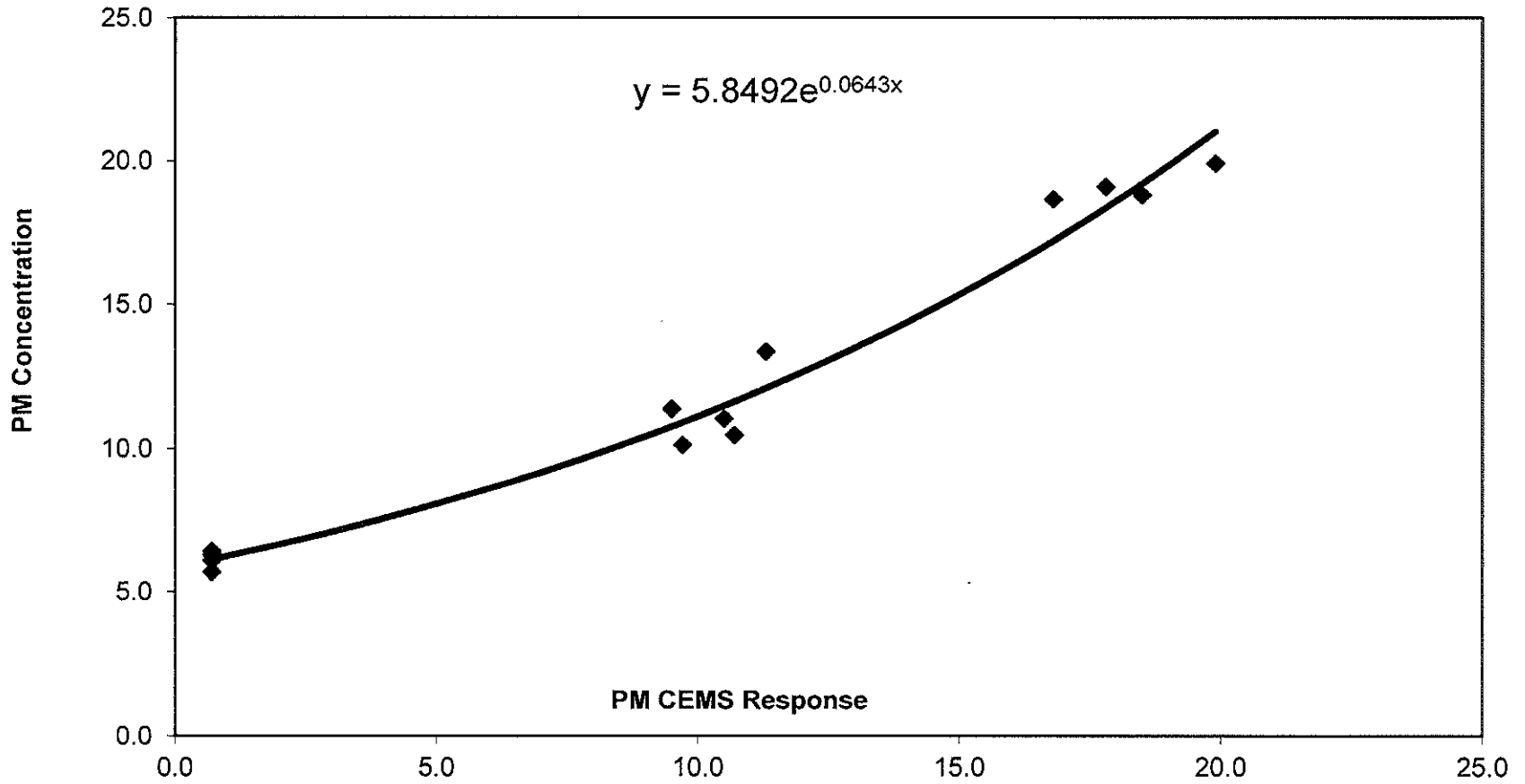
Run	PM CEMS response	PM concentration mg/acm
	x	y
1	0.7	6.1
2	0.7	6.42
3	0.7	6.32
4	0.7	6.07
5	0.7	6.24
6	0.7	5.7
7	18.5	18.81
8	16.8	18.66
9	17.8	19.1
10		
11	19.9	19.91
12		
13		
14	9.5	11.38
15	10.5	11.05
16	9.7	10.13
17	11.3	13.37
18	10.7	10.47
19		
20		

Facility: La Cygne Station  
 Location: La Cygne, Kansas  
 Emission Unit: Boiler No. 1  
 Test Dates: April 22-23, 2015

Emission limit:          Value          Units  
    25          mg/acm



Plot of Exponential Regression Curve





# 1-Minute Data Report



From: 04/17/2015 14:30 To: 04/17/2015 15:36 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:11 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOx, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, Mwe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOX, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/17/2015 14:30	0.060	0.028	776.0	10.3	28.1	9.3
04/17/2015 14:31	0.059	0.028	776.5	10.3	27.8	9.4
04/17/2015 14:32	0.061	0.028	775.9	10.3	28.5	9.3
04/17/2015 14:33	0.063	0.028	776.0	10.3	29.4	9.3
04/17/2015 14:34	0.064	0.027	775.4	10.3	29.8	9.2
04/17/2015 14:35	0.064	0.027	776.0	10.3	30.2	9.2
04/17/2015 14:36	0.065	0.027	775.2	10.3	30.3	9.2
04/17/2015 14:37	0.065	0.027	774.4	10.3	30.3	9.2
04/17/2015 14:38	0.065	0.028	775.4	10.3	30.5	9.4
04/17/2015 14:39	0.067	0.028	776.0	10.3	31.3	9.4
04/17/2015 14:40	0.068	0.028	775.9	10.3	32.1	9.6
04/17/2015 14:41	0.070	0.029	775.4	10.3	33.0	9.7
04/17/2015 14:42	0.073	0.029	775.3	10.3	34.4	9.8
04/17/2015 14:43	0.075	0.029	775.9	10.3	35.3	9.8
04/17/2015 14:44	0.067	0.029	775.1	10.3	31.3	9.9
04/17/2015 14:45	0.062	0.029	775.3	10.3	29.3	9.9
04/17/2015 14:46	0.064	0.027	777.0	9.1	26.7	8.1
04/17/2015 14:47	0.064	0.028	777.9	10.2	29.8	9.5
04/17/2015 14:48	0.064	0.028	777.4	10.2	29.7	9.4
04/17/2015 14:49	0.064	0.028	776.4	10.3	29.9	9.5
04/17/2015 14:50	0.065	0.028	776.8	10.3	30.7	9.5
04/17/2015 14:51	0.067	0.028	776.4	10.3	31.2	9.4
04/17/2015 14:52	0.064	0.028	776.4	10.3	30.1	9.5
04/17/2015 14:53	0.058	0.028	775.4	10.3	27.1	9.5
04/17/2015 14:54	0.056	0.028	775.9	10.3	26.1	9.5
04/17/2015 14:55	0.054	0.028	776.3	10.3	25.1	9.5
04/17/2015 14:56	0.054	0.028	775.9	10.3	25.2	9.6
04/17/2015 14:57	0.055	0.029	775.6	10.3	25.6	9.7
04/17/2015 14:58	0.058	0.029	776.1	10.3	27.1	9.7
04/17/2015 14:59	0.065	0.029	775.0	10.3	30.6	9.8

# 1-Minute Data Report



From: 04/17/2015 14:30 To: 04/17/2015 15:36 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:11 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOx, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, Mwe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOx, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/17/2015 15:00	0.067	0.029	775.3	10.3	31.2	9.7
04/17/2015 15:01	0.068	0.028	775.3	10.3	31.7	9.6
04/17/2015 15:02	0.070	0.029	775.8	10.2	32.3	9.6
04/17/2015 15:03	0.070	0.029	775.8	10.2	32.5	9.7
04/17/2015 15:04	0.068	0.029	776.1	10.3	31.8	9.7
04/17/2015 15:05	0.067	0.029	776.0	10.3	31.5	9.9
04/17/2015 15:06	0.068	0.030	776.1	10.3	31.9	10.0
04/17/2015 15:07	0.068	0.030	775.2	10.3	32.1	10.1
04/17/2015 15:08	0.069	0.030	775.8	10.3	32.2	10.1
04/17/2015 15:09	0.069	0.030	775.3	10.3	32.3	10.1
04/17/2015 15:10	0.069	0.030	776.0	10.3	32.4	10.0
04/17/2015 15:11	0.068	0.030	775.2	10.3	32.1	10.0
04/17/2015 15:12	0.069	0.030	775.1	10.3	32.2	10.0
04/17/2015 15:13	0.069	0.029	775.9	10.3	32.2	9.9
04/17/2015 15:14	0.068	0.029	775.1	10.3	31.8	9.9
04/17/2015 15:15	0.067	0.029	774.9	10.3	31.5	9.8
04/17/2015 15:16	0.067	0.029	774.7	10.3	31.3	9.8
04/17/2015 15:17	0.066	0.029	774.7	10.3	30.9	9.7
04/17/2015 15:18	0.064	0.028	775.1	10.3	30.2	9.6
04/17/2015 15:19	0.063	0.029	775.4	10.3	29.7	9.7
04/17/2015 15:20	0.065	0.029	775.5	10.3	30.3	9.8
04/17/2015 15:21	0.068	0.029	775.6	10.3	32.0	9.8
04/17/2015 15:22	0.071	0.029	774.2	10.3	33.5	9.9
04/17/2015 15:23	0.075	0.030	774.1	10.3	35.1	10.0
04/17/2015 15:24	0.077	0.030	773.7	10.2	35.6	10.0
04/17/2015 15:25	0.069	0.030	774.3	10.3	32.4	10.0
04/17/2015 15:26	0.068	0.030	774.4	10.3	32.1	10.0
04/17/2015 15:27	0.068	0.029	775.0	10.3	31.9	9.9
04/17/2015 15:28	0.068	0.029	775.2	10.3	31.7	9.7
04/17/2015 15:29	0.068	0.029	775.0	10.3	32.0	9.7

# 1-Minute Data Report



From: 04/17/2015 14:30 To: 04/17/2015 15:36 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:11 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOx, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, MWe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOx, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/17/2015 15:30	0.068	0.029	773.9	10.3	32.1	9.7
04/17/2015 15:31	0.067	0.029	774.5	10.3	31.4	9.7
04/17/2015 15:32	0.064	0.029	775.1	10.3	29.9	9.9
04/17/2015 15:33	0.061	0.030	775.1	10.3	28.8	10.1
04/17/2015 15:34	0.061	0.030	775.6	10.3	28.7	10.2
04/17/2015 15:35	0.074	0.031	775.8	10.3	34.5	10.4
04/17/2015 15:36	0.085	0.031	777.1	10.3	39.8	10.6

Valid Data Points:	60	60	67	60	60	60
Average:	0.066	0.029	775.5	10.3	31.1	9.8

# 1-Minute Data Report



From: 04/17/2015 16:15 To: 04/17/2015 17:21 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:16 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOX, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, Mwe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOX, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/17/2015 16:15	0.091	0.029	776.5	10.2	42.3	9.8
04/17/2015 16:16	0.094	0.030	776.2	10.2	43.6	9.9
04/17/2015 16:17	0.089	0.030	776.0	10.3	41.5	10.0
04/17/2015 16:18	0.078	0.030	776.4	10.3	36.7	10.1
04/17/2015 16:19	0.076	0.030	776.3	10.3	35.4	10.2
04/17/2015 16:20	0.071	0.030	774.7	10.3	33.1	10.1
04/17/2015 16:21	0.060	0.030	776.0	10.3	28.2	10.0
04/17/2015 16:22	0.058	0.029	775.6	10.3	27.4	9.8
04/17/2015 16:23	0.060	0.029	776.2	10.3	28.1	9.8
04/17/2015 16:24	0.062	0.029	775.5	10.3	29.2	9.8
04/17/2015 16:25	0.065	0.029	775.5	10.3	30.5	9.8
04/17/2015 16:26	0.067	0.029	775.2	10.3	31.3	9.9
04/17/2015 16:27	0.067	0.030	775.3	10.3	31.3	10.0
04/17/2015 16:28	0.062	0.029	775.2	10.3	29.0	9.9
04/17/2015 16:29	0.059	0.029	775.7	10.3	27.6	9.9
04/17/2015 16:30	0.057	0.029	775.0	10.3	26.7	9.9
04/17/2015 16:31	0.056	0.029	775.0	10.3	26.1	9.9
04/17/2015 16:32	0.057	0.029	776.0	10.3	26.5	9.9
04/17/2015 16:33	0.059	0.029	776.4	10.3	27.7	9.9
04/17/2015 16:34	0.061	0.029	775.6	10.3	28.5	9.9
04/17/2015 16:35	0.061	0.029	775.2	10.3	28.4	9.9
04/17/2015 16:36	0.059	0.029	774.9	10.3	27.7	9.8
04/17/2015 16:37	0.059	0.029	774.6	10.3	27.7	9.7
04/17/2015 16:38	0.060	0.029	775.8	10.3	28.3	9.7
04/17/2015 16:39	0.062	0.029	775.2	10.3	29.0	9.7
04/17/2015 16:40	0.069	0.029	775.4	10.3	32.4	9.8
04/17/2015 16:41	0.071	0.029	775.1	10.3	33.1	9.9
04/17/2015 16:42	0.084	0.030	775.2	10.3	39.2	10.1
04/17/2015 16:43	0.087	0.030	774.5	10.3	40.7	10.2
04/17/2015 16:44	0.087	0.031	775.2	10.3	41.0	10.3

# 1-Minute Data Report



From: 04/17/2015 16:15 To: 04/17/2015 17:21 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:16 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOX, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, Mwe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOX, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/17/2015 16:45	0.089	0.031	774.2	10.2	41.3	10.5
04/17/2015 16:46	0.085	0.029	774.4	9.2	35.5	8.6
04/17/2015 16:47	0.077	0.029	774.4	10.2	35.6	9.7
04/17/2015 16:48	0.072	0.030	774.8	10.3	33.6	10.0
04/17/2015 16:49	0.062	0.029	774.7	10.3	29.2	9.7
04/17/2015 16:50	0.061	0.029	774.6	10.3	28.4	9.7
04/17/2015 16:51	0.060	0.029	774.0	10.3	28.0	9.7
04/17/2015 16:52	0.058	0.029	774.5	10.3	27.1	9.7
04/17/2015 16:53	0.056	0.029	775.0	10.3	26.2	9.8
04/17/2015 16:54	0.062	0.029	775.4	10.3	29.0	9.8
04/17/2015 16:55	0.066	0.029	775.0	10.3	31.1	9.9
04/17/2015 16:56	0.067	0.030	776.0	10.3	31.3	10.0
04/17/2015 16:57	0.068	0.030	775.6	10.3	31.7	10.1
04/17/2015 16:58	0.067	0.030	775.9	10.3	31.6	10.1
04/17/2015 16:59	0.065	0.030	775.8	10.3	30.7	10.1
04/17/2015 17:00	0.065	0.030	775.6	10.3	30.5	10.1
04/17/2015 17:01	0.067	0.030	775.8	10.3	31.2	10.2
04/17/2015 17:02	0.068	0.031	776.1	10.3	31.8	10.3
04/17/2015 17:03	0.068	0.031	776.8	10.3	32.0	10.3
04/17/2015 17:04	0.067	0.030	776.9	10.3	31.5	10.2
04/17/2015 17:05	0.066	0.030	777.1	10.3	30.8	10.2
04/17/2015 17:06	0.065	0.030	776.8	10.3	30.4	10.0
04/17/2015 17:07	0.064	0.029	776.9	10.3	30.1	9.9
04/17/2015 17:08	0.062	0.029	777.3	10.3	29.0	9.8
04/17/2015 17:09	0.059	0.029	776.2	10.3	27.5	9.9
04/17/2015 17:10	0.057	0.029	775.9	10.3	26.7	9.9
04/17/2015 17:11	0.055	0.030	776.6	10.3	26.0	10.1
04/17/2015 17:12	0.056	0.030	776.3	10.3	26.1	10.2
04/17/2015 17:13	0.058	0.030	776.3	10.3	27.1	10.2
04/17/2015 17:14	0.059	0.030	775.5	10.3	27.7	10.2

# 1-Minute Data Report



From: 04/17/2015 16:15 To: 04/17/2015 17:21 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:16 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOX, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, Mwe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOX, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/17/2015 17:15	0.061	0.031	776.6	10.3	28.4	10.3
04/17/2015 17:16	0.067	0.030	776.6	10.3	31.2	10.2
04/17/2015 17:17	0.070	0.030	776.7	10.3	32.6	10.2
04/17/2015 17:18	0.068	0.030	775.1	10.3	31.7	10.2
04/17/2015 17:19	0.068	0.030	775.5	10.3	31.9	10.2
04/17/2015 17:20	0.069	0.030	775.8	10.3	32.4	10.2
04/17/2015 17:21	0.070	0.031	775.6	10.3	32.7	10.3

Valid Data Points:	60	60	67	60	60	60
Average:	0.067	0.030	775.6	10.3	31.2	10.0

# 1-Minute Data Report



From: 04/18/2015 07:55 To: 04/18/2015 09:05 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:15 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOx, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, Mwe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOx, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/18/2015 07:55	0.070	0.031	775.1	10.3	32.6	10.5
04/18/2015 07:56	0.072	0.031	775.8	10.3	33.9	10.6
04/18/2015 07:57	0.075	0.031	775.6	10.3	35.2	10.5
04/18/2015 07:58	0.056	0.028	776.4	4.6	11.8	4.2
04/18/2015 07:59	0.076	0.030	776.3	10.0	34.7	9.7
04/18/2015 08:00	0.073	0.031	776.0	10.3	34.3	10.4
04/18/2015 08:01	0.073	0.030	774.9	10.3	34.1	10.0
04/18/2015 08:02	0.072	0.030	775.4	10.3	33.7	10.0
04/18/2015 08:03	0.071	0.030	775.7	10.3	33.5	10.1
04/18/2015 08:04	0.070	0.030	775.2	10.3	32.8	10.1
04/18/2015 08:05	0.067	0.030	774.7	10.4	31.9	10.2
04/18/2015 08:06	0.067	0.030	774.7	10.4	31.9	10.2
04/18/2015 08:07	0.071	0.030	774.9	10.3	33.1	10.2
04/18/2015 08:08	0.072	0.030	774.9	10.3	33.9	10.2
04/18/2015 08:09	0.072	0.031	774.3	10.3	33.9	10.4
04/18/2015 08:10	0.073	0.031	774.7	10.3	34.1	10.4
04/18/2015 08:11	0.074	0.031	774.5	10.3	34.8	10.5
04/18/2015 08:12	0.077	0.031	774.9	10.3	35.9	10.5
04/18/2015 08:13	0.079	0.031	775.9	10.3	37.2	10.5
04/18/2015 08:14	0.087	0.031	775.2	10.3	40.9	10.5
04/18/2015 08:15	0.088	0.031	774.8	10.3	41.4	10.5
04/18/2015 08:16	0.086	0.031	773.8	10.3	40.4	10.5
04/18/2015 08:17	0.084	0.031	775.0	10.3	39.4	10.6
04/18/2015 08:18	0.082	0.031	775.6	10.3	38.4	10.6
04/18/2015 08:19	0.079	0.031	775.4	10.3	37.2	10.6
04/18/2015 08:20	0.076	0.031	774.7	10.3	35.4	10.5
04/18/2015 08:21	0.074	0.031	774.7	10.3	34.8	10.4
04/18/2015 08:22	0.073	0.031	775.1	10.3	34.4	10.3
04/18/2015 08:23	0.071	0.031	775.1	10.3	33.3	10.3
04/18/2015 08:24	0.067	0.031	774.7	10.3	31.4	10.4

# 1-Minute Data Report



From: 04/18/2015 07:55 To: 04/18/2015 09:05 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:15 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOX, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, Mwe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOX, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/18/2015 08:25	0.065	0.031	775.3	10.3	30.3	10.4
04/18/2015 08:26	0.064	0.031	775.1	10.3	29.8	10.3
04/18/2015 08:27	0.063	0.031	775.0	10.3	29.4	10.3
04/18/2015 08:28	0.061	0.030	775.4	10.3	28.8	10.2
04/18/2015 08:29	0.061	0.030	775.7	10.3	28.5	10.1
04/18/2015 08:30	0.062	0.030	775.5	10.3	29.0	10.1
04/18/2015 08:31	0.063	0.030	775.5	10.3	29.7	10.1
04/18/2015 08:32	0.064	0.030	776.3	10.3	30.2	10.1
04/18/2015 08:33	0.066	0.030	776.4	10.3	30.8	10.1
04/18/2015 08:34	0.067	0.030	775.9	10.3	31.6	10.2
04/18/2015 08:35	0.069	0.030	776.4	10.3	32.5	10.2
04/18/2015 08:36	0.070	0.031	776.1	10.3	32.7	10.3
04/18/2015 08:37	0.068	0.031	776.0	10.3	32.0	10.3
04/18/2015 08:38	0.065	0.031	776.4	10.3	30.7	10.4
04/18/2015 08:39	0.063	0.031	775.8	10.3	29.6	10.3
04/18/2015 08:40	0.062	0.031	775.8	10.3	29.2	10.3
04/18/2015 08:41	0.062	0.031	776.4	10.3	29.3	10.3
04/18/2015 08:42	0.063	0.030	776.5	10.3	29.6	10.2
04/18/2015 08:43	0.063	0.030	776.0	10.3	29.5	10.2
04/18/2015 08:44	0.064	0.031	776.3	10.3	29.9	10.3
04/18/2015 08:45	0.066	0.031	775.1	10.3	30.8	10.4
04/18/2015 08:46	0.066	0.031	774.3	10.3	31.0	10.5
04/18/2015 08:47	0.063	0.031	774.0	10.3	29.7	10.6
04/18/2015 08:48	0.062	0.031	774.3	10.3	29.2	10.6
04/18/2015 08:49	0.065	0.031	774.5	10.3	30.3	10.6
04/18/2015 08:50	0.067	0.031	774.8	10.2	31.0	10.4
04/18/2015 08:51	0.067	0.031	775.1	10.3	31.3	10.4
04/18/2015 08:52	0.067	0.031	775.9	10.3	31.3	10.3
04/18/2015 08:53	0.065	0.031	775.9	10.3	30.7	10.3
04/18/2015 08:54	0.064	0.031	775.4	10.3	29.8	10.3



# 1-Minute Data Report



From: 04/18/2015 07:55 To: 04/18/2015 09:05 Facility Name: LA CYGNE STATION  
 Generated: 04/30/2015 12:15 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

Red = Sample Invalid

Date/Time	Unit 1 NOx, LbPerMBtu 1 Minute(s)	Unit 1 SO2, LbPerMBtu 1 Minute(s)	Unit 1 Load, MWe 1 Minute(s)	Unit 1 CO2, Pct 1 Minute(s)	Unit 1 NOx, Ppm 1 Minute(s)	Unit 1 SO2, Ppm 1 Minute(s)
04/18/2015 08:55	0.062	0.031	775.1	10.3	29.1	10.3
04/18/2015 08:56	0.060	0.030	775.4	10.3	28.1	10.2
04/18/2015 08:57	0.060	0.030	775.3	10.2	27.7	10.1
04/18/2015 08:58	0.047	0.028	775.2	4.6	9.8	4.2
04/18/2015 08:59	0.060	0.029	774.7	10.0	27.2	9.5
04/18/2015 09:00	0.059	0.031	775.5	10.3	27.6	10.3
04/18/2015 09:01	0.060	0.031	775.0	10.3	28.3	10.3
04/18/2015 09:02	0.062	0.031	775.8	10.3	29.2	10.3
04/18/2015 09:03	0.064	0.031	776.2	10.3	30.0	10.3
04/18/2015 09:04	0.066	0.031	776.4	10.3	30.9	10.4
04/18/2015 09:05	0.067	0.031	775.7	10.3	31.6	10.4

Valid Data Points:	55	55	71	55	55	55
Average:	0.069	0.031	775.4	10.3	32.3	10.4

## Attachment D. 4-Hour Particulate Test Results

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: PM10 - 4 hr  
 PM10 Filterable Emission Limit, Limit, lb/MMBtu: 0.013  
 PM10 Total Emission Limit, lb/MMBtu: 0.022  
 Min. Load, MW: 729  
 Target, minutes: 240

**4 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = exclude time for calibration or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/23/2015 02:10	720	0.008	0.017	0
4/23/2015 02:20	726	0.008	0.017	0
4/23/2015 02:30	725	0.008	0.017	0
4/23/2015 02:40	732	0.008	0.017	10
4/23/2015 02:50	734	0.008	0.016	20
4/23/2015 03:00	748	0.008	0.016	30
4/23/2015 03:10	746	0.008	0.017	40
4/23/2015 03:20	747	0.008	0.016	50
4/23/2015 03:30	743	0.008	0.017	60
4/23/2015 03:40	754	0.008	0.017	70
4/23/2015 03:50	753	0.008	0.017	80
4/23/2015 04:00	752	0.008	0.016	90
4/23/2015 04:10	743	0.008	0.017	100
4/23/2015 04:20	756	0.008	0.016	110
4/23/2015 04:30	767	0.008	0.016	120
4/23/2015 04:40	770	0.008	0.016	130
4/23/2015 04:50	760	0.008	0.017	140
4/23/2015 05:00	761	0.008	0.016	150
4/23/2015 05:10	753	0.008	0.017	160
4/23/2015 05:20	765	0.008	0.016	170
4/23/2015 05:30	755	0.008	0.016	180
4/23/2015 05:40	767	Invalid Data	Invalid Data	180
4/23/2015 05:50	768	Invalid Data	Invalid Data	180
4/23/2015 06:00	777	Invalid Data	Invalid Data	180
4/23/2015 06:10	776	0.008	0.016	190
4/23/2015 06:20	775	0.008	0.016	200
4/23/2015 06:30	775	0.008	0.016	210
4/23/2015 06:40	776	0.008	0.016	220
4/23/2015 06:50	776	0.008	0.016	230
4/23/2015 07:00	776	0.008	0.016	240
4/23/2015 07:10	775	0.008	0.016	250
4/23/2015 07:20	775	0.009	0.018	260
4/23/2015 07:30	775	0.021	0.046	0
4/23/2015 07:40	776	0.021	0.046	0

	Load MWe	PM10 Filt - 4 hr Lb/MBtu	PM10 Tot - 4 hr Lb/MBtu
Average Values	759	0.008	0.016
Maximum Values	777	0.008	0.017
Minimum Value	732	0.008	0.016
Minimum Target	729		
Maximum Target		0.013	0.022

## **Attachment E. 120-Hour Particulate Test Results**

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable 0.014  
 Emission Limit, PM10 Total Emission 0.023  
 Limit, lb/MMBtu  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/25/2015 00:50	511	0.008	0.018	0
4/25/2015 01:00	543	0.008	0.017	0
4/25/2015 01:10	573	0.008	0.017	0
4/25/2015 01:20	602	0.008	0.017	0
4/25/2015 01:30	631	0.008	0.016	0
4/25/2015 01:40	662	0.008	0.016	10
4/25/2015 01:50	678	0.008	0.016	20
4/25/2015 02:00	677	0.008	0.016	30
4/25/2015 02:10	677	0.008	0.016	40
4/25/2015 02:20	691	0.008	0.016	50
4/25/2015 02:30	692	0.008	0.016	60
4/25/2015 02:40	695	0.008	0.016	70
4/25/2015 02:50	691	0.008	0.016	80
4/25/2015 03:00	687	0.008	0.016	90
4/25/2015 03:10	683	0.008	0.016	100
4/25/2015 03:20	680	0.008	0.016	110
4/25/2015 03:30	679	0.008	0.016	120
4/25/2015 03:40	677	0.008	0.016	130
4/25/2015 03:50	679	0.008	0.016	140
4/25/2015 04:00	679	0.008	0.016	150
4/25/2015 04:10	680	0.008	0.016	160
4/25/2015 04:20	698	0.008	0.016	170
4/25/2015 04:30	694	0.008	0.016	180
4/25/2015 04:40	694	0.008	0.016	190
4/25/2015 04:50	699	0.008	0.016	200
4/25/2015 05:00	693	0.008	0.016	210
4/25/2015 05:10	692	0.008	0.016	220
4/25/2015 05:20	690	0.008	0.016	230
4/25/2015 05:30	679	0.008	0.016	240
4/25/2015 05:40	677	0.008	0.016	250
4/25/2015 05:50	679	0.008	0.016	260
4/25/2015 06:00	682	0.008	0.016	270
4/25/2015 06:10	690	0.008	0.016	280
4/25/2015 06:20	692	0.008	0.016	290
4/25/2015 06:30	702	0.008	0.016	300
4/25/2015 06:40	718	Invalid Data	Invalid Data	300
4/25/2015 06:50	742	Invalid Data	Invalid Data	300
4/25/2015 07:00	771	Invalid Data	Invalid Data	300
4/25/2015 07:10	776	0.007	0.016	310
4/25/2015 07:20	775	0.007	0.016	320
4/25/2015 07:30	775	0.007	0.016	330
4/25/2015 07:40	775	0.007	0.016	340
4/25/2015 07:50	775	0.007	0.016	350
4/25/2015 08:00	775	0.007	0.016	360
4/25/2015 08:10	776	0.007	0.016	370
4/25/2015 08:20	775	0.007	0.016	380
4/25/2015 08:30	775	0.007	0.016	390
4/25/2015 08:40	776	0.007	0.016	400
4/25/2015 08:50	775	0.007	0.016	410
4/25/2015 09:00	775	0.007	0.016	420
4/25/2015 09:10	775	0.007	0.016	430
4/25/2015 09:20	776	0.007	0.016	440
4/25/2015 09:30	775	0.007	0.016	450
4/25/2015 09:40	775	0.007	0.016	460
4/25/2015 09:50	775	0.007	0.016	470
4/25/2015 10:00	776	0.007	0.016	480
4/25/2015 10:10	776	0.007	0.016	490
4/25/2015 10:20	775	0.007	0.016	500
4/25/2015 10:30	775	0.007	0.016	510
4/25/2015 10:40	776	0.007	0.016	520

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable Emission Limit, 0.014  
 PM10 Total Emission Limit, lb/MMBtu 0.023  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration or probe blowback as allowed by EPA

Date/Time	Load	PM10 Filterable	PM10 Total	Total Compliance Time
period prior to	MWe	Lb/MMBtu	Lb/MMBtu	Minutes
4/25/2015 10:50	775	0.007	0.016	530
4/25/2015 11:00	775	0.008	0.016	540
4/25/2015 11:10	776	0.007	0.016	550
4/25/2015 11:20	775	0.007	0.016	560
4/25/2015 11:30	776	0.007	0.016	570
4/25/2015 11:40	776	0.007	0.016	580
4/25/2015 11:50	775	0.007	0.016	590
4/25/2015 12:00	775	0.007	0.016	600
4/25/2015 12:10	775	0.007	0.016	610
4/25/2015 12:20	776	0.007	0.016	620
4/25/2015 12:30	775	0.007	0.016	630
4/25/2015 12:40	776	0.007	0.016	640
4/25/2015 12:50	775	0.007	0.016	650
4/25/2015 13:00	776	0.007	0.016	660
4/25/2015 13:10	775	0.007	0.016	670
4/25/2015 13:20	775	0.007	0.016	680
4/25/2015 13:30	775	0.007	0.016	690
4/25/2015 13:40	775	0.007	0.016	700
4/25/2015 13:50	775	0.007	0.016	710
4/25/2015 14:00	776	0.007	0.016	720
4/25/2015 14:10	776	0.007	0.016	730
4/25/2015 14:20	775	0.007	0.016	740
4/25/2015 14:30	775	0.007	0.016	750
4/25/2015 14:40	775	0.007	0.016	760
4/25/2015 14:50	775	0.007	0.016	770
4/25/2015 15:00	776	0.007	0.016	780
4/25/2015 15:10	775	0.007	0.016	790
4/25/2015 15:20	775	0.007	0.016	800
4/25/2015 15:30	776	0.007	0.016	810
4/25/2015 15:40	776	0.008	0.016	820
4/25/2015 15:50	775	0.008	0.016	830
4/25/2015 16:00	774	0.007	0.016	840
4/25/2015 16:10	775	0.007	0.016	850
4/25/2015 16:20	776	0.007	0.016	860
4/25/2015 16:30	776	0.007	0.016	870
4/25/2015 16:40	776	0.008	0.016	880
4/25/2015 16:50	775	0.007	0.016	890
4/25/2015 17:00	775	0.008	0.016	900
4/25/2015 17:10	776	0.008	0.016	910
4/25/2015 17:20	775	0.008	0.016	920
4/25/2015 17:30	775	0.008	0.016	930
4/25/2015 17:40	775	0.007	0.016	940
4/25/2015 17:50	775	0.008	0.016	950
4/25/2015 18:00	776	0.008	0.016	960
4/25/2015 18:10	776	0.008	0.016	970
4/25/2015 18:20	776	0.008	0.016	980
4/25/2015 18:30	776	0.008	0.016	990
4/25/2015 18:40	776	0.008	0.016	1000
4/25/2015 18:50	775	0.008	0.016	1010
4/25/2015 19:00	775	0.008	0.016	1020
4/25/2015 19:10	775	0.008	0.016	1030
4/25/2015 19:20	776	0.008	0.016	1040
4/25/2015 19:30	775	0.007	0.016	1050
4/25/2015 19:40	775	0.008	0.016	1060
4/25/2015 19:50	776	0.008	0.016	1070
4/25/2015 20:00	775	0.008	0.016	1080
4/25/2015 20:10	775	0.008	0.016	1090
4/25/2015 20:20	775	0.008	0.016	1100
4/25/2015 20:30	775	0.008	0.016	1110
4/25/2015 20:40	776	0.008	0.016	1120
4/25/2015 20:50	775	0.008	0.016	1130

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable 0.014  
 Emission Limit, PM10 Total Emission 0.023  
 Limit, lb/MMBtu  
 Min. Load, MW 648  
 Target, minutes 7200

120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages

Invalid Data = excluded time for calibration or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/25/2015 21:00	776	0.008	0.016	1140
4/25/2015 21:10	776	0.008	0.016	1150
4/25/2015 21:20	776	0.007	0.016	1160
4/25/2015 21:30	776	0.007	0.016	1170
4/25/2015 21:40	775	0.008	0.016	1180
4/25/2015 21:50	775	0.007	0.016	1190
4/25/2015 22:00	761	0.008	0.016	1200
4/25/2015 22:10	736	0.008	0.016	1210
4/25/2015 22:20	730	0.008	0.016	1220
4/25/2015 22:30	716	0.008	0.016	1230
4/25/2015 22:40	713	0.008	0.016	1240
4/25/2015 22:50	726	0.008	0.016	1250
4/25/2015 23:00	725	0.008	0.016	1260
4/25/2015 23:10	725	0.008	0.016	1270
4/25/2015 23:20	725	0.008	0.016	1280
4/25/2015 23:30	725	0.008	0.016	1290
4/25/2015 23:40	726	0.008	0.016	1300
4/25/2015 23:50	722	0.008	0.016	1310
4/26/2015 00:00	701	0.008	0.016	1320
4/26/2015 00:10	700	0.008	0.016	1330
4/26/2015 00:20	696	0.008	0.016	1340
4/26/2015 00:30	675	0.008	0.016	1350
4/26/2015 00:40	675	0.008	0.016	1360
4/26/2015 00:50	675	0.008	0.016	1370
4/26/2015 01:00	676	0.008	0.016	1380
4/26/2015 01:10	675	0.008	0.016	1390
4/26/2015 01:20	674	0.008	0.016	1400
4/26/2015 01:30	675	0.008	0.016	1410
4/26/2015 01:40	675	0.008	0.016	1420
4/26/2015 01:50	675	0.008	0.016	1430
4/26/2015 02:00	676	0.008	0.016	1440
4/26/2015 02:10	676	0.008	0.016	1450
4/26/2015 02:20	675	0.008	0.016	1460
4/26/2015 02:30	675	0.008	0.016	1470
4/26/2015 02:40	676	0.008	0.016	1480
4/26/2015 02:50	676	0.008	0.016	1490
4/26/2015 03:00	676	0.008	0.016	1500
4/26/2015 03:10	675	0.008	0.016	1510
4/26/2015 03:20	675	0.008	0.016	1520
4/26/2015 03:30	676	0.008	0.016	1530
4/26/2015 03:40	676	0.008	0.016	1540
4/26/2015 03:50	675	0.008	0.016	1550
4/26/2015 04:00	675	0.008	0.016	1560
4/26/2015 04:10	675	0.008	0.016	1570
4/26/2015 04:20	675	0.008	0.016	1580
4/26/2015 04:30	675	0.008	0.016	1590
4/26/2015 04:40	675	0.008	0.016	1600
4/26/2015 04:50	675	0.008	0.016	1610
4/26/2015 05:00	675	0.008	0.016	1620
4/26/2015 05:10	675	0.008	0.016	1630
4/26/2015 05:20	676	0.008	0.016	1640
4/26/2015 05:30	686	0.008	0.016	1650
4/26/2015 05:40	687	0.008	0.016	1660
4/26/2015 05:50	678	0.008	0.016	1670
4/26/2015 06:00	677	0.008	0.016	1680
4/26/2015 06:10	685	0.008	0.016	1690
4/26/2015 06:20	712	0.008	0.016	1700
4/26/2015 06:30	737	0.008	0.016	1710
4/26/2015 06:40	764	Invalid Data	Invalid Data	1710
4/26/2015 06:50	772	Invalid Data	Invalid Data	1710
4/26/2015 07:00	771	Invalid Data	Invalid Data	1710

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable 0.014  
 Emission Limit, PM10 Total Emission 0.023  
 Limit, lb/MMBtu  
 Min. Load, MW 648  
 Target, minutes 7200

120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/26/2015 07:10	770	0.007	0.016	1720
4/26/2015 07:20	769	0.007	0.016	1730
4/26/2015 07:30	772	0.008	0.016	1740
4/26/2015 07:40	771	0.008	0.016	1750
4/26/2015 07:50	771	0.008	0.016	1760
4/26/2015 08:00	772	0.008	0.016	1770
4/26/2015 08:10	774	0.008	0.016	1780
4/26/2015 08:20	774	0.007	0.016	1790
4/26/2015 08:30	774	0.008	0.016	1800
4/26/2015 08:40	774	0.007	0.016	1810
4/26/2015 08:50	775	0.007	0.016	1820
4/26/2015 09:00	775	0.007	0.016	1830
4/26/2015 09:10	775	0.007	0.016	1840
4/26/2015 09:20	776	0.007	0.016	1850
4/26/2015 09:30	776	0.007	0.016	1860
4/26/2015 09:40	774	0.007	0.016	1870
4/26/2015 09:50	773	0.007	0.016	1880
4/26/2015 10:00	775	0.007	0.016	1890
4/26/2015 10:10	774	0.007	0.016	1900
4/26/2015 10:20	774	0.007	0.016	1910
4/26/2015 10:30	774	0.008	0.016	1920
4/26/2015 10:40	774	0.007	0.016	1930
4/26/2015 10:50	775	0.008	0.016	1940
4/26/2015 11:00	775	0.007	0.016	1950
4/26/2015 11:10	774	0.007	0.016	1960
4/26/2015 11:20	772	0.007	0.016	1970
4/26/2015 11:30	774	0.007	0.016	1980
4/26/2015 11:40	774	0.007	0.016	1990
4/26/2015 11:50	775	0.007	0.016	2000
4/26/2015 12:00	774	0.007	0.016	2010
4/26/2015 12:10	774	0.007	0.016	2020
4/26/2015 12:20	775	0.007	0.016	2030
4/26/2015 12:30	774	0.007	0.016	2040
4/26/2015 12:40	772	0.007	0.016	2050
4/26/2015 12:50	773	0.007	0.016	2060
4/26/2015 13:00	774	0.007	0.016	2070
4/26/2015 13:10	774	0.007	0.016	2080
4/26/2015 13:20	774	0.007	0.016	2090
4/26/2015 13:30	775	0.007	0.016	2100
4/26/2015 13:40	775	0.007	0.016	2110
4/26/2015 13:50	775	0.007	0.016	2120
4/26/2015 14:00	776	0.007	0.016	2130
4/26/2015 14:10	769	0.007	0.016	2140
4/26/2015 14:20	765	0.007	0.016	2150
4/26/2015 14:30	759	0.007	0.016	2160
4/26/2015 14:40	764	0.007	0.016	2170
4/26/2015 14:50	744	0.007	0.016	2180
4/26/2015 15:00	713	0.008	0.016	2190
4/26/2015 15:10	699	0.008	0.016	2200
4/26/2015 15:20	701	0.008	0.016	2210
4/26/2015 15:30	701	0.008	0.016	2220
4/26/2015 15:40	701	0.008	0.016	2230
4/26/2015 15:50	700	0.008	0.016	2240
4/26/2015 16:00	700	0.008	0.016	2250
4/26/2015 16:10	701	0.007	0.016	2260
4/26/2015 16:20	700	0.007	0.016	2270
4/26/2015 16:30	700	0.007	0.016	2280
4/26/2015 16:40	700	0.007	0.016	2290
4/26/2015 16:50	700	0.007	0.016	2300
4/26/2015 17:00	700	0.007	0.016	2310
4/26/2015 17:10	699	0.007	0.016	2320



Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable Emission Limit, PM10 Total Emission Limit, lb/MMBtu 0.014  
 0.023  
 Min. Load, MW 648  
 Target, minutes 7200

120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages

Invalid Data = excluded time for calibration or probe blowback as allowed by EPA

Date/Time	Load	PM10 Filterable	PM10 Total	Total Compliance
period prior to	MWe	Lb/MBtu	Lb/MBtu	Time Minutes
4/26/2015 17:20	707	0.008	0.016	2330
4/26/2015 17:30	734	0.007	0.016	2340
4/26/2015 17:40	753	0.007	0.016	2350
4/26/2015 17:50	763	0.007	0.016	2360
4/26/2015 18:00	766	0.007	0.016	2370
4/26/2015 18:10	768	0.007	0.016	2380
4/26/2015 18:20	780	0.007	0.016	2390
4/26/2015 18:30	784	0.007	0.016	2400
4/26/2015 18:40	784	0.007	0.016	2410
4/26/2015 18:50	785	0.007	0.016	2420
4/26/2015 19:00	785	0.007	0.016	2430
4/26/2015 19:10	784	0.007	0.016	2440
4/26/2015 19:20	783	0.007	0.016	2450
4/26/2015 19:30	783	0.007	0.016	2460
4/26/2015 19:40	778	0.007	0.016	2470
4/26/2015 19:50	778	0.007	0.016	2480
4/26/2015 20:00	774	0.007	0.016	2490
4/26/2015 20:10	779	0.007	0.016	2500
4/26/2015 20:20	779	0.007	0.016	2510
4/26/2015 20:30	778	0.007	0.016	2520
4/26/2015 20:40	772	0.007	0.016	2530
4/26/2015 20:50	771	0.008	0.016	2540
4/26/2015 21:00	759	0.008	0.016	2550
4/26/2015 21:10	735	0.008	0.016	2560
4/26/2015 21:20	720	0.008	0.016	2570
4/26/2015 21:30	701	0.008	0.016	2580
4/26/2015 21:40	716	0.008	0.016	2590
4/26/2015 21:50	726	0.008	0.016	2600
4/26/2015 22:00	712	0.008	0.016	2610
4/26/2015 22:10	690	0.008	0.016	2620
4/26/2015 22:20	684	0.008	0.016	2630
4/26/2015 22:30	675	0.008	0.016	2640
4/26/2015 22:40	677	0.008	0.016	2650
4/26/2015 22:50	683	0.008	0.016	2660
4/26/2015 23:00	683	0.008	0.016	2670
4/26/2015 23:10	678	0.008	0.016	2680
4/26/2015 23:20	675	0.008	0.016	2690
4/26/2015 23:30	675	0.008	0.016	2700
4/26/2015 23:40	675	0.008	0.016	2710
4/26/2015 23:50	675	0.008	0.016	2720
4/27/2015 00:00	675	0.008	0.016	2730
4/27/2015 00:10	675	0.008	0.016	2740
4/27/2015 00:20	676	0.008	0.016	2750
4/27/2015 00:30	675	0.008	0.016	2760
4/27/2015 00:40	675	0.008	0.016	2770
4/27/2015 00:50	675	0.008	0.016	2780
4/27/2015 01:00	675	0.008	0.016	2790
4/27/2015 01:10	679	0.008	0.016	2800
4/27/2015 01:20	685	0.008	0.016	2810
4/27/2015 01:30	678	0.008	0.016	2820
4/27/2015 01:40	684	0.008	0.016	2830
4/27/2015 01:50	685	0.008	0.016	2840
4/27/2015 02:00	680	0.008	0.016	2850
4/27/2015 02:10	683	0.008	0.016	2860
4/27/2015 02:20	681	0.008	0.016	2870
4/27/2015 02:30	686	0.008	0.016	2880
4/27/2015 02:40	687	0.008	0.016	2890
4/27/2015 02:50	688	0.008	0.016	2900
4/27/2015 03:00	689	0.008	0.016	2910
4/27/2015 03:10	695	0.008	0.016	2920
4/27/2015 03:20	687	0.008	0.016	2930

**Unit 1**

Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040



State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable 0.014  
 Emission Limit, PM10 Total Emission 0.023  
 Limit, lb/MMBtu  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/27/2015 03:30	691	0.008	0.016	2940
4/27/2015 03:40	688	0.008	0.016	2950
4/27/2015 03:50	690	0.008	0.016	2960
4/27/2015 04:00	694	0.008	0.016	2970
4/27/2015 04:10	702	0.008	0.016	2980
4/27/2015 04:20	719	0.007	0.016	2990
4/27/2015 04:30	735	0.008	0.016	3000
4/27/2015 04:40	742	0.008	0.016	3010
4/27/2015 04:50	755	0.008	0.016	3020
4/27/2015 05:00	757	0.008	0.016	3030
4/27/2015 05:10	739	0.008	0.016	3040
4/27/2015 05:20	746	0.008	0.016	3050
4/27/2015 05:30	764	0.008	0.016	3060
4/27/2015 05:40	759	0.008	0.016	3070
4/27/2015 05:50	765	0.007	0.016	3080
4/27/2015 06:00	779	0.007	0.016	3090
4/27/2015 06:10	780	0.007	0.016	3100
4/27/2015 06:20	780	0.007	0.016	3110
4/27/2015 06:30	780	0.007	0.016	3120
4/27/2015 06:40	780	Invalid Data	Invalid Data	3120
4/27/2015 06:50	780	Invalid Data	Invalid Data	3120
4/27/2015 07:00	783	Invalid Data	Invalid Data	3120
4/27/2015 07:10	783	0.008	0.016	3130
4/27/2015 07:20	783	0.007	0.016	3140
4/27/2015 07:30	784	0.007	0.016	3150
4/27/2015 07:40	784	0.008	0.016	3160
4/27/2015 07:50	782	0.008	0.016	3170
4/27/2015 08:00	782	0.008	0.016	3180
4/27/2015 08:10	781	0.007	0.016	3190
4/27/2015 08:20	782	0.007	0.016	3200
4/27/2015 08:30	783	0.007	0.016	3210
4/27/2015 08:40	781	0.007	0.016	3220
4/27/2015 08:50	783	0.008	0.016	3230
4/27/2015 09:00	783	0.008	0.016	3240
4/27/2015 09:10	781	0.008	0.016	3250
4/27/2015 09:20	782	0.008	0.016	3260
4/27/2015 09:30	784	0.008	0.016	3270
4/27/2015 09:40	784	0.008	0.016	3280
4/27/2015 09:50	781	0.007	0.016	3290
4/27/2015 10:00	781	0.007	0.016	3300
4/27/2015 10:10	782	0.007	0.016	3310
4/27/2015 10:20	784	0.007	0.016	3320
4/27/2015 10:30	782	0.007	0.016	3330
4/27/2015 10:40	782	0.007	0.016	3340
4/27/2015 10:50	782	0.007	0.016	3350
4/27/2015 11:00	781	0.007	0.016	3360
4/27/2015 11:10	780	0.007	0.016	3370
4/27/2015 11:20	778	0.007	0.016	3380
4/27/2015 11:30	780	0.007	0.016	3390
4/27/2015 11:40	782	0.007	0.016	3400
4/27/2015 11:50	782	0.007	0.016	3410
4/27/2015 12:00	782	0.007	0.016	3420
4/27/2015 12:10	782	0.007	0.016	3430
4/27/2015 12:20	780	0.007	0.016	3440
4/27/2015 12:30	782	0.007	0.016	3450
4/27/2015 12:40	781	0.007	0.016	3460
4/27/2015 12:50	782	0.007	0.016	3470
4/27/2015 13:00	781	0.007	0.016	3480
4/27/2015 13:10	782	0.007	0.016	3490
4/27/2015 13:20	784	0.007	0.016	3500
4/27/2015 13:30	784	0.007	0.016	3510

**Unit 1**

Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040



State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable 0.014  
 Emission Limit, PM10 Total Emission 0.023  
 Limit, lb/MMBtu  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/27/2015 13:40	783	0.007	0.016	3520
4/27/2015 13:50	784	0.007	0.016	3530
4/27/2015 14:00	784	0.007	0.016	3540
4/27/2015 14:10	784	0.007	0.016	3550
4/27/2015 14:20	784	0.007	0.016	3560
4/27/2015 14:30	784	0.007	0.016	3570
4/27/2015 14:40	784	0.007	0.016	3580
4/27/2015 14:50	785	0.007	0.016	3590
4/27/2015 15:00	784	0.007	0.016	3600
4/27/2015 15:10	783	0.007	0.016	3610
4/27/2015 15:20	782	0.007	0.016	3620
4/27/2015 15:30	780	0.007	0.016	3630
4/27/2015 15:40	781	0.007	0.016	3640
4/27/2015 15:50	781	0.007	0.016	3650
4/27/2015 16:00	781	0.007	0.016	3660
4/27/2015 16:10	781	0.007	0.016	3670
4/27/2015 16:20	781	0.007	0.016	3680
4/27/2015 16:30	781	0.007	0.016	3690
4/27/2015 16:40	780	0.007	0.016	3700
4/27/2015 16:50	779	0.007	0.016	3710
4/27/2015 17:00	779	0.007	0.016	3720
4/27/2015 17:10	780	0.007	0.016	3730
4/27/2015 17:20	780	0.007	0.016	3740
4/27/2015 17:30	779	0.007	0.016	3750
4/27/2015 17:40	779	0.007	0.016	3760
4/27/2015 17:50	781	0.007	0.016	3770
4/27/2015 18:00	782	0.007	0.016	3780
4/27/2015 18:10	776	0.007	0.016	3790
4/27/2015 18:20	773	0.007	0.016	3800
4/27/2015 18:30	767	0.007	0.016	3810
4/27/2015 18:40	764	0.007	0.016	3820
4/27/2015 18:50	760	0.007	0.016	3830
4/27/2015 19:00	773	0.007	0.016	3840
4/27/2015 19:10	767	0.007	0.016	3850
4/27/2015 19:20	761	0.007	0.016	3860
4/27/2015 19:30	772	0.007	0.016	3870
4/27/2015 19:40	770	0.007	0.016	3880
4/27/2015 19:50	765	0.007	0.016	3890
4/27/2015 20:00	772	0.007	0.016	3900
4/27/2015 20:10	780	0.007	0.016	3910
4/27/2015 20:20	775	0.007	0.016	3920
4/27/2015 20:30	776	0.007	0.016	3930
4/27/2015 20:40	777	0.007	0.016	3940
4/27/2015 20:50	771	0.007	0.016	3950
4/27/2015 21:00	769	0.008	0.016	3960
4/27/2015 21:10	771	0.007	0.016	3970
4/27/2015 21:20	772	0.007	0.016	3980
4/27/2015 21:30	772	0.007	0.016	3990
4/27/2015 21:40	770	0.007	0.016	4000
4/27/2015 21:50	768	0.007	0.016	4010
4/27/2015 22:00	760	0.007	0.016	4020
4/27/2015 22:10	748	0.008	0.016	4030
4/27/2015 22:20	745	0.008	0.016	4040
4/27/2015 22:30	748	0.007	0.016	4050
4/27/2015 22:40	741	0.008	0.016	4060
4/27/2015 22:50	741	0.008	0.016	4070
4/27/2015 23:00	740	0.007	0.016	4080
4/27/2015 23:10	728	0.008	0.016	4090
4/27/2015 23:20	725	0.008	0.016	4100
4/27/2015 23:30	730	0.008	0.016	4110
4/27/2015 23:40	732	0.008	0.016	4120

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable 0.014  
 Emission Limit, PM10 Total Emission 0.023  
 Limit, lb/MMBtu  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MMBtu	PM10 Total Lb/MMBtu	Total Compliance Time Minutes
4/27/2015 23:50	733	0.008	0.016	4130
4/28/2015 00:00	732	0.007	0.016	4140
4/28/2015 00:10	715	0.008	0.016	4150
4/28/2015 00:20	699	0.008	0.016	4160
4/28/2015 00:30	689	0.008	0.016	4170
4/28/2015 00:40	686	0.008	0.016	4180
4/28/2015 00:50	686	0.008	0.016	4190
4/28/2015 01:00	689	0.008	0.016	4200
4/28/2015 01:10	688	0.008	0.016	4210
4/28/2015 01:20	685	0.008	0.016	4220
4/28/2015 01:30	682	0.008	0.016	4230
4/28/2015 01:40	682	0.008	0.016	4240
4/28/2015 01:50	682	0.008	0.016	4250
4/28/2015 02:00	681	0.008	0.016	4260
4/28/2015 02:10	679	0.008	0.016	4270
4/28/2015 02:20	675	0.008	0.016	4280
4/28/2015 02:30	677	0.008	0.016	4290
4/28/2015 02:40	686	0.008	0.016	4300
4/28/2015 02:50	702	0.008	0.016	4310
4/28/2015 03:00	716	0.008	0.016	4320
4/28/2015 03:10	725	0.007	0.016	4330
4/28/2015 03:20	735	0.007	0.016	4340
4/28/2015 03:30	735	0.007	0.016	4350
4/28/2015 03:40	736	0.008	0.016	4360
4/28/2015 03:50	731	0.008	0.016	4370
4/28/2015 04:00	729	0.007	0.016	4380
4/28/2015 04:10	726	0.008	0.016	4390
4/28/2015 04:20	725	0.008	0.016	4400
4/28/2015 04:30	722	0.008	0.016	4410
4/28/2015 04:40	721	0.008	0.016	4420
4/28/2015 04:50	725	0.008	0.016	4430
4/28/2015 05:00	707	0.008	0.016	4440
4/28/2015 05:10	711	0.008	0.016	4450
4/28/2015 05:20	732	0.008	0.016	4460
4/28/2015 05:30	746	0.007	0.016	4470
4/28/2015 05:40	764	0.007	0.016	4480
4/28/2015 05:50	762	0.007	0.016	4490
4/28/2015 06:00	767	0.007	0.016	4500
4/28/2015 06:10	778	0.007	0.016	4510
4/28/2015 06:20	780	0.007	0.016	4520
4/28/2015 06:30	780	0.007	0.016	4530
4/28/2015 06:40	780	Invalid Data	Invalid Data	4530
4/28/2015 06:50	783	Invalid Data	Invalid Data	4530
4/28/2015 07:00	784	Invalid Data	Invalid Data	4530
4/28/2015 07:10	783	0.007	0.016	4540
4/28/2015 07:20	784	0.007	0.016	4550
4/28/2015 07:30	784	0.007	0.016	4560
4/28/2015 07:40	784	0.007	0.016	4570
4/28/2015 07:50	783	0.007	0.016	4580
4/28/2015 08:00	783	0.007	0.016	4590
4/28/2015 08:10	783	0.007	0.016	4600
4/28/2015 08:20	783	0.007	0.016	4610
4/28/2015 08:30	782	0.007	0.016	4620
4/28/2015 08:40	783	0.007	0.016	4630
4/28/2015 08:50	784	0.007	0.016	4640
4/28/2015 09:00	783	0.007	0.016	4650
4/28/2015 09:10	784	0.007	0.016	4660
4/28/2015 09:20	783	0.007	0.016	4670
4/28/2015 09:30	783	0.007	0.016	4680
4/28/2015 09:40	780	0.007	0.016	4690
4/28/2015 09:50	781	0.007	0.016	4700

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: PM10 - 120 hr  
 PM10 Filterable: 0.014  
 Emission Limit, PM10 Total Emission Limit, lb/MMBtu: 0.023  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/28/2015 10:00	785	0.007	0.016	4710
4/28/2015 10:10	784	0.007	0.016	4720
4/28/2015 10:20	783	0.007	0.016	4730
4/28/2015 10:30	784	0.007	0.016	4740
4/28/2015 10:40	777	0.007	0.016	4750
4/28/2015 10:50	781	0.007	0.016	4760
4/28/2015 11:00	782	0.007	0.016	4770
4/28/2015 11:10	784	0.007	0.016	4780
4/28/2015 11:20	782	0.007	0.016	4790
4/28/2015 11:30	784	0.007	0.016	4800
4/28/2015 11:40	784	0.007	0.016	4810
4/28/2015 11:50	784	0.007	0.016	4820
4/28/2015 12:00	784	0.007	0.016	4830
4/28/2015 12:10	783	0.007	0.016	4840
4/28/2015 12:20	781	0.007	0.016	4850
4/28/2015 12:30	780	0.007	0.016	4860
4/28/2015 12:40	781	0.007	0.016	4870
4/28/2015 12:50	781	0.007	0.016	4880
4/28/2015 13:00	781	0.007	0.016	4890
4/28/2015 13:10	781	0.007	0.016	4900
4/28/2015 13:20	782	0.007	0.016	4910
4/28/2015 13:30	782	0.007	0.016	4920
4/28/2015 13:40	782	0.007	0.016	4930
4/28/2015 13:50	781	0.007	0.016	4940
4/28/2015 14:00	782	0.007	0.016	4950
4/28/2015 14:10	783	0.007	0.016	4960
4/28/2015 14:20	784	0.007	0.016	4970
4/28/2015 14:30	784	0.007	0.016	4980
4/28/2015 14:40	784	0.007	0.016	4990
4/28/2015 14:50	785	0.007	0.016	5000
4/28/2015 15:00	785	0.007	0.016	5010
4/28/2015 15:10	783	0.007	0.016	5020
4/28/2015 15:20	784	0.007	0.016	5030
4/28/2015 15:30	784	0.007	0.016	5040
4/28/2015 15:40	784	0.007	0.016	5050
4/28/2015 15:50	783	0.007	0.016	5060
4/28/2015 16:00	783	0.007	0.016	5070
4/28/2015 16:10	783	0.007	0.016	5080
4/28/2015 16:20	784	0.007	0.016	5090
4/28/2015 16:30	784	0.008	0.016	5100
4/28/2015 16:40	782	0.007	0.016	5110
4/28/2015 16:50	783	0.007	0.016	5120
4/28/2015 17:00	782	0.007	0.016	5130
4/28/2015 17:10	783	0.007	0.016	5140
4/28/2015 17:20	784	0.007	0.016	5150
4/28/2015 17:30	783	0.007	0.016	5160
4/28/2015 17:40	783	0.008	0.016	5170
4/28/2015 17:50	782	0.008	0.016	5180
4/28/2015 18:00	781	0.007	0.016	5190
4/28/2015 18:10	781	0.007	0.016	5200
4/28/2015 18:20	780	0.007	0.016	5210
4/28/2015 18:30	770	0.007	0.016	5220
4/28/2015 18:40	774	0.007	0.016	5230
4/28/2015 18:50	777	0.007	0.016	5240
4/28/2015 19:00	773	0.007	0.016	5250
4/28/2015 19:10	765	0.007	0.016	5260
4/28/2015 19:20	781	0.007	0.016	5270
4/28/2015 19:30	783	0.007	0.016	5280
4/28/2015 19:40	783	0.007	0.016	5290
4/28/2015 19:50	781	0.007	0.016	5300
4/28/2015 20:00	782	0.007	0.016	5310

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable 0.014  
 Emission Limit, PM10 Total Emission 0.023  
 Limit, lb/MMBtu  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	PM10 Filterable	PM10 Total	Total Compliance Time
period prior to	MWe	Lb/MBtu	Lb/MBtu	Minutes
4/28/2015 20:10	783	0.007	0.016	5320
4/28/2015 20:20	782	0.007	0.016	5330
4/28/2015 20:30	777	0.007	0.016	5340
4/28/2015 20:40	776	0.007	0.016	5350
4/28/2015 20:50	772	0.008	0.016	5360
4/28/2015 21:00	762	0.008	0.016	5370
4/28/2015 21:10	777	0.007	0.016	5380
4/28/2015 21:20	778	0.007	0.016	5390
4/28/2015 21:30	777	0.007	0.016	5400
4/28/2015 21:40	768	0.007	0.016	5410
4/28/2015 21:50	753	0.008	0.016	5420
4/28/2015 22:00	744	0.008	0.016	5430
4/28/2015 22:10	765	0.007	0.016	5440
4/28/2015 22:20	780	0.007	0.016	5450
4/28/2015 22:30	778	0.007	0.016	5460
4/28/2015 22:40	772	0.007	0.016	5470
4/28/2015 22:50	778	0.007	0.016	5480
4/28/2015 23:00	780	0.007	0.016	5490
4/28/2015 23:10	761	0.008	0.016	5500
4/28/2015 23:20	730	0.008	0.016	5510
4/28/2015 23:30	704	0.008	0.016	5520
4/28/2015 23:40	700	0.008	0.016	5530
4/28/2015 23:50	700	0.008	0.016	5540
4/29/2015 00:00	690	0.008	0.016	5550
4/29/2015 00:10	675	0.008	0.016	5560
4/29/2015 00:20	676	0.008	0.016	5570
4/29/2015 00:30	676	0.008	0.016	5580
4/29/2015 00:40	685	0.008	0.016	5590
4/29/2015 00:50	683	0.008	0.016	5600
4/29/2015 01:00	674	0.008	0.016	5610
4/29/2015 01:10	681	0.008	0.016	5620
4/29/2015 01:20	686	0.008	0.016	5630
4/29/2015 01:30	686	0.008	0.016	5640
4/29/2015 01:40	687	0.008	0.016	5650
4/29/2015 01:50	709	0.008	0.016	5660
4/29/2015 02:00	736	0.008	0.016	5670
4/29/2015 02:10	744	0.008	0.016	5680
4/29/2015 02:20	728	0.008	0.016	5690
4/29/2015 02:30	719	0.008	0.016	5700
4/29/2015 02:40	718	0.008	0.016	5710
4/29/2015 02:50	723	0.008	0.016	5720
4/29/2015 03:00	726	0.008	0.016	5730
4/29/2015 03:10	733	0.008	0.016	5740
4/29/2015 03:20	739	0.008	0.016	5750
4/29/2015 03:30	738	0.008	0.016	5760
4/29/2015 03:40	723	0.008	0.016	5770
4/29/2015 03:50	716	0.008	0.016	5780
4/29/2015 04:00	726	0.008	0.016	5790
4/29/2015 04:10	730	0.008	0.016	5800
4/29/2015 04:20	737	0.008	0.016	5810
4/29/2015 04:30	728	0.008	0.016	5820
4/29/2015 04:40	716	0.008	0.016	5830
4/29/2015 04:50	702	0.008	0.016	5840
4/29/2015 05:00	697	0.008	0.016	5850
4/29/2015 05:10	687	0.008	0.016	5860
4/29/2015 05:20	697	0.008	0.016	5870
4/29/2015 05:30	713	0.008	0.016	5880
4/29/2015 05:40	731	0.008	0.016	5890
4/29/2015 05:50	732	0.008	0.016	5900
4/29/2015 06:00	757	0.008	0.016	5910
4/29/2015 06:10	780	0.007	0.016	5920

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: PM10 - 120 hr  
 PM10 Filterable: 0.014  
 Emission Limit, PM10 Total Emission Limit, lb/MMBtu: 0.023  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/29/2015 06:20	780	0.007	0.016	5930
4/29/2015 06:30	780	0.007	0.016	5940
4/29/2015 06:40	781	Invalid Data	Invalid Data	5940
4/29/2015 06:50	781	Invalid Data	Invalid Data	5940
4/29/2015 07:00	780	Invalid Data	Invalid Data	5940
4/29/2015 07:10	780	0.007	0.016	5950
4/29/2015 07:20	781	0.007	0.016	5960
4/29/2015 07:30	780	0.007	0.016	5970
4/29/2015 07:40	781	0.007	0.016	5980
4/29/2015 07:50	780	0.007	0.016	5990
4/29/2015 08:00	780	0.007	0.016	6000
4/29/2015 08:10	781	0.007	0.016	6010
4/29/2015 08:20	779	0.007	0.016	6020
4/29/2015 08:30	780	0.007	0.016	6030
4/29/2015 08:40	781	0.007	0.016	6040
4/29/2015 08:50	780	0.007	0.016	6050
4/29/2015 09:00	781	0.007	0.016	6060
4/29/2015 09:10	781	0.007	0.016	6070
4/29/2015 09:20	780	0.007	0.016	6080
4/29/2015 09:30	781	0.007	0.016	6090
4/29/2015 09:40	781	0.007	0.016	6100
4/29/2015 09:50	781	0.007	0.016	6110
4/29/2015 10:00	781	0.007	0.016	6120
4/29/2015 10:10	780	0.007	0.016	6130
4/29/2015 10:20	781	0.007	0.016	6140
4/29/2015 10:30	781	0.007	0.016	6150
4/29/2015 10:40	780	0.007	0.016	6160
4/29/2015 10:50	780	0.007	0.016	6170
4/29/2015 11:00	780	0.007	0.016	6180
4/29/2015 11:10	780	0.007	0.016	6190
4/29/2015 11:20	782	0.007	0.016	6200
4/29/2015 11:30	781	0.007	0.016	6210
4/29/2015 11:40	780	0.007	0.016	6220
4/29/2015 11:50	780	0.007	0.016	6230
4/29/2015 12:00	782	0.008	0.016	6240
4/29/2015 12:10	782	0.008	0.016	6250
4/29/2015 12:20	780	0.008	0.016	6260
4/29/2015 12:30	781	0.008	0.016	6270
4/29/2015 12:40	781	0.008	0.016	6280
4/29/2015 12:50	781	0.008	0.016	6290
4/29/2015 13:00	780	0.008	0.016	6300
4/29/2015 13:10	781	0.008	0.016	6310
4/29/2015 13:20	781	0.007	0.016	6320
4/29/2015 13:30	780	0.007	0.016	6330
4/29/2015 13:40	780	0.007	0.016	6340
4/29/2015 13:50	781	0.007	0.016	6350
4/29/2015 14:00	781	0.007	0.016	6360
4/29/2015 14:10	781	0.007	0.016	6370
4/29/2015 14:20	781	0.007	0.016	6380
4/29/2015 14:30	781	0.007	0.016	6390
4/29/2015 14:40	781	0.007	0.016	6400
4/29/2015 14:50	781	0.007	0.016	6410
4/29/2015 15:00	781	0.007	0.016	6420
4/29/2015 15:10	780	0.007	0.016	6430
4/29/2015 15:20	781	0.007	0.016	6440
4/29/2015 15:30	778	0.008	0.016	6450
4/29/2015 15:40	779	0.008	0.016	6460
4/29/2015 15:50	782	0.008	0.016	6470
4/29/2015 16:00	781	0.008	0.016	6480
4/29/2015 16:10	779	0.008	0.016	6490
4/29/2015 16:20	781	0.008	0.016	6500

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST PM10 - 120 hr  
 PM10 Filterable Emission Limit, 0.014  
 PM10 Total Emission Limit, lb/MMBtu 0.023  
 Min. Load, MW 648  
 Target, minutes 7200

120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages

Invalid Data = excluded time for calibration or probe blowback as allowed by EPA

Date/Time	Load	PM10 Filterable	PM10 Total	Total Compliance Time
period prior to	MWe	Lb/MMBtu	Lb/MMBtu	Minutes
4/29/2015 16:30	781	0.007	0.016	6510
4/29/2015 16:40	780	0.008	0.016	6520
4/29/2015 16:50	780	0.008	0.016	6530
4/29/2015 17:00	781	0.008	0.016	6540
4/29/2015 17:10	780	0.008	0.016	6550
4/29/2015 17:20	780	0.008	0.016	6560
4/29/2015 17:30	781	0.008	0.016	6570
4/29/2015 17:40	781	0.008	0.016	6580
4/29/2015 17:50	781	0.008	0.016	6590
4/29/2015 18:00	780	0.008	0.016	6600
4/29/2015 18:10	781	0.007	0.016	6610
4/29/2015 18:20	780	0.008	0.016	6620
4/29/2015 18:30	784	0.007	0.016	6630
4/29/2015 18:40	785	0.008	0.016	6640
4/29/2015 18:50	784	0.007	0.016	6650
4/29/2015 19:00	783	0.008	0.016	6660
4/29/2015 19:10	785	0.008	0.016	6670
4/29/2015 19:20	785	0.008	0.016	6680
4/29/2015 19:30	784	0.008	0.016	6690
4/29/2015 19:40	784	0.008	0.016	6700
4/29/2015 19:50	783	0.008	0.016	6710
4/29/2015 20:00	783	0.008	0.016	6720
4/29/2015 20:10	782	0.007	0.016	6730
4/29/2015 20:20	781	0.008	0.016	6740
4/29/2015 20:30	780	0.007	0.016	6750
4/29/2015 20:40	780	0.007	0.016	6760
4/29/2015 20:50	779	0.008	0.016	6770
4/29/2015 21:00	779	0.008	0.016	6780
4/29/2015 21:10	781	0.008	0.016	6790
4/29/2015 21:20	773	0.008	0.016	6800
4/29/2015 21:30	766	0.008	0.016	6810
4/29/2015 21:40	754	0.008	0.016	6820
4/29/2015 21:50	744	0.008	0.016	6830
4/29/2015 22:00	718	0.008	0.016	6840
4/29/2015 22:10	694	0.008	0.016	6850
4/29/2015 22:20	682	0.008	0.017	6860
4/29/2015 22:30	683	0.008	0.016	6870
4/29/2015 22:40	679	0.008	0.016	6880
4/29/2015 22:50	686	0.008	0.016	6890
4/29/2015 23:00	685	0.008	0.016	6900
4/29/2015 23:10	675	0.008	0.017	6910
4/29/2015 23:20	676	0.008	0.016	6920
4/29/2015 23:30	676	0.008	0.016	6930
4/29/2015 23:40	676	0.008	0.016	6940
4/29/2015 23:50	676	0.008	0.016	6950
4/30/2015 00:00	675	0.008	0.016	6960
4/30/2015 00:10	676	0.008	0.016	6970
4/30/2015 00:20	675	0.008	0.016	6980
4/30/2015 00:30	675	0.008	0.016	6990
4/30/2015 00:40	675	0.008	0.016	7000
4/30/2015 00:50	675	0.008	0.016	7010
4/30/2015 01:00	676	0.008	0.016	7020
4/30/2015 01:10	675	0.008	0.016	7030
4/30/2015 01:20	675	0.008	0.016	7040
4/30/2015 01:30	676	0.008	0.016	7050
4/30/2015 01:40	675	0.008	0.016	7060
4/30/2015 01:50	676	0.008	0.016	7070
4/30/2015 02:00	676	0.008	0.016	7080
4/30/2015 02:10	676	0.008	0.016	7090
4/30/2015 02:20	675	0.008	0.016	7100
4/30/2015 02:30	675	0.008	0.016	7110



**Unit 1**

Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040



State	Missouri
TEST	PM10 - 120 hr
PM10 Filterable Emission Limit, PM10 Total Emission Limit, lb/MMBtu	0.014
Min. Load, MW	0.023
Target, minutes	648
	7200

**120 - Hr PM10 Filterable and Total Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	PM10 Filterable Lb/MBtu	PM10 Total Lb/MBtu	Total Compliance Time Minutes
4/30/2015 02:40	675	0.008	0.016	7120
4/30/2015 02:50	676	0.008	0.016	7130
4/30/2015 03:00	676	0.008	0.016	7140
4/30/2015 03:10	688	0.008	0.016	7150
4/30/2015 03:20	698	0.008	0.016	7160
4/30/2015 03:30	696	0.008	0.016	7170
4/30/2015 03:40	695	0.008	0.016	7180
4/30/2015 03:50	694	0.008	0.016	7190
4/30/2015 04:00	686	0.008	0.016	7200
4/30/2015 04:10	680	0.008	0.016	7210
4/30/2015 04:20	699	0.008	0.016	7220
4/30/2015 04:30	691	0.008	0.016	7230
4/30/2015 04:40	696	0.008	0.016	7240

	Load MWe	PM10 Filt - 120 hr Lb/MBtu	PM10 Tot - 120 hr Lb/MBtu
Average Values	748	0.008	0.016
Maximum Values	785	0.008	0.017
Minimum Value	662	0.007	0.016
Minimum Target	648		
Maximum Target		0.014	0.023

## Attachment F. 4-Hour SO<sub>2</sub> Test Results



**Unit 1**

Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 - 4 hr  
 Emission Limit, lb/MMBtu 0.055  
 Min. Load, MW 753  
 Target, minutes 240

**4 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	SO2 Lb/MBtu	Total Compliance Time Minutes
4/2/2015 11:30	746	0.010	0
4/2/2015 11:40	746	0.010	0
4/2/2015 11:50	746	0.010	0
4/2/2015 12:00	746	0.010	0
4/2/2015 12:10	747	0.009	0
4/2/2015 12:20	756	0.010	10
4/2/2015 12:30	762	0.010	20
4/2/2015 12:40	761	0.010	30
4/2/2015 12:50	761	0.009	40
4/2/2015 13:00	761	0.010	50
4/2/2015 13:10	759	0.009	60
4/2/2015 13:20	754	0.009	70
4/2/2015 13:30	756	0.009	80
4/2/2015 13:40	756	0.010	90
4/2/2015 13:50	756	0.009	100
4/2/2015 14:00	755	0.009	110
4/2/2015 14:10	756	0.009	120
4/2/2015 14:20	755	0.009	130
4/2/2015 14:30	756	0.010	140
4/2/2015 14:40	755	0.010	150
4/2/2015 14:50	755	0.010	160
4/2/2015 15:00	756	0.009	170
4/2/2015 15:10	756	0.009	180
4/2/2015 15:20	755	0.009	190
4/2/2015 15:30	756	0.010	200
4/2/2015 15:40	756	0.009	210
4/2/2015 15:50	756	0.010	220
4/2/2015 16:00	756	0.010	230
4/2/2015 16:10	755	0.011	240
4/2/2015 16:20	756	0.010	250
4/2/2015 16:30	756	0.010	260
4/2/2015 16:40	756	0.011	270
4/2/2015 16:50	755	0.011	280
4/2/2015 17:00	756	0.011	290

	Load MWe	SO2 - 4 hr Lb/MBtu
Average Values	757	0.010
Maximum Values	762	0.011
Minimum Value	754	0.009
Minimum Target	753	
Maximum Target		0.055

## Attachment G. 72-Hour SO<sub>2</sub> Test Results

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -72 hr  
 Emission Limit, lb/MMBtu 0.058  
 Min. Load, MW 648  
 Target, minutes 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	SO2 Lb/MBtu	Total Compliance Time Minutes
4/17/2015 12:20	600	0.011	0
4/17/2015 12:30	601	0.011	0
4/17/2015 12:40	600	0.011	0
4/17/2015 12:50	607	0.011	0
4/17/2015 13:00	638	0.014	0
4/17/2015 13:10	669	0.017	10
4/17/2015 13:20	701	0.019	20
4/17/2015 13:30	726	0.019	30
4/17/2015 13:40	752	0.022	40
4/17/2015 13:50	776	0.025	50
4/17/2015 14:00	776	0.026	60
4/17/2015 14:10	775	0.026	70
4/17/2015 14:20	775	0.027	80
4/17/2015 14:30	776	0.027	90
4/17/2015 14:40	776	0.028	100
4/17/2015 14:50	776	0.029	110
4/17/2015 15:00	776	0.029	120
4/17/2015 15:10	776	0.029	130
4/17/2015 15:20	775	0.029	140
4/17/2015 15:30	775	0.029	150
4/17/2015 15:40	775	0.031	160
4/17/2015 15:50	776	0.031	170
4/17/2015 16:00	775	0.031	180
4/17/2015 16:10	776	0.030	190
4/17/2015 16:20	776	0.030	200
4/17/2015 16:30	775	0.029	210
4/17/2015 16:40	775	0.029	220
4/17/2015 16:50	775	0.030	230
4/17/2015 17:00	775	0.030	240
4/17/2015 17:10	777	0.030	250
4/17/2015 17:20	776	0.030	260
4/17/2015 17:30	776	0.030	270
4/17/2015 17:40	775	0.030	280
4/17/2015 17:50	775	0.031	290
4/17/2015 18:00	775	0.031	300
4/17/2015 18:10	775	0.031	310
4/17/2015 18:20	776	0.031	320
4/17/2015 18:30	775	0.032	330
4/17/2015 18:40	775	0.030	340
4/17/2015 18:50	776	0.031	350
4/17/2015 19:00	775	0.030	360
4/17/2015 19:10	776	0.030	370
4/17/2015 19:20	776	0.030	380
4/17/2015 19:30	775	0.030	390
4/17/2015 19:40	775	0.029	400
4/17/2015 19:50	776	0.030	410
4/17/2015 20:00	776	0.030	420

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -72 hr  
 Emission Limit, lb/MMBtu: 0.058  
 Min. Load, MW: 648  
 Target, minutes: 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/17/2015 20:10	776	0.029	430
4/17/2015 20:20	775	0.029	440
4/17/2015 20:30	776	0.028	450
4/17/2015 20:40	776	0.028	460
4/17/2015 20:50	776	0.028	470
4/17/2015 21:00	776	0.027	480
4/17/2015 21:10	775	0.028	490
4/17/2015 21:20	775	0.028	500
4/17/2015 21:30	776	0.028	510
4/17/2015 21:40	775	0.029	520
4/17/2015 21:50	774	0.028	530
4/17/2015 22:00	776	0.028	540
4/17/2015 22:10	776	0.028	550
4/17/2015 22:20	775	0.028	560
4/17/2015 22:30	775	0.028	570
4/17/2015 22:40	776	0.028	580
4/17/2015 22:50	776	0.028	590
4/17/2015 23:00	775	0.029	600
4/17/2015 23:10	776	0.029	610
4/17/2015 23:20	776	0.029	620
4/17/2015 23:30	775	0.029	630
4/17/2015 23:40	775	0.028	640
4/17/2015 23:50	776	0.028	650
4/18/2015 00:00	774	0.030	660
4/18/2015 00:10	774	0.029	670
4/18/2015 00:20	776	0.030	680
4/18/2015 00:30	776	0.029	690
4/18/2015 00:40	775	0.029	700
4/18/2015 00:50	775	0.030	710
4/18/2015 01:00	771	0.029	720
4/18/2015 01:10	758	0.028	730
4/18/2015 01:20	750	0.027	740
4/18/2015 01:30	743	0.027	750
4/18/2015 01:40	739	0.027	760
4/18/2015 01:50	740	0.026	770
4/18/2015 02:00	740	0.026	780
4/18/2015 02:10	742	0.027	790
4/18/2015 02:20	748	0.027	800
4/18/2015 02:30	756	0.027	810
4/18/2015 02:40	760	0.029	820
4/18/2015 02:50	759	0.029	830
4/18/2015 03:00	763	0.029	840
4/18/2015 03:10	760	0.028	850
4/18/2015 03:20	759	0.029	860
4/18/2015 03:30	753	0.028	870
4/18/2015 03:40	750	0.027	880
4/18/2015 03:50	745	0.028	890
4/18/2015 04:00	755	0.028	900
4/18/2015 04:10	748	0.028	910

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -72 hr  
 Emission Limit, lb/MMBtu: 0.058  
 Min. Load, MW: 648  
 Target, minutes: 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/18/2015 04:20	739	0.026	920
4/18/2015 04:30	746	0.027	930
4/18/2015 04:40	756	0.028	940
4/18/2015 04:50	750	0.030	950
4/18/2015 05:00	743	0.027	960
4/18/2015 05:10	748	0.027	970
4/18/2015 05:20	746	0.029	980
4/18/2015 05:30	748	0.028	990
4/18/2015 05:40	755	Invalid Data	990
4/18/2015 05:50	775	Invalid Data	990
4/18/2015 06:00	776	Invalid Data	990
4/18/2015 06:10	775	0.033	1000
4/18/2015 06:20	776	0.032	1010
4/18/2015 06:30	777	0.031	1020
4/18/2015 06:40	775	0.031	1030
4/18/2015 06:50	775	0.031	1040
4/18/2015 07:00	776	0.030	1050
4/18/2015 07:10	776	0.031	1060
4/18/2015 07:20	775	0.030	1070
4/18/2015 07:30	776	0.030	1080
4/18/2015 07:40	775	0.031	1090
4/18/2015 07:50	775	0.030	1100
4/18/2015 08:00	776	0.031	1110
4/18/2015 08:10	775	0.030	1120
4/18/2015 08:20	775	0.031	1130
4/18/2015 08:30	775	0.031	1140
4/18/2015 08:40	776	0.030	1150
4/18/2015 08:50	775	0.031	1160
4/18/2015 09:00	775	0.031	1170
4/18/2015 09:10	776	0.032	1180
4/18/2015 09:20	775	0.031	1190
4/18/2015 09:30	775	0.031	1200
4/18/2015 09:40	776	0.031	1210
4/18/2015 09:50	776	0.031	1220
4/18/2015 10:00	776	0.031	1230
4/18/2015 10:10	775	0.032	1240
4/18/2015 10:20	775	0.032	1250
4/18/2015 10:30	776	0.031	1260
4/18/2015 10:40	769	0.032	1270
4/18/2015 10:50	748	0.030	1280
4/18/2015 11:00	750	0.028	1290
4/18/2015 11:10	752	0.030	1300
4/18/2015 11:20	751	0.029	1310
4/18/2015 11:30	750	0.029	1320
4/18/2015 11:40	751	0.029	1330
4/18/2015 11:50	751	0.029	1340
4/18/2015 12:00	750	0.029	1350
4/18/2015 12:10	750	0.027	1360
4/18/2015 12:20	751	0.026	1370

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -72 hr  
 Emission Limit, lb/MMBtu 0.058  
 Min. Load, MW 648  
 Target, minutes 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/18/2015 12:30	751	0.026	1380
4/18/2015 12:40	750	0.026	1390
4/18/2015 12:50	750	0.026	1400
4/18/2015 13:00	750	0.026	1410
4/18/2015 13:10	751	0.025	1420
4/18/2015 13:20	751	0.026	1430
4/18/2015 13:30	750	0.026	1440
4/18/2015 13:40	750	0.026	1450
4/18/2015 13:50	751	0.025	1460
4/18/2015 14:00	751	0.026	1470
4/18/2015 14:10	751	0.026	1480
4/18/2015 14:20	750	0.026	1490
4/18/2015 14:30	750	0.025	1500
4/18/2015 14:40	751	0.025	1510
4/18/2015 14:50	750	0.025	1520
4/18/2015 15:00	749	0.024	1530
4/18/2015 15:10	750	0.025	1540
4/18/2015 15:20	751	0.024	1550
4/18/2015 15:30	751	0.024	1560
4/18/2015 15:40	751	0.025	1570
4/18/2015 15:50	750	0.025	1580
4/18/2015 16:00	750	0.024	1590
4/18/2015 16:10	751	0.025	1600
4/18/2015 16:20	751	0.024	1610
4/18/2015 16:30	750	0.024	1620
4/18/2015 16:40	749	0.026	1630
4/18/2015 16:50	750	0.024	1640
4/18/2015 17:00	752	0.024	1650
4/18/2015 17:10	751	0.024	1660
4/18/2015 17:20	750	0.025	1670
4/18/2015 17:30	750	0.025	1680
4/18/2015 17:40	751	0.024	1690
4/18/2015 17:50	751	0.024	1700
4/18/2015 18:00	750	0.025	1710
4/18/2015 18:10	750	0.024	1720
4/18/2015 18:20	751	0.024	1730
4/18/2015 18:30	751	0.025	1740
4/18/2015 18:40	750	0.024	1750
4/18/2015 18:50	750	0.025	1760
4/18/2015 19:00	750	0.025	1770
4/18/2015 19:10	750	0.024	1780
4/18/2015 19:20	751	0.025	1790
4/18/2015 19:30	751	0.025	1800
4/18/2015 19:40	750	0.025	1810
4/18/2015 19:50	750	0.026	1820
4/18/2015 20:00	751	0.025	1830
4/18/2015 20:10	751	0.025	1840
4/18/2015 20:20	750	0.025	1850
4/18/2015 20:30	750	0.026	1860



Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -72 hr  
 Emission Limit, lb/MMBtu 0.058  
 Min. Load, MW 648  
 Target, minutes 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/18/2015 20:40	749	0.025	1870
4/18/2015 20:50	750	0.025	1880
4/18/2015 21:00	752	0.025	1890
4/18/2015 21:10	750	0.026	1900
4/18/2015 21:20	750	0.026	1910
4/18/2015 21:30	751	0.025	1920
4/18/2015 21:40	749	0.025	1930
4/18/2015 21:50	728	0.024	1940
4/18/2015 22:00	738	0.024	1950
4/18/2015 22:10	726	0.025	1960
4/18/2015 22:20	708	0.023	1970
4/18/2015 22:30	712	0.022	1980
4/18/2015 22:40	719	0.023	1990
4/18/2015 22:50	718	0.023	2000
4/18/2015 23:00	703	0.023	2010
4/18/2015 23:10	694	0.020	2020
4/18/2015 23:20	711	0.022	2030
4/18/2015 23:30	716	0.023	2040
4/18/2015 23:40	724	0.022	2050
4/18/2015 23:50	735	0.023	2060
4/19/2015 00:00	738	0.024	2070
4/19/2015 00:10	737	0.022	2080
4/19/2015 00:20	746	0.024	2090
4/19/2015 00:30	735	0.023	2100
4/19/2015 00:40	739	0.023	2110
4/19/2015 00:50	743	0.025	2120
4/19/2015 01:00	739	0.024	2130
4/19/2015 01:10	742	0.025	2140
4/19/2015 01:20	735	0.025	2150
4/19/2015 01:30	713	0.023	2160
4/19/2015 01:40	696	0.022	2170
4/19/2015 01:50	718	0.023	2180
4/19/2015 02:00	724	0.025	2190
4/19/2015 02:10	711	0.023	2200
4/19/2015 02:20	716	0.023	2210
4/19/2015 02:30	736	0.025	2220
4/19/2015 02:40	737	0.026	2230
4/19/2015 02:50	726	0.025	2240
4/19/2015 03:00	704	0.024	2250
4/19/2015 03:10	691	0.022	2260
4/19/2015 03:20	690	0.022	2270
4/19/2015 03:30	691	0.023	2280
4/19/2015 03:40	692	0.022	2290
4/19/2015 03:50	700	0.024	2300
4/19/2015 04:00	699	0.022	2310
4/19/2015 04:10	704	0.022	2320
4/19/2015 04:20	698	0.022	2330
4/19/2015 04:30	698	0.022	2340
4/19/2015 04:40	695	0.022	2350

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -72 hr  
 Emission Limit, lb/MMBtu 0.058  
 Min. Load, MW 648  
 Target, minutes 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/19/2015 04:50	701	0.023	2360
4/19/2015 05:00	691	0.022	2370
4/19/2015 05:10	686	0.021	2380
4/19/2015 05:20	714	0.023	2390
4/19/2015 05:30	736	0.027	2400
4/19/2015 05:40	749	Invalid Data	2400
4/19/2015 05:50	749	Invalid Data	2400
4/19/2015 06:00	747	Invalid Data	2400
4/19/2015 06:10	746	0.040	2410
4/19/2015 06:20	747	0.040	2420
4/19/2015 06:30	735	0.039	2430
4/19/2015 06:40	709	0.038	2440
4/19/2015 06:50	709	0.035	2450
4/19/2015 07:00	712	0.036	2460
4/19/2015 07:10	711	0.038	2470
4/19/2015 07:20	711	0.036	2480
4/19/2015 07:30	709	0.036	2490
4/19/2015 07:40	710	0.033	2500
4/19/2015 07:50	711	0.033	2510
4/19/2015 08:00	711	0.031	2520
4/19/2015 08:10	710	0.028	2530
4/19/2015 08:20	710	0.029	2540
4/19/2015 08:30	710	0.028	2550
4/19/2015 08:40	711	0.027	2560
4/19/2015 08:50	711	0.027	2570
4/19/2015 09:00	710	0.027	2580
4/19/2015 09:10	710	0.026	2590
4/19/2015 09:20	710	0.026	2600
4/19/2015 09:30	711	0.026	2610
4/19/2015 09:40	711	0.025	2620
4/19/2015 09:50	710	0.025	2630
4/19/2015 10:00	711	0.025	2640
4/19/2015 10:10	710	0.025	2650
4/19/2015 10:20	710	0.026	2660
4/19/2015 10:30	711	0.025	2670
4/19/2015 10:40	710	0.025	2680
4/19/2015 10:50	710	0.025	2690
4/19/2015 11:00	711	0.025	2700
4/19/2015 11:10	711	0.027	2710
4/19/2015 11:20	710	0.029	2720
4/19/2015 11:30	710	0.031	2730
4/19/2015 11:40	710	0.033	2740
4/19/2015 11:50	710	0.034	2750
4/19/2015 12:00	710	0.035	2760
4/19/2015 12:10	710	0.037	2770
4/19/2015 12:20	710	0.035	2780
4/19/2015 12:30	702	0.034	2790
4/19/2015 12:40	701	0.033	2800
4/19/2015 12:50	701	0.033	2810

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -72 hr  
 Emission Limit, lb/MMBtu: 0.058  
 Min. Load, MW: 648  
 Target, minutes: 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/19/2015 13:00	700	0.033	2820
4/19/2015 13:10	698	0.032	2830
4/19/2015 13:20	690	0.031	2840
4/19/2015 13:30	690	0.031	2850
4/19/2015 13:40	690	0.031	2860
4/19/2015 13:50	690	0.032	2870
4/19/2015 14:00	690	0.032	2880
4/19/2015 14:10	691	0.031	2890
4/19/2015 14:20	691	0.031	2900
4/19/2015 14:30	690	0.031	2910
4/19/2015 14:40	690	0.031	2920
4/19/2015 14:50	690	0.033	2930
4/19/2015 15:00	690	0.031	2940
4/19/2015 15:10	691	0.032	2950
4/19/2015 15:20	690	0.032	2960
4/19/2015 15:30	690	0.032	2970
4/19/2015 15:40	690	0.033	2980
4/19/2015 15:50	690	0.032	2990
4/19/2015 16:00	691	0.032	3000
4/19/2015 16:10	691	0.033	3010
4/19/2015 16:20	690	0.032	3020
4/19/2015 16:30	690	0.032	3030
4/19/2015 16:40	691	0.033	3040
4/19/2015 16:50	690	0.031	3050
4/19/2015 17:00	690	0.032	3060
4/19/2015 17:10	691	0.032	3070
4/19/2015 17:20	690	0.032	3080
4/19/2015 17:30	690	0.033	3090
4/19/2015 17:40	690	0.034	3100
4/19/2015 17:50	690	0.033	3110
4/19/2015 18:00	690	0.033	3120
4/19/2015 18:10	691	0.032	3130
4/19/2015 18:20	691	0.032	3140
4/19/2015 18:30	690	0.034	3150
4/19/2015 18:40	690	0.032	3160
4/19/2015 18:50	691	0.033	3170
4/19/2015 19:00	690	0.033	3180
4/19/2015 19:10	690	0.032	3190
4/19/2015 19:20	690	0.033	3200
4/19/2015 19:30	690	0.031	3210
4/19/2015 19:40	690	0.031	3220
4/19/2015 19:50	691	0.032	3230
4/19/2015 20:00	694	0.031	3240
4/19/2015 20:10	692	0.029	3250
4/19/2015 20:20	690	0.030	3260
4/19/2015 20:30	695	0.029	3270
4/19/2015 20:40	701	0.029	3280
4/19/2015 20:50	700	0.029	3290
4/19/2015 21:00	700	0.029	3300

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -72 hr  
 Emission Limit, lb/MMBtu: 0.058  
 Min. Load, MW: 648  
 Target, minutes: 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/19/2015 21:10	701	0.030	3310
4/19/2015 21:20	700	0.029	3320
4/19/2015 21:30	700	0.029	3330
4/19/2015 21:40	700	0.030	3340
4/19/2015 21:50	691	0.029	3350
4/19/2015 22:00	676	0.032	3360
4/19/2015 22:10	676	0.025	3370
4/19/2015 22:20	685	0.026	3380
4/19/2015 22:30	686	0.028	3390
4/19/2015 22:40	688	0.026	3400
4/19/2015 22:50	697	0.027	3410
4/19/2015 23:00	716	0.029	3420
4/19/2015 23:10	730	0.031	3430
4/19/2015 23:20	750	0.033	3440
4/19/2015 23:30	741	0.033	3450
4/19/2015 23:40	729	0.030	3460
4/19/2015 23:50	723	0.029	3470
4/20/2015 00:00	722	0.029	3480
4/20/2015 00:10	734	0.029	3490
4/20/2015 00:20	733	0.030	3500
4/20/2015 00:30	737	0.029	3510
4/20/2015 00:40	736	0.029	3520
4/20/2015 00:50	737	0.030	3530
4/20/2015 01:00	737	0.029	3540
4/20/2015 01:10	728	0.028	3550
4/20/2015 01:20	723	0.028	3560
4/20/2015 01:30	728	0.028	3570
4/20/2015 01:40	745	0.030	3580
4/20/2015 01:50	748	0.032	3590
4/20/2015 02:00	730	0.029	3600
4/20/2015 02:10	730	0.028	3610
4/20/2015 02:20	739	0.029	3620
4/20/2015 02:30	746	0.030	3630
4/20/2015 02:40	746	0.029	3640
4/20/2015 02:50	742	0.029	3650
4/20/2015 03:00	745	0.029	3660
4/20/2015 03:10	729	0.028	3670
4/20/2015 03:20	734	0.028	3680
4/20/2015 03:30	750	0.029	3690
4/20/2015 03:40	764	0.031	3700
4/20/2015 03:50	760	0.030	3710
4/20/2015 04:00	759	0.030	3720
4/20/2015 04:10	768	0.030	3730
4/20/2015 04:20	774	0.031	3740
4/20/2015 04:30	760	0.031	3750
4/20/2015 04:40	749	0.028	3760
4/20/2015 04:50	765	0.030	3770
4/20/2015 05:00	767	0.032	3780
4/20/2015 05:10	756	0.029	3790

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -72 hr  
 Emission Limit, lb/MMBtu 0.058  
 Min. Load, MW 648  
 Target, minutes 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/20/2015 05:20	772	0.030	3800
4/20/2015 05:30	772	0.032	3810
4/20/2015 05:40	766	Invalid Data	3810
4/20/2015 05:50	767	Invalid Data	3810
4/20/2015 06:00	772	Invalid Data	3810
4/20/2015 06:10	776	0.035	3820
4/20/2015 06:20	776	0.034	3830
4/20/2015 06:30	776	0.032	3840
4/20/2015 06:40	776	0.033	3850
4/20/2015 06:50	776	0.033	3860
4/20/2015 07:00	775	0.033	3870
4/20/2015 07:10	775	0.034	3880
4/20/2015 07:20	776	0.033	3890
4/20/2015 07:30	776	0.034	3900
4/20/2015 07:40	775	0.035	3910
4/20/2015 07:50	775	0.034	3920
4/20/2015 08:00	775	0.034	3930
4/20/2015 08:10	776	0.035	3940
4/20/2015 08:20	776	0.037	3950
4/20/2015 08:30	775	0.037	3960
4/20/2015 08:40	776	0.036	3970
4/20/2015 08:50	776	0.036	3980
4/20/2015 09:00	776	0.037	3990
4/20/2015 09:10	776	0.036	4000
4/20/2015 09:20	776	0.036	4010
4/20/2015 09:30	775	0.037	4020
4/20/2015 09:40	775	0.038	4030
4/20/2015 09:50	776	0.037	4040
4/20/2015 10:00	776	0.037	4050
4/20/2015 10:10	775	0.036	4060
4/20/2015 10:20	776	0.036	4070
4/20/2015 10:30	775	0.037	4080
4/20/2015 10:40	775	0.038	4090
4/20/2015 10:50	776	0.039	4100
4/20/2015 11:00	776	0.038	4110
4/20/2015 11:10	776	0.041	4120
4/20/2015 11:20	775	0.041	4130
4/20/2015 11:30	775	0.040	4140
4/20/2015 11:40	776	0.041	4150
4/20/2015 11:50	776	0.039	4160
4/20/2015 12:00	775	0.039	4170
4/20/2015 12:10	775	0.040	4180
4/20/2015 12:20	776	0.041	4190
4/20/2015 12:30	776	0.041	4200
4/20/2015 12:40	775	0.041	4210
4/20/2015 12:50	775	0.039	4220
4/20/2015 13:00	775	0.039	4230
4/20/2015 13:10	775	0.039	4240
4/20/2015 13:20	754	0.038	4250

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -72 hr  
 Emission Limit, lb/MMBtu: 0.058  
 Min. Load, MW: 648  
 Target, minutes: 4320

**72 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	SO2 Lb/MBtu	Total Compliance Time Minutes
4/20/2015 13:30	723	0.033	4260
4/20/2015 13:40	700	0.030	4270
4/20/2015 13:50	700	0.030	4280
4/20/2015 14:00	701	0.032	4290
4/20/2015 14:10	701	0.031	4300
4/20/2015 14:20	700	0.031	4310
4/20/2015 14:30	700	0.031	4320
4/20/2015 14:40	700	0.031	4330
4/20/2015 14:50	701	0.032	4340
4/20/2015 15:00	700	0.032	4350
4/20/2015 15:10	700	0.032	4360
4/20/2015 15:20	701	0.033	4370

	Load MWe	SO2 - 72 hr Lb/MBtu
Average Values	742	0.029
Maximum Values	777	0.041
Minimum Value	669	0.017
Minimum Target	648	
Maximum Target		0.058

## Attachment H. 120-Hour SO<sub>2</sub> Test Results

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	SO2 Lb/MBtu	Total Compliance Time Minutes
4/25/2015 00:50	511	0.026	0
4/25/2015 01:00	543	0.028	0
4/25/2015 01:10	573	0.030	0
4/25/2015 01:20	602	0.031	0
4/25/2015 01:30	631	0.024	0
4/25/2015 01:40	662	0.027	10
4/25/2015 01:50	678	0.027	20
4/25/2015 02:00	677	0.026	30
4/25/2015 02:10	677	0.029	40
4/25/2015 02:20	691	0.030	50
4/25/2015 02:30	692	0.030	60
4/25/2015 02:40	695	0.031	70
4/25/2015 02:50	691	0.031	80
4/25/2015 03:00	687	0.031	90
4/25/2015 03:10	683	0.032	100
4/25/2015 03:20	680	0.032	110
4/25/2015 03:30	679	0.031	120
4/25/2015 03:40	677	0.032	130
4/25/2015 03:50	679	0.032	140
4/25/2015 04:00	679	0.033	150
4/25/2015 04:10	680	0.033	160
4/25/2015 04:20	698	0.033	170
4/25/2015 04:30	694	0.034	180
4/25/2015 04:40	694	0.034	190
4/25/2015 04:50	699	0.034	200
4/25/2015 05:00	693	0.034	210
4/25/2015 05:10	692	0.034	220
4/25/2015 05:20	690	0.034	230
4/25/2015 05:30	679	0.034	240
4/25/2015 05:40	677	0.033	250
4/25/2015 05:50	679	0.034	260
4/25/2015 06:00	682	0.035	270
4/25/2015 06:10	690	0.034	280
4/25/2015 06:20	692	0.035	290
4/25/2015 06:30	702	0.037	300
4/25/2015 06:40	718	Invalid Data	300
4/25/2015 06:50	742	Invalid Data	300
4/25/2015 07:00	771	Invalid Data	300
4/25/2015 07:10	776	0.050	310
4/25/2015 07:20	775	0.047	320
4/25/2015 07:30	775	0.047	330
4/25/2015 07:40	775	0.048	340
4/25/2015 07:50	775	0.048	350
4/25/2015 08:00	775	0.047	360
4/25/2015 08:10	776	0.047	370
4/25/2015 08:20	775	0.047	380
4/25/2015 08:30	775	0.045	390



**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/25/2015 08:40	776	0.045	400
4/25/2015 08:50	775	0.043	410
4/25/2015 09:00	775	0.043	420
4/25/2015 09:10	775	0.042	430
4/25/2015 09:20	776	0.040	440
4/25/2015 09:30	775	0.042	450
4/25/2015 09:40	775	0.041	460
4/25/2015 09:50	775	0.039	470
4/25/2015 10:00	776	0.040	480
4/25/2015 10:10	776	0.039	490
4/25/2015 10:20	775	0.039	500
4/25/2015 10:30	775	0.038	510
4/25/2015 10:40	776	0.038	520
4/25/2015 10:50	775	0.037	530
4/25/2015 11:00	775	0.037	540
4/25/2015 11:10	776	0.029	550
4/25/2015 11:20	775	0.027	560
4/25/2015 11:30	776	0.027	570
4/25/2015 11:40	776	0.026	580
4/25/2015 11:50	775	0.026	590
4/25/2015 12:00	775	0.026	600
4/25/2015 12:10	775	0.025	610
4/25/2015 12:20	776	0.025	620
4/25/2015 12:30	775	0.025	630
4/25/2015 12:40	776	0.025	640
4/25/2015 12:50	775	0.026	650
4/25/2015 13:00	776	0.027	660
4/25/2015 13:10	775	0.026	670
4/25/2015 13:20	775	0.025	680
4/25/2015 13:30	775	0.025	690
4/25/2015 13:40	775	0.026	700
4/25/2015 13:50	775	0.026	710
4/25/2015 14:00	776	0.026	720
4/25/2015 14:10	776	0.026	730
4/25/2015 14:20	775	0.026	740
4/25/2015 14:30	775	0.026	750
4/25/2015 14:40	775	0.027	760
4/25/2015 14:50	775	0.027	770
4/25/2015 15:00	776	0.026	780
4/25/2015 15:10	775	0.026	790
4/25/2015 15:20	775	0.027	800
4/25/2015 15:30	776	0.027	810
4/25/2015 15:40	776	0.027	820
4/25/2015 15:50	775	0.027	830
4/25/2015 16:00	774	0.027	840
4/25/2015 16:10	775	0.028	850
4/25/2015 16:20	776	0.027	860
4/25/2015 16:30	776	0.027	870
4/25/2015 16:40	776	0.027	880

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/25/2015 16:50	775	0.028	890
4/25/2015 17:00	775	0.028	900
4/25/2015 17:10	776	0.027	910
4/25/2015 17:20	775	0.028	920
4/25/2015 17:30	775	0.028	930
4/25/2015 17:40	775	0.027	940
4/25/2015 17:50	775	0.029	950
4/25/2015 18:00	776	0.028	960
4/25/2015 18:10	776	0.029	970
4/25/2015 18:20	776	0.029	980
4/25/2015 18:30	776	0.029	990
4/25/2015 18:40	776	0.028	1000
4/25/2015 18:50	775	0.028	1010
4/25/2015 19:00	775	0.029	1020
4/25/2015 19:10	775	0.029	1030
4/25/2015 19:20	776	0.029	1040
4/25/2015 19:30	775	0.029	1050
4/25/2015 19:40	775	0.029	1060
4/25/2015 19:50	776	0.029	1070
4/25/2015 20:00	775	0.029	1080
4/25/2015 20:10	775	0.030	1090
4/25/2015 20:20	775	0.030	1100
4/25/2015 20:30	775	0.030	1110
4/25/2015 20:40	776	0.030	1120
4/25/2015 20:50	775	0.030	1130
4/25/2015 21:00	776	0.031	1140
4/25/2015 21:10	776	0.030	1150
4/25/2015 21:20	776	0.030	1160
4/25/2015 21:30	776	0.030	1170
4/25/2015 21:40	775	0.030	1180
4/25/2015 21:50	775	0.029	1190
4/25/2015 22:00	761	0.029	1200
4/25/2015 22:10	736	0.027	1210
4/25/2015 22:20	730	0.027	1220
4/25/2015 22:30	716	0.026	1230
4/25/2015 22:40	713	0.025	1240
4/25/2015 22:50	726	0.026	1250
4/25/2015 23:00	725	0.027	1260
4/25/2015 23:10	725	0.027	1270
4/25/2015 23:20	725	0.027	1280
4/25/2015 23:30	725	0.027	1290
4/25/2015 23:40	726	0.027	1300
4/25/2015 23:50	722	0.027	1310
4/26/2015 00:00	701	0.026	1320
4/26/2015 00:10	700	0.026	1330
4/26/2015 00:20	696	0.026	1340
4/26/2015 00:30	675	0.024	1350
4/26/2015 00:40	675	0.025	1360
4/26/2015 00:50	675	0.025	1370

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/26/2015 01:00	676	0.025	1380
4/26/2015 01:10	675	0.024	1390
4/26/2015 01:20	674	0.025	1400
4/26/2015 01:30	675	0.026	1410
4/26/2015 01:40	675	0.025	1420
4/26/2015 01:50	675	0.025	1430
4/26/2015 02:00	676	0.025	1440
4/26/2015 02:10	676	0.024	1450
4/26/2015 02:20	675	0.025	1460
4/26/2015 02:30	675	0.024	1470
4/26/2015 02:40	676	0.024	1480
4/26/2015 02:50	676	0.025	1490
4/26/2015 03:00	676	0.024	1500
4/26/2015 03:10	675	0.024	1510
4/26/2015 03:20	675	0.024	1520
4/26/2015 03:30	676	0.024	1530
4/26/2015 03:40	676	0.024	1540
4/26/2015 03:50	675	0.024	1550
4/26/2015 04:00	675	0.024	1560
4/26/2015 04:10	675	0.024	1570
4/26/2015 04:20	675	0.024	1580
4/26/2015 04:30	675	0.024	1590
4/26/2015 04:40	675	0.025	1600
4/26/2015 04:50	675	0.025	1610
4/26/2015 05:00	675	0.025	1620
4/26/2015 05:10	675	0.024	1630
4/26/2015 05:20	676	0.024	1640
4/26/2015 05:30	686	0.025	1650
4/26/2015 05:40	687	0.025	1660
4/26/2015 05:50	678	0.024	1670
4/26/2015 06:00	677	0.023	1680
4/26/2015 06:10	685	0.023	1690
4/26/2015 06:20	712	0.024	1700
4/26/2015 06:30	737	0.026	1710
4/26/2015 06:40	764	Invalid Data	1710
4/26/2015 06:50	772	Invalid Data	1710
4/26/2015 07:00	771	Invalid Data	1710
4/26/2015 07:10	770	0.032	1720
4/26/2015 07:20	769	0.030	1730
4/26/2015 07:30	772	0.030	1740
4/26/2015 07:40	771	0.030	1750
4/26/2015 07:50	771	0.030	1760
4/26/2015 08:00	772	0.029	1770
4/26/2015 08:10	774	0.030	1780
4/26/2015 08:20	774	0.030	1790
4/26/2015 08:30	774	0.029	1800
4/26/2015 08:40	774	0.029	1810
4/26/2015 08:50	775	0.029	1820
4/26/2015 09:00	775	0.029	1830

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/26/2015 09:10	775	0.030	1840
4/26/2015 09:20	776	0.029	1850
4/26/2015 09:30	776	0.029	1860
4/26/2015 09:40	774	0.030	1870
4/26/2015 09:50	773	0.029	1880
4/26/2015 10:00	775	0.029	1890
4/26/2015 10:10	774	0.030	1900
4/26/2015 10:20	774	0.030	1910
4/26/2015 10:30	774	0.030	1920
4/26/2015 10:40	774	0.030	1930
4/26/2015 10:50	775	0.031	1940
4/26/2015 11:00	775	0.031	1950
4/26/2015 11:10	774	0.031	1960
4/26/2015 11:20	772	0.031	1970
4/26/2015 11:30	774	0.033	1980
4/26/2015 11:40	774	0.033	1990
4/26/2015 11:50	775	0.032	2000
4/26/2015 12:00	774	0.032	2010
4/26/2015 12:10	774	0.033	2020
4/26/2015 12:20	775	0.033	2030
4/26/2015 12:30	774	0.032	2040
4/26/2015 12:40	772	0.032	2050
4/26/2015 12:50	773	0.033	2060
4/26/2015 13:00	774	0.033	2070
4/26/2015 13:10	774	0.034	2080
4/26/2015 13:20	774	0.033	2090
4/26/2015 13:30	775	0.034	2100
4/26/2015 13:40	775	0.034	2110
4/26/2015 13:50	775	0.034	2120
4/26/2015 14:00	776	0.033	2130
4/26/2015 14:10	769	0.034	2140
4/26/2015 14:20	765	0.032	2150
4/26/2015 14:30	759	0.032	2160
4/26/2015 14:40	764	0.033	2170
4/26/2015 14:50	744	0.033	2180
4/26/2015 15:00	713	0.030	2190
4/26/2015 15:10	699	0.028	2200
4/26/2015 15:20	701	0.028	2210
4/26/2015 15:30	701	0.029	2220
4/26/2015 15:40	701	0.028	2230
4/26/2015 15:50	700	0.028	2240
4/26/2015 16:00	700	0.028	2250
4/26/2015 16:10	701	0.028	2260
4/26/2015 16:20	700	0.028	2270
4/26/2015 16:30	700	0.028	2280
4/26/2015 16:40	700	0.028	2290
4/26/2015 16:50	700	0.028	2300
4/26/2015 17:00	700	0.028	2310
4/26/2015 17:10	699	0.029	2320

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/26/2015 17:20	707	0.029	2330
4/26/2015 17:30	734	0.030	2340
4/26/2015 17:40	753	0.032	2350
4/26/2015 17:50	763	0.033	2360
4/26/2015 18:00	766	0.033	2370
4/26/2015 18:10	768	0.034	2380
4/26/2015 18:20	780	0.037	2390
4/26/2015 18:30	784	0.036	2400
4/26/2015 18:40	784	0.036	2410
4/26/2015 18:50	785	0.037	2420
4/26/2015 19:00	785	0.037	2430
4/26/2015 19:10	784	0.037	2440
4/26/2015 19:20	783	0.036	2450
4/26/2015 19:30	783	0.036	2460
4/26/2015 19:40	778	0.036	2470
4/26/2015 19:50	778	0.035	2480
4/26/2015 20:00	774	0.035	2490
4/26/2015 20:10	779	0.036	2500
4/26/2015 20:20	779	0.037	2510
4/26/2015 20:30	778	0.036	2520
4/26/2015 20:40	772	0.036	2530
4/26/2015 20:50	771	0.036	2540
4/26/2015 21:00	759	0.036	2550
4/26/2015 21:10	735	0.032	2560
4/26/2015 21:20	720	0.032	2570
4/26/2015 21:30	701	0.030	2580
4/26/2015 21:40	716	0.029	2590
4/26/2015 21:50	726	0.031	2600
4/26/2015 22:00	712	0.031	2610
4/26/2015 22:10	690	0.027	2620
4/26/2015 22:20	684	0.027	2630
4/26/2015 22:30	675	0.026	2640
4/26/2015 22:40	677	0.027	2650
4/26/2015 22:50	683	0.027	2660
4/26/2015 23:00	683	0.027	2670
4/26/2015 23:10	678	0.026	2680
4/26/2015 23:20	675	0.025	2690
4/26/2015 23:30	675	0.025	2700
4/26/2015 23:40	675	0.026	2710
4/26/2015 23:50	675	0.025	2720
4/27/2015 00:00	675	0.025	2730
4/27/2015 00:10	675	0.026	2740
4/27/2015 00:20	676	0.025	2750
4/27/2015 00:30	675	0.025	2760
4/27/2015 00:40	675	0.025	2770
4/27/2015 00:50	675	0.024	2780
4/27/2015 01:00	675	0.025	2790
4/27/2015 01:10	679	0.024	2800
4/27/2015 01:20	685	0.025	2810

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/27/2015 01:30	678	0.025	2820
4/27/2015 01:40	684	0.025	2830
4/27/2015 01:50	685	0.026	2840
4/27/2015 02:00	680	0.026	2850
4/27/2015 02:10	683	0.025	2860
4/27/2015 02:20	681	0.025	2870
4/27/2015 02:30	686	0.024	2880
4/27/2015 02:40	687	0.024	2890
4/27/2015 02:50	688	0.024	2900
4/27/2015 03:00	689	0.024	2910
4/27/2015 03:10	695	0.023	2920
4/27/2015 03:20	687	0.023	2930
4/27/2015 03:30	691	0.022	2940
4/27/2015 03:40	688	0.022	2950
4/27/2015 03:50	690	0.022	2960
4/27/2015 04:00	694	0.022	2970
4/27/2015 04:10	702	0.023	2980
4/27/2015 04:20	719	0.024	2990
4/27/2015 04:30	735	0.025	3000
4/27/2015 04:40	742	0.025	3010
4/27/2015 04:50	755	0.026	3020
4/27/2015 05:00	757	0.027	3030
4/27/2015 05:10	739	0.026	3040
4/27/2015 05:20	746	0.026	3050
4/27/2015 05:30	764	0.026	3060
4/27/2015 05:40	759	0.027	3070
4/27/2015 05:50	765	0.025	3080
4/27/2015 06:00	779	0.027	3090
4/27/2015 06:10	780	0.027	3100
4/27/2015 06:20	780	0.027	3110
4/27/2015 06:30	780	0.027	3120
4/27/2015 06:40	780	Invalid Data	3120
4/27/2015 06:50	780	Invalid Data	3120
4/27/2015 07:00	783	Invalid Data	3120
4/27/2015 07:10	783	0.031	3130
4/27/2015 07:20	783	0.029	3140
4/27/2015 07:30	784	0.029	3150
4/27/2015 07:40	784	0.029	3160
4/27/2015 07:50	782	0.028	3170
4/27/2015 08:00	782	0.028	3180
4/27/2015 08:10	781	0.026	3190
4/27/2015 08:20	782	0.027	3200
4/27/2015 08:30	783	0.026	3210
4/27/2015 08:40	781	0.026	3220
4/27/2015 08:50	783	0.028	3230
4/27/2015 09:00	783	0.027	3240
4/27/2015 09:10	781	0.027	3250
4/27/2015 09:20	782	0.026	3260
4/27/2015 09:30	784	0.027	3270

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/27/2015 09:40	784	0.027	3280
4/27/2015 09:50	781	0.026	3290
4/27/2015 10:00	781	0.025	3300
4/27/2015 10:10	782	0.025	3310
4/27/2015 10:20	784	0.024	3320
4/27/2015 10:30	782	0.024	3330
4/27/2015 10:40	782	0.024	3340
4/27/2015 10:50	782	0.024	3350
4/27/2015 11:00	781	0.024	3360
4/27/2015 11:10	780	0.024	3370
4/27/2015 11:20	778	0.024	3380
4/27/2015 11:30	780	0.025	3390
4/27/2015 11:40	782	0.025	3400
4/27/2015 11:50	782	0.024	3410
4/27/2015 12:00	782	0.024	3420
4/27/2015 12:10	782	0.024	3430
4/27/2015 12:20	780	0.024	3440
4/27/2015 12:30	782	0.023	3450
4/27/2015 12:40	781	0.024	3460
4/27/2015 12:50	782	0.024	3470
4/27/2015 13:00	781	0.023	3480
4/27/2015 13:10	782	0.024	3490
4/27/2015 13:20	784	0.025	3500
4/27/2015 13:30	784	0.025	3510
4/27/2015 13:40	783	0.025	3520
4/27/2015 13:50	784	0.026	3530
4/27/2015 14:00	784	0.026	3540
4/27/2015 14:10	784	0.025	3550
4/27/2015 14:20	784	0.026	3560
4/27/2015 14:30	784	0.025	3570
4/27/2015 14:40	784	0.026	3580
4/27/2015 14:50	785	0.026	3590
4/27/2015 15:00	784	0.026	3600
4/27/2015 15:10	783	0.026	3610
4/27/2015 15:20	782	0.026	3620
4/27/2015 15:30	780	0.027	3630
4/27/2015 15:40	781	0.026	3640
4/27/2015 15:50	781	0.027	3650
4/27/2015 16:00	781	0.028	3660
4/27/2015 16:10	781	0.026	3670
4/27/2015 16:20	781	0.027	3680
4/27/2015 16:30	781	0.027	3690
4/27/2015 16:40	780	0.027	3700
4/27/2015 16:50	779	0.027	3710
4/27/2015 17:00	779	0.027	3720
4/27/2015 17:10	780	0.026	3730
4/27/2015 17:20	780	0.027	3740
4/27/2015 17:30	779	0.026	3750
4/27/2015 17:40	779	0.026	3760

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/27/2015 17:50	781	0.027	3770
4/27/2015 18:00	782	0.026	3780
4/27/2015 18:10	776	0.026	3790
4/27/2015 18:20	773	0.026	3800
4/27/2015 18:30	767	0.024	3810
4/27/2015 18:40	764	0.024	3820
4/27/2015 18:50	760	0.024	3830
4/27/2015 19:00	773	0.024	3840
4/27/2015 19:10	767	0.025	3850
4/27/2015 19:20	761	0.024	3860
4/27/2015 19:30	772	0.025	3870
4/27/2015 19:40	770	0.025	3880
4/27/2015 19:50	765	0.024	3890
4/27/2015 20:00	772	0.024	3900
4/27/2015 20:10	780	0.025	3910
4/27/2015 20:20	775	0.025	3920
4/27/2015 20:30	776	0.024	3930
4/27/2015 20:40	777	0.025	3940
4/27/2015 20:50	771	0.025	3950
4/27/2015 21:00	769	0.024	3960
4/27/2015 21:10	771	0.023	3970
4/27/2015 21:20	772	0.024	3980
4/27/2015 21:30	772	0.024	3990
4/27/2015 21:40	770	0.023	4000
4/27/2015 21:50	768	0.024	4010
4/27/2015 22:00	760	0.024	4020
4/27/2015 22:10	748	0.022	4030
4/27/2015 22:20	745	0.022	4040
4/27/2015 22:30	748	0.023	4050
4/27/2015 22:40	741	0.022	4060
4/27/2015 22:50	741	0.022	4070
4/27/2015 23:00	740	0.021	4080
4/27/2015 23:10	728	0.021	4090
4/27/2015 23:20	725	0.022	4100
4/27/2015 23:30	730	0.021	4110
4/27/2015 23:40	732	0.021	4120
4/27/2015 23:50	733	0.021	4130
4/28/2015 00:00	732	0.020	4140
4/28/2015 00:10	715	0.020	4150
4/28/2015 00:20	699	0.018	4160
4/28/2015 00:30	689	0.018	4170
4/28/2015 00:40	686	0.018	4180
4/28/2015 00:50	686	0.018	4190
4/28/2015 01:00	689	0.018	4200
4/28/2015 01:10	688	0.017	4210
4/28/2015 01:20	685	0.017	4220
4/28/2015 01:30	682	0.017	4230
4/28/2015 01:40	682	0.017	4240
4/28/2015 01:50	682	0.017	4250



**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/28/2015 02:00	681	0.017	4260
4/28/2015 02:10	679	0.017	4270
4/28/2015 02:20	675	0.017	4280
4/28/2015 02:30	677	0.015	4290
4/28/2015 02:40	686	0.016	4300
4/28/2015 02:50	702	0.017	4310
4/28/2015 03:00	716	0.018	4320
4/28/2015 03:10	725	0.018	4330
4/28/2015 03:20	735	0.018	4340
4/28/2015 03:30	735	0.018	4350
4/28/2015 03:40	736	0.018	4360
4/28/2015 03:50	731	0.018	4370
4/28/2015 04:00	729	0.017	4380
4/28/2015 04:10	726	0.018	4390
4/28/2015 04:20	725	0.017	4400
4/28/2015 04:30	722	0.018	4410
4/28/2015 04:40	721	0.019	4420
4/28/2015 04:50	725	0.018	4430
4/28/2015 05:00	707	0.017	4440
4/28/2015 05:10	711	0.018	4450
4/28/2015 05:20	732	0.019	4460
4/28/2015 05:30	746	0.019	4470
4/28/2015 05:40	764	0.020	4480
4/28/2015 05:50	762	0.020	4490
4/28/2015 06:00	767	0.020	4500
4/28/2015 06:10	778	0.021	4510
4/28/2015 06:20	780	0.022	4520
4/28/2015 06:30	780	0.022	4530
4/28/2015 06:40	780	Invalid Data	4530
4/28/2015 06:50	783	Invalid Data	4530
4/28/2015 07:00	784	Invalid Data	4530
4/28/2015 07:10	783	0.024	4540
4/28/2015 07:20	784	0.023	4550
4/28/2015 07:30	784	0.023	4560
4/28/2015 07:40	784	0.022	4570
4/28/2015 07:50	783	0.022	4580
4/28/2015 08:00	783	0.022	4590
4/28/2015 08:10	783	0.022	4600
4/28/2015 08:20	783	0.022	4610
4/28/2015 08:30	782	0.022	4620
4/28/2015 08:40	783	0.022	4630
4/28/2015 08:50	784	0.022	4640
4/28/2015 09:00	783	0.022	4650
4/28/2015 09:10	784	0.022	4660
4/28/2015 09:20	783	0.023	4670
4/28/2015 09:30	783	0.023	4680
4/28/2015 09:40	780	0.023	4690
4/28/2015 09:50	781	0.022	4700
4/28/2015 10:00	785	0.022	4710

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

120 - Hr SO2 Test  
 10 Minute Emission Averages

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/28/2015 10:10	784	0.024	4720
4/28/2015 10:20	783	0.022	4730
4/28/2015 10:30	784	0.023	4740
4/28/2015 10:40	777	0.023	4750
4/28/2015 10:50	781	0.023	4760
4/28/2015 11:00	782	0.024	4770
4/28/2015 11:10	784	0.024	4780
4/28/2015 11:20	782	0.024	4790
4/28/2015 11:30	784	0.025	4800
4/28/2015 11:40	784	0.025	4810
4/28/2015 11:50	784	0.025	4820
4/28/2015 12:00	784	0.024	4830
4/28/2015 12:10	783	0.024	4840
4/28/2015 12:20	781	0.024	4850
4/28/2015 12:30	780	0.024	4860
4/28/2015 12:40	781	0.024	4870
4/28/2015 12:50	781	0.025	4880
4/28/2015 13:00	781	0.024	4890
4/28/2015 13:10	781	0.024	4900
4/28/2015 13:20	782	0.024	4910
4/28/2015 13:30	782	0.023	4920
4/28/2015 13:40	782	0.023	4930
4/28/2015 13:50	781	0.022	4940
4/28/2015 14:00	782	0.023	4950
4/28/2015 14:10	783	0.022	4960
4/28/2015 14:20	784	0.021	4970
4/28/2015 14:30	784	0.021	4980
4/28/2015 14:40	784	0.021	4990
4/28/2015 14:50	785	0.020	5000
4/28/2015 15:00	785	0.019	5010
4/28/2015 15:10	783	0.022	5020
4/28/2015 15:20	784	0.028	5030
4/28/2015 15:30	784	0.027	5040
4/28/2015 15:40	784	0.023	5050
4/28/2015 15:50	783	0.022	5060
4/28/2015 16:00	783	0.022	5070
4/28/2015 16:10	783	0.022	5080
4/28/2015 16:20	784	0.023	5090
4/28/2015 16:30	784	0.024	5100
4/28/2015 16:40	782	0.020	5110
4/28/2015 16:50	783	0.022	5120
4/28/2015 17:00	782	0.023	5130
4/28/2015 17:10	783	0.023	5140
4/28/2015 17:20	784	0.022	5150
4/28/2015 17:30	783	0.021	5160
4/28/2015 17:40	783	0.023	5170
4/28/2015 17:50	782	0.020	5180
4/28/2015 18:00	781	0.019	5190
4/28/2015 18:10	781	0.021	5200

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/28/2015 18:20	780	0.021	5210
4/28/2015 18:30	770	0.020	5220
4/28/2015 18:40	774	0.020	5230
4/28/2015 18:50	777	0.021	5240
4/28/2015 19:00	773	0.021	5250
4/28/2015 19:10	765	0.022	5260
4/28/2015 19:20	781	0.022	5270
4/28/2015 19:30	783	0.023	5280
4/28/2015 19:40	783	0.022	5290
4/28/2015 19:50	781	0.021	5300
4/28/2015 20:00	782	0.021	5310
4/28/2015 20:10	783	0.021	5320
4/28/2015 20:20	782	0.021	5330
4/28/2015 20:30	777	0.021	5340
4/28/2015 20:40	776	0.022	5350
4/28/2015 20:50	772	0.022	5360
4/28/2015 21:00	762	0.022	5370
4/28/2015 21:10	777	0.021	5380
4/28/2015 21:20	778	0.022	5390
4/28/2015 21:30	777	0.020	5400
4/28/2015 21:40	768	0.019	5410
4/28/2015 21:50	753	0.019	5420
4/28/2015 22:00	744	0.019	5430
4/28/2015 22:10	765	0.019	5440
4/28/2015 22:20	780	0.020	5450
4/28/2015 22:30	778	0.020	5460
4/28/2015 22:40	772	0.019	5470
4/28/2015 22:50	778	0.019	5480
4/28/2015 23:00	780	0.019	5490
4/28/2015 23:10	761	0.019	5500
4/28/2015 23:20	730	0.017	5510
4/28/2015 23:30	704	0.016	5520
4/28/2015 23:40	700	0.016	5530
4/28/2015 23:50	700	0.016	5540
4/29/2015 00:00	690	0.016	5550
4/29/2015 00:10	675	0.015	5560
4/29/2015 00:20	676	0.015	5570
4/29/2015 00:30	676	0.015	5580
4/29/2015 00:40	685	0.017	5590
4/29/2015 00:50	683	0.016	5600
4/29/2015 01:00	674	0.014	5610
4/29/2015 01:10	681	0.014	5620
4/29/2015 01:20	686	0.015	5630
4/29/2015 01:30	686	0.015	5640
4/29/2015 01:40	687	0.015	5650
4/29/2015 01:50	709	0.015	5660
4/29/2015 02:00	736	0.015	5670
4/29/2015 02:10	744	0.016	5680
4/29/2015 02:20	728	0.014	5690

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/29/2015 02:30	719	0.014	5700
4/29/2015 02:40	718	0.014	5710
4/29/2015 02:50	723	0.014	5720
4/29/2015 03:00	726	0.014	5730
4/29/2015 03:10	733	0.014	5740
4/29/2015 03:20	739	0.014	5750
4/29/2015 03:30	738	0.014	5760
4/29/2015 03:40	723	0.014	5770
4/29/2015 03:50	716	0.013	5780
4/29/2015 04:00	726	0.013	5790
4/29/2015 04:10	730	0.013	5800
4/29/2015 04:20	737	0.014	5810
4/29/2015 04:30	728	0.014	5820
4/29/2015 04:40	716	0.013	5830
4/29/2015 04:50	702	0.013	5840
4/29/2015 05:00	697	0.013	5850
4/29/2015 05:10	687	0.013	5860
4/29/2015 05:20	697	0.013	5870
4/29/2015 05:30	713	0.014	5880
4/29/2015 05:40	731	0.015	5890
4/29/2015 05:50	732	0.015	5900
4/29/2015 06:00	757	0.015	5910
4/29/2015 06:10	780	0.017	5920
4/29/2015 06:20	780	0.017	5930
4/29/2015 06:30	780	0.017	5940
4/29/2015 06:40	781	Invalid Data	5940
4/29/2015 06:50	781	Invalid Data	5940
4/29/2015 07:00	780	Invalid Data	5940
4/29/2015 07:10	780	0.020	5950
4/29/2015 07:20	781	0.019	5960
4/29/2015 07:30	780	0.019	5970
4/29/2015 07:40	781	0.019	5980
4/29/2015 07:50	780	0.019	5990
4/29/2015 08:00	780	0.019	6000
4/29/2015 08:10	781	0.019	6010
4/29/2015 08:20	779	0.018	6020
4/29/2015 08:30	780	0.019	6030
4/29/2015 08:40	781	0.019	6040
4/29/2015 08:50	780	0.019	6050
4/29/2015 09:00	781	0.020	6060
4/29/2015 09:10	781	0.021	6070
4/29/2015 09:20	780	0.021	6080
4/29/2015 09:30	781	0.021	6090
4/29/2015 09:40	781	0.021	6100
4/29/2015 09:50	781	0.021	6110
4/29/2015 10:00	781	0.022	6120
4/29/2015 10:10	780	0.022	6130
4/29/2015 10:20	781	0.021	6140
4/29/2015 10:30	781	0.021	6150

Unit 1



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/29/2015 10:40	780	0.022	6160
4/29/2015 10:50	780	0.021	6170
4/29/2015 11:00	780	0.021	6180
4/29/2015 11:10	780	0.020	6190
4/29/2015 11:20	782	0.020	6200
4/29/2015 11:30	781	0.021	6210
4/29/2015 11:40	780	0.021	6220
4/29/2015 11:50	780	0.020	6230
4/29/2015 12:00	782	0.021	6240
4/29/2015 12:10	782	0.022	6250
4/29/2015 12:20	780	0.019	6260
4/29/2015 12:30	781	0.020	6270
4/29/2015 12:40	781	0.020	6280
4/29/2015 12:50	781	0.020	6290
4/29/2015 13:00	780	0.020	6300
4/29/2015 13:10	781	0.020	6310
4/29/2015 13:20	781	0.020	6320
4/29/2015 13:30	780	0.019	6330
4/29/2015 13:40	780	0.020	6340
4/29/2015 13:50	781	0.020	6350
4/29/2015 14:00	781	0.019	6360
4/29/2015 14:10	781	0.019	6370
4/29/2015 14:20	781	0.020	6380
4/29/2015 14:30	781	0.020	6390
4/29/2015 14:40	781	0.019	6400
4/29/2015 14:50	781	0.019	6410
4/29/2015 15:00	781	0.020	6420
4/29/2015 15:10	780	0.020	6430
4/29/2015 15:20	781	0.020	6440
4/29/2015 15:30	778	0.021	6450
4/29/2015 15:40	779	0.019	6460
4/29/2015 15:50	782	0.021	6470
4/29/2015 16:00	781	0.021	6480
4/29/2015 16:10	779	0.020	6490
4/29/2015 16:20	781	0.020	6500
4/29/2015 16:30	781	0.020	6510
4/29/2015 16:40	780	0.021	6520
4/29/2015 16:50	780	0.020	6530
4/29/2015 17:00	781	0.021	6540
4/29/2015 17:10	780	0.021	6550
4/29/2015 17:20	780	0.020	6560
4/29/2015 17:30	781	0.021	6570
4/29/2015 17:40	781	0.020	6580
4/29/2015 17:50	781	0.022	6590
4/29/2015 18:00	780	0.021	6600
4/29/2015 18:10	781	0.021	6610
4/29/2015 18:20	780	0.022	6620
4/29/2015 18:30	784	0.022	6630
4/29/2015 18:40	785	0.022	6640

**Unit 1**



Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State Missouri  
 TEST SO2 -120 hr  
 Emission Limit, lb/MMBtu 0.07  
 Min. Load, MW 648  
 Target, minutes 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time	Load	SO2	Total Compliance Time
period prior to	MWe	Lb/MBtu	Minutes
4/29/2015 18:50	784	0.023	6650
4/29/2015 19:00	783	0.022	6660
4/29/2015 19:10	785	0.023	6670
4/29/2015 19:20	785	0.023	6680
4/29/2015 19:30	784	0.023	6690
4/29/2015 19:40	784	0.022	6700
4/29/2015 19:50	783	0.022	6710
4/29/2015 20:00	783	0.023	6720
4/29/2015 20:10	782	0.023	6730
4/29/2015 20:20	781	0.023	6740
4/29/2015 20:30	780	0.022	6750
4/29/2015 20:40	780	0.023	6760
4/29/2015 20:50	779	0.024	6770
4/29/2015 21:00	779	0.023	6780
4/29/2015 21:10	781	0.023	6790
4/29/2015 21:20	773	0.023	6800
4/29/2015 21:30	766	0.022	6810
4/29/2015 21:40	754	0.021	6820
4/29/2015 21:50	744	0.021	6830
4/29/2015 22:00	718	0.020	6840
4/29/2015 22:10	694	0.018	6850
4/29/2015 22:20	682	0.018	6860
4/29/2015 22:30	683	0.018	6870
4/29/2015 22:40	679	0.018	6880
4/29/2015 22:50	686	0.019	6890
4/29/2015 23:00	685	0.019	6900
4/29/2015 23:10	675	0.018	6910
4/29/2015 23:20	676	0.018	6920
4/29/2015 23:30	676	0.017	6930
4/29/2015 23:40	676	0.017	6940
4/29/2015 23:50	676	0.018	6950
4/30/2015 00:00	675	0.017	6960
4/30/2015 00:10	676	0.018	6970
4/30/2015 00:20	675	0.017	6980
4/30/2015 00:30	675	0.017	6990
4/30/2015 00:40	675	0.018	7000
4/30/2015 00:50	675	0.018	7010
4/30/2015 01:00	676	0.018	7020
4/30/2015 01:10	675	0.018	7030
4/30/2015 01:20	675	0.019	7040
4/30/2015 01:30	676	0.019	7050
4/30/2015 01:40	675	0.019	7060
4/30/2015 01:50	676	0.018	7070
4/30/2015 02:00	676	0.018	7080
4/30/2015 02:10	676	0.019	7090
4/30/2015 02:20	675	0.019	7100
4/30/2015 02:30	675	0.019	7110
4/30/2015 02:40	675	0.019	7120
4/30/2015 02:50	676	0.019	7130



**Unit 1**

Facility Name: LA CYGNE STATION  
 Location: 25166 E. 2200 Rd., La Cygne, KS 66040

State: Missouri  
 TEST: SO2 -120 hr  
 Emission Limit, lb/MMBtu: 0.07  
 Min. Load, MW: 648  
 Target, minutes: 7200

**120 - Hr SO2 Test  
 10 Minute Emission Averages**

Invalid Data = excluded time for calibration  
 or probe blowback as allowed by EPA

Date/Time period prior to	Load MWe	SO2 Lb/MBtu	Total Compliance Time Minutes
4/30/2015 03:00	676	0.020	7140
4/30/2015 03:10	688	0.019	7150
4/30/2015 03:20	698	0.020	7160
4/30/2015 03:30	696	0.020	7170
4/30/2015 03:40	695	0.019	7180
4/30/2015 03:50	694	0.020	7190
4/30/2015 04:00	686	0.020	7200
4/30/2015 04:10	680	0.019	7210
4/30/2015 04:20	699	0.020	7220
4/30/2015 04:30	691	0.020	7230
4/30/2015 04:40	696	0.020	7240

	Load MWe	SO2 - 120 hr Lb/MBtu
Average Values	748	0.025
Maximum Values	785	0.050
Minimum Value	662	0.013
Minimum Target	648	
Maximum Target		0.070

# IN-SERVICE TESTING REPORT

La Cygne Unit 2 & Common

B&V PROJECT NO. 166817

Missouri Case No. ER-2014-0370

PREPARED FOR



Kansas City Power & Light





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## 1.0 Executive Summary

Kansas City Power & Light Company (KCP&L) performed in-service testing of the Unit 2 La Cygne Air Quality Control (AQC) systems during the period from February 26, 2015 through March 24, 2015. KCP&L previously consulted the Staff of the Missouri Public Service Commission (MPSC) to develop in-service test criteria that established specific construction and performance conditions that the La Cygne Unit 1 and Unit 2 and Common plant related to the AQC systems had to meet in order to demonstrate that the environmental control equipment including the nitrogen oxide (NO<sub>x</sub>), particulate, and the sulfur dioxide (SO<sub>2</sub>) control equipment were in-service and “used and required to be used” in service to KCP&L’s customers. As of March 24, 2015, KCP&L successfully achieved each in-service criterion for Unit 2 and Common.

## 2.0 La Cygne Project Description and Background

La Cygne Generating Station Unit 2 operates at a nominal capacity of 715 MW and burns Powder River Basin (PRB) from various mines. Unit 2 has the flexibility to burn a blend of PRB and Kansas/Missouri coal. Unit 2 has its own flue in the Common concrete shell. The unit is located at the La Cygne Generating Station near La Cygne, Kansas.

The La Cygne Environmental Retrofit Project included the addition of state of the art environmental controls on the existing unit that meets or exceeds Best Available Control Technology standards at the time the permit was issued. The Unit 2 equipment arrangement upon completion of the Environmental Retrofit Project includes a selective catalytic reduction (SCR) system, a pulse-jet fabric filter (PJFF) replacing the existing electrostatic precipitator, induced draft (ID) fans, a wet flue gas desulfurization (WFGD) system, and a dual-flue chimney (single chimney shell shared with Unit 1 with a separate flue for each unit). Additional equipment, commonly shared by Unit 1 and Unit 2 and essential to the operation of the AQC equipment on both units, is referred to as Common equipment. This equipment includes, but is not limited to, auxiliary power, fire protection, potable water, and gypsum, limestone, and fly ash handling systems.

## 3.0 In-Service Test Criteria and Procedures

The new La Cygne Unit 2 AQC systems provide control for three distinct criteria air emissions: NO<sub>x</sub>, SO<sub>2</sub>, and particulate matter less than 10 microns as both filterable (PM<sub>10F</sub>) and total (PM<sub>10T</sub>), each with distinct in-service criteria. The three main control systems for each of these emission types include the SCR for NO<sub>x</sub> removal, the PJFF for particulate removal, and the WFGD for SO<sub>2</sub> removal, although some of the control systems do provide co-beneficial removal of other air emissions. Control of each of the three emission types is necessary to meet the in-service criteria in order for the AQC systems to be considered in-service. In-service criteria, attached to this Report as Attachment A, includes: (1) Completion of all major construction work for Unit 2 and; (2) Successful completion of all preoperational tests; and (3) AQC equipment had to successfully meet certain in-service performance criteria. In-service project completion criteria 1 and 2 are documented by Attachment B, KCP&L LaCygne Unit 2 Construction Completion & Commissioning Status, which provides the construction completion and commissioning dates of all the major equipment.

In-service criteria contained specific 4-hour, 72-hour (NO<sub>x</sub> and SO<sub>2</sub> only) and 120-hour testing requirements for the air emissions described above. The in-service criteria included requirements that the 4-hour particulate testing be executed at greater than or equal to 90 percent design load (644 MW), the 4-hour NO<sub>x</sub> and SO<sub>2</sub> testing be executed at greater than or equal to 93 percent design load (665 MW), and the 72-hour NO<sub>x</sub> and SO<sub>2</sub> testing along with all 120-hour testing be executed at greater than or equal to 80 percent design load (572 MW). In-service criterion required that the

Continuous Emission Monitoring System (CEMS) be operational and demonstrate the capability of monitoring  $\text{NO}_x$ ,  $\text{PM}_{10F}$ ,  $\text{PM}_{10T}$  and  $\text{SO}_2$  emission levels.

La Cygne Environmental Partners (LEP) completed necessary construction and pre-operational tests on the AQC systems to support unit start-up January 20, 2015. Following several unit boiler outages unrelated to the new equipment, on February 19, 2015, Unit 2 output reached a load level greater than 90 percent; a load level sufficient to complete stack reference testing for  $\text{PM}_{10F}$  and  $\text{PM}_{10T}$  emissions. Particulate matter test runs were conducted by Burns & McDonnell on February 19, 2015 to measure filterable particulate less than 10 microns ( $\text{PM}_{10F}$ ) and total particulate less than 10 microns ( $\text{PM}_{10T}$ ). Since PM CEMS systems can only measure the filterable portion of  $\text{PM}_{10}$  and not the condensable portion of particulate emissions that the EPA also defines as part  $\text{PM}_{10T}$ , this testing was necessary to allow the development of a correlation factor between the  $\text{PM}_{10F}$  and  $\text{PM}_{10T}$  emissions. The PM CEMS uses this correlation factor to calculate the  $\text{PM}_{10T}$  emission from the measured  $\text{PM}_{10F}$  emission. This  $\text{PM}_{10}$  testing is in addition to the PM CEMS correlation testing performed by C.E.M. Solutions that is necessary per EPA regulations to allow development of a correlation curve of the filterable emissions to actual stack measurements. All PM testing was conservatively completed using EPA MATS Method 5/202 which includes particulate smaller and greater than 10 microns. The practice of using this test method is commonly allowed by regulators as it is easier and more practical to complete as compared to methods that only measure  $\text{PM}_{10}$ .

Attachment C provides a summary of the  $\text{PM}_{10F}$  and  $\text{PM}_{10T}$  correlation testing from the testing contractor, Burns & McDonnell. This summary includes the correlation factor calculation, results of the PM CEMS correlation verification and results of the Relative Accuracy Test Audit (RATA) testing completed by LEP and their subcontractor, C.E.M. Solutions. C.E.M. Solutions testing has identified that the CEMS achieved provisional acceptance by meeting all EPA 40 CFR Part 75 requirements.

The unit and new equipment then operated to allow completion of the remaining commissioning and in-service tests through the period of March 24, 2015 for all equipment required for in-service testing. A summary of the in-service criteria and test results is given in Table 1. Each of the tests listed in Table 1 are described in more detail in the subsequent sections of this report. Note that all times reported in this report and attachments are based on Central Standard Time as the CEMS clock does not adjust for daylight savings time.

**Table 1 MPSC In-Service Criteria and Test Results**

IN-SERVICE CRITERIA	IN-SERVICE EMISSION CRITERIA, LB/MMBTU		IN-SERVICE LOAD CRITERIA, MW	
	CRITERIA LIMIT	ACTUAL TEST MAXIMUM	CRITERIA LIMIT	ACTUAL TEST MINIMUM
4-hour NO <sub>x</sub> emissions at ≥ 93 percent design load (10 min avg)	≤ 0.055	0.053	≥665	699
72-hour NO <sub>x</sub> emissions at ≥80 percent design load (10 min avg) <sup>(1)</sup>	≤ 0.058	0.055	≥572	584
120-hour NO <sub>x</sub> emissions at ≥ 80 percent design load (10 min avg) <sup>(1)</sup>	≤ 0.07	0.069	≥572	584
4-hour PM <sub>10</sub> filterable emissions at ≥ 90 percent design load (10 min avg)	≤ 0.013	0.006	≥644	699
4-hour PM <sub>10</sub> total emissions at ≥ 90 percent design load (10 min avg)	≤ 0.022	0.014 <sup>(2)</sup>	≥644	699
120-hour PM <sub>10</sub> filterable emissions at ≥80percent design load (10 min avg)	≤ 0.014	0.007	≥572	584
120-hour PM <sub>10</sub> total emissions at ≥ 80 percent design load (10 min avg)	≤ 0.023	0.017 <sup>(2)</sup>	≥572	584
4-hour SO <sub>2</sub> emissions at ≥93 percent design load (10 min avg)	≤ 0.055 <sup>(3)</sup>	0.018	≥665	671
72- hour SO <sub>2</sub> emissions at ≥80 percent design load (10 min avg) <sup>(1)</sup>	≤ 0.058 <sup>(4)</sup>	0.044	≥572	614
120-hour SO <sub>2</sub> emissions at ≥80 percent design load (10 min avg) <sup>(1)</sup>	≤ 0.07	0.044	≥572	575

**Notes:**

1. 72 hour and 120 hour test periods may, but are not required to, occur concurrently.
2. Using correlation factor of PM<sub>10</sub> filterable to PM<sub>10</sub> Total emissions as determined by previous testing and implemented in the PM CEMS.
3. The less strict requirement of this limit or a 97.8 removal efficiency criterion was to be met. The removal efficiency requirement is stricter and not required to be met based on the fuels burned for this testing.
4. The less strict requirement of this limit or a 97.7 removal efficiency criterion was to be met. The removal efficiency requirement is stricter and not required to be met based on the fuels burned for this testing.

## 4.0 In-Service NO<sub>x</sub> Reduction Test and Results

The pre-operational tests of the various SCR subsystems (*i.e.*, sonic horns, rappers, dilution air fans, damper controls, air compressor, thermocouples and differential pressure transmitters, dilution air skid, ammonia storage tank, vaporizers, regulators, and water fogging system) were completed to support start-up of the SCR operation and testing in accordance with the dates in Attachment B. On February 19, La Cygne plant personnel initiated ammonia injection into the flue gas stream and preliminary operation of the ammonia injection grid and SCR.

The NO<sub>x</sub> reduction in-service testing began March 8, 2015. Data was measured and stored by the CEMS on 1-minute emission averages. This 1-minute data was collected and used to calculate 10-minute averages as the calculation of 10-minute averages by the CEMS is not a typical EPA reporting format. The use of the 10-minute averages follows the precedent set by the previous in-service testing completed by KCP&L for the Iatan plant. It is noted that the CEMS performs automatic calibrations, ranging in duration from 20 to 30 minutes and hourly probe blowbacks. During those calibration periods and probe blowbacks, in accordance with EPA regulations, the CEMS marks the data as invalid and, as a result, some 10-minute reporting periods can be impacted. General EPA reporting protocol was followed which used all valid data collected during a 10-minute period to determine the 10-minute average. The time stamps on averaging period indicates the end of the averaging period, *i.e.*, an averaging period noted ending in the 10th minute of the hour encompasses the time period of 00:00 through 09:59. All 10-minute averaging periods during which no valid data was collected were marked as "Invalid Data" and that averaging period was excluded from consideration in the operating period. As noted the exclusion of these invalid data periods is common to normal operation and allowed under EPA protocol. All of these 10-minute operating periods are clearly identified with the note "Invalid Data" in the data presented. The complete data for the NO<sub>x</sub> testing results are provided in Attachment D - 4-Hour NO<sub>x</sub> Test Results, Attachment E - 72-Hour NO<sub>x</sub> Test Results and Attachment F - 120-Hour NO<sub>x</sub> Test Results.

### In-Service NO<sub>x</sub> Test Results:

The 4-hour in-service test was started at 0930 on March 8, 2015 and concluded at 1330 on March 8, 2015. The maximum output of NO<sub>x</sub> at the stack during this period was 0.053 lb/MMBtu, with a minimum unit load of 699 MW (representing approximately 98 percent of design load). The 10-minute average test data included in Attachment D shows that output NO<sub>x</sub> over the 4-hour test period was successfully maintained below the in-service criterion limit of 0.055 lb/MMBtu. On this basis, KCP&L satisfied the 4-hour NO<sub>x</sub> reduction in-service criterion.

The 72-hour in-service test was started at 1450 on March 8, 2015 and concluded at 1620 on March 11, 2015. During the included time periods, the maximum output of NO<sub>x</sub> at the stack was 0.055 lb/MMBtu with an average emission rate of 0.044 lb/MMBtu. Minimum operating load for the Unit was 584 MW (representing 82 percent of design load) and an average load of 678 MW.

The 120-hour in-service test was started at 1430 on March 8, 2015 and concluded at 1700 on March 13, 2015. During the included time periods, the maximum output of NO<sub>x</sub> at the stack was 0.069 lb/MMBtu with an average emission rate of 0.043 lb/MMBtu. Minimum operating load for the Unit was 584 MW (representing 82 percent of design load) and an average load of 669 MW.

The 10-minute average test data included in Attachment E - 72-Hour NO<sub>x</sub> Test Results and in Attachment F - 120-Hour NO<sub>x</sub> Test Results shows that the NO<sub>x</sub> emissions were successfully maintained below the in-service criterion limits of 0.058 lb/MMBtu and 0.07 lb/MMBtu

respectively, while the Unit was simultaneously at or above 572 MW for the required 72 and 120 hours. On this basis, KCP&L satisfied the 72 and 120-hour NO<sub>x</sub> reduction in-service criterion.

## 5.0 In-Service Particulate Reduction Test and Results

The completion of major construction of the various fabric filter subsystems occurred prior to the first fire of the Unit after completing its outage. The pre-operational tests of the various fabric filter subsystems (*i.e.*, fabric filter compartments, dampers, damper controls, air compressors, thermocouples and differential pressure transmitters, pulse jet air system and ash removal system) were completed prior to the initial operation of the fabric filter in January 2015. Operating personnel pre-coated the fabric filter bags in accordance with the manufacturer's recommendations prior to flue gas first being emitted to the fabric filter. Boiler unit operations and requirements for other operational tests prevented the in-service emission testing from beginning until March 19, 2015.

### In-Service Particulate Reduction Test Results:

Following the required stack emission testing for the development of the correlation curve for the PM CEMS and the PM<sub>10F</sub> to PM<sub>10T</sub> correlation factor as explained in Section 3, the PM<sub>10</sub> 4-hour testing began at 1310 on March 19, 2015 and ended at 1710 March 19, 2015, with the PM CEMS providing measurement of the emissions. The maximum PM<sub>10F</sub> measurement for the test period was 0.006 lb/MMBtu with an average of 0.006 lb/MMBtu, while the maximum PM<sub>10T</sub> measurement was 0.014 lb/MMBtu with an average of 0.014 lb/MMBtu. Minimum unit load during the test was 699 MW (representing 98 percent of design load). Attachment G - 4-Hour Particulate Test Results provides the full data from this testing.

The PM<sub>10</sub> 120-hour testing began at 1710 on March 19, 2015 and ended at 1940 March 24, 2015, with the PM CEMS providing measurement of the emissions. The maximum PM<sub>10F</sub> measurement for the test period was 0.007 lb/MMBtu with an average of 0.006 lb/MMBtu, while the maximum PM<sub>10T</sub> measurement was 0.017 lb/MMBtu with an average of 0.013 lb/MMBtu. Minimum unit load during the test was 584 MW (representing 82 percent of design load). Attachment H - 120-Hour Particulate Test Results provides the full data from this testing.

The test data shows that particulate emission controls successfully maintained the emissions below the 4-hour criterion limits of 0.013 lb/MMBtu for PM<sub>10F</sub> and 0.022 lb/MMBtu for PM<sub>10T</sub> and the 120-hour testing limits of 0.014 lb/MMBtu for PM<sub>10F</sub> and 0.023 lb/MMBtu for PM<sub>10T</sub>. On this basis, KCP&L satisfied the particulate reduction in-service criterion.

## 6.0 In-Service SO<sub>2</sub> Reduction Test and Results

The completion of major construction of the various absorber and reagent preparation subsystems occurred in January 2015 to allow Unit 2 start-up in mid-January 2015. The pre-operational tests of the various absorber and reagent preparation subsystems (*i.e.*, absorber vessel, recycle pumps, mist eliminator, reagent feed system, absorber bleed system, limestone conveying system, ball mills, reclaim water system, filter feed system, and gypsum dewatering and conveying systems) were completed prior to flue gas first being emitted to the system. Boiler unit operations and requirements for other operational tests prevented the in-service emission testing from beginning until February 26, 2015.

SO<sub>2</sub> stack emission data was collected from the CEMS similar to the procedure discussed for the NO<sub>x</sub> testing in Section 4.0. All "Invalid Data" was identified in accordance with guidelines set forth in

that section. The complete data for the SO<sub>2</sub> testing results are provided in Attachment I - 4-Hour SO<sub>2</sub> Test Results, Attachment J - 72-Hour SO<sub>2</sub> Test Results and Attachment K - 120-Hour SO<sub>2</sub> Test Results.

### **In-Service SO<sub>2</sub> Test Results:**

The 4-hour in-service test was started at 0850 February 26, 2015 and concluded at 1250 February 26, 2015. The maximum output of SO<sub>2</sub> at the stack during this period was 0.018 lb/MMBtu and the average SO<sub>2</sub> emission at the stack during this period was 0.014 lb/MMBtu. Minimum unit load was 671 MW (representing 94 percent of design load), while average load was 680 MW. The 10-minute average test data included in Attachment I shows that SO<sub>2</sub> emissions over the 4-hour test were successfully maintained below the in-service criterion limit of 0.055 lb/MMBtu. On this basis, KCP&L satisfied the 4-hour SO<sub>2</sub> reduction in-service criterion.

The 72-hour in-service test was started at 1300 February 26, 2015 and concluded at 1530 March 1, 2015. During this time period, the maximum output of SO<sub>2</sub> at the stack was 0.044 lb/MMBtu and the average SO<sub>2</sub> emission at the stack during this period was 0.022 lb/MMBtu. Minimum load during the test was 614 MW (representing 86 percent of design load), while average load was 684 MW. The 10-minute average test data included in Attachment J shows that SO<sub>2</sub> emissions over the 72-hour test were successfully maintained below the in-service criteria limit of 0.058 lb/MMBtu. On this basis, KCP&L satisfied the 72-hour SO<sub>2</sub> reduction in-service criterion.

The 120-hour in-service test was started at 0940 March 2, 2015 and concluded at 1210 March 7, 2015. During this time period, the maximum output of SO<sub>2</sub> at the stack was 0.044 lb/MMBtu and the average SO<sub>2</sub> emission at the stack during this period was 0.022 lb/MMBtu. Minimum load during the test was 575 MW (representing 80 percent of design load), while the average load was 676 MW. The 10-minute average test data included in Attachment K show that SO<sub>2</sub> emissions over the 120-hour test were successfully maintained below the in-service criteria limit of 0.07 lb/MMBtu. On this basis, KCP&L satisfied the 120-hour SO<sub>2</sub> reduction in-service criterion.

## **7.0 Conclusion**

KCP&L and its contractors have completed all major construction and pre-operational testing of the La Cygne Unit 2 and Common AQC Systems. During the period of February 19 through March 24, 2015 the individual testing of the three air emission types, NO<sub>x</sub>, particulate and SO<sub>2</sub>, identified as the in-service criteria, demonstrated the ability of the primary control systems to meet the in-service criteria by fulfilling the 4-hour, 72-hour and 120-hour tests. The CEMS certification tests completed by LEP and their subcontractor, C.E.M. Solutions, demonstrated the ability of the CEMS to measure the NO<sub>x</sub> and SO<sub>2</sub> emissions. PM<sub>10</sub> stack measurements and results submitted by the testing subcontractors, Burns & McDonnell and C.E.M. Solutions, provide the necessary data to correlate and demonstrate the ability of the PM CEMS to measure PM<sub>10</sub> emissions. Therefore, the La Cygne Unit 2 and Common AQC Systems have successfully met each of the in-service criteria and as of March 24, 2015 can be declared "used and required to be used" for service to KCP&L's customers.

## **Attachment A. In-Service Test Criteria**



## MPSC In-Service Criteria for La Cygne Unit 2 and Common

### PM10 Compliance – La Cygne Unit 2 and Common

1. All major construction work for Unit 2 and Common is complete.
2. All preoperational tests for Unit 2 and Common have been successfully completed.
3. PM10 filterable: Unit 2 shall demonstrate its ability to operate at or above 90 percent of its nominal gross output of 715 MW (644 MW – 715 MW) with emissions that contain on average 0.013 lb/mmBTU or less as measured by the CEMS over a continuous four (4) hour period.
4. PM10 filterable: Unit 2 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 715 MW (572 MW – 715 MW) with emissions that contain on average 0.014 lb/mmBTU or less as measured by the CEMS over a continuous 120 hour period.
5. PM10 total: Unit 2 shall demonstrate its ability to operate at or above 90 percent of its nominal gross output of 715 MW (644 MW – 715 MW) with emissions that contain on average 0.022 lb/mmBTU or less as measured by the CEMS over a continuous four (4) hour period.
6. PM10 total: Unit 2 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 715 MW (572 MW – 715 MW) with emissions that contain on average 0.023 lb/mmBTU or less as measured by the CEMS over a continuous 120 hour period.
7. Continuous emission monitoring systems (CEMS) are operational and demonstrate the capability of monitoring the PM10 emissions to satisfy the parameters in items (3), (4), (5) and (6) above.

### SO<sub>2</sub> Compliance – La Cygne Unit 2 and Common

1. All major construction work for Unit 2 and Common is complete.
2. All preoperational tests for Unit 2 and Common have been successfully completed.
3. Unit 2 shall demonstrate its ability to operate at or above 93 percent of its nominal gross output of 715 MW (665 MW – 715 MW) with emissions that contain on average 0.055 lb/mmBTU or less (or 97.8 percent removal, whichever is less stringent) as measured by the CEMS over a continuous four (4) hour period.
4. Unit 2 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 715 MW (572 MW – 715 MW) with emissions that contain on average 0.058 lb/mmBTU or less (or 97.7 percent removal, whichever is less stringent) as measured by the CEMS over a continuous 72 hour period.

5. Unit 2 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 715 MW (572 MW – 715 MW) with emissions that contain on average 0.07 lb/mmBTU or less (or 97.7 percent removal, whichever is less stringent) as measured by the CEMS over a continuous 120 hour period. Successful completion of items (4) and (5) may, but are not required to, occur concurrently
6. CEMS are operational and demonstrate the capability of monitoring the SO<sub>2</sub> emissions to satisfy the parameters in items (3), (4) and (5) above.

### **NO<sub>x</sub> Compliance – La Cygne Unit 2 and Common**

1. All major construction work for Unit 2 and Common is complete.
2. All preoperational tests for Unit 2 and Common have been successfully completed.
3. Unit 2 shall demonstrate its ability to operate at or above 93 percent of its nominal gross output of 715 MW (665 MW – 715 MW) with emissions that contain on average 0.055 lb/mmBTU or less as measured by the continuous emission monitoring systems (CEMS) over a continuous four (4) hour period.
4. Unit 2 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 715 MW (572 MW – 715 MW) with emissions that contain on average 0.058 lb/mmBTU or less as measured by the CEMS over a continuous 72 hour period.
5. Unit 2 shall demonstrate its ability to operate at or above 80 percent of its nominal gross output of 715 MW (572 MW – 715 MW) with emissions that contain on average 0.07 lb/mmBTU or less as measured by the CEMS over a continuous 120 hour period. Successful completion of items (4) and (5) may, but are not required to, occur concurrently
6. CEMS are operational and demonstrate the capability of monitoring the NO<sub>x</sub> emissions to satisfy the parameters in items (3), (4) and (5) above.

**Attachment B. Construction Completion & Commissioning Status**

# KCP&L LaCygne Unit 2 Construction Completion & Commissioning Status

Activity ID	Activity Name	Original Duration	% Complete	Start	Finish
<b>T/O Packs: PWR Power T/O Packs</b>					
<b>T/O Packs: PWR.02DCU-01.01 Commission System [DC &amp; UPS System Unit 2(02DCU-01.01)]</b>					
ST09.02DCU-02.01to	TO System to Start Up [DC & UPS System Unit 2(02DCU-02.01)]	16	100%	01-08-14 A	01-09-14 A
ST09.02DCU-02.01cs	Commission System [DC & UPS System Unit 2(02DCU-02.01)]	8	100%	04-16-14 A	05-14-14 A
<b>T/O Packs: PWR.02AUX-01.01 Unit 2 Aux Transformer</b>					
ST09.02AUX-01.01to	TO System to Start Up [Unit 2 Aux Transformer(02AUX-01.01)]	16	100%	01-15-14 A	01-17-14 A
ST09.02AUX-01.01ek	Energize and Soak [Unit 2 Aux Transformer(02AUX-01.01)]	8	100%	03-21-14 A	03-21-14 A
<b>T/O Packs: PWR.02EMB-01.01 13.8 KV BUS 22A and 22B</b>					
ST09.02EMB-01.01to	TO System to Start Up [13.8 KV Bus 22A and 22B(02EMB-01.01)]	16	100%	01-15-14 A	01-17-14 A
ST09.02EMB-01.01es	Energize Switchgear Bus [13.8 KV Bus 22A and 22B(02EMB-01.01)]	8	100%	05-15-14 A	05-15-14 A
<b>T/O Packs: PWR.02EMB-02.01 Unit 2 MV BUS 2G and 2H (6.9KV)</b>					
ST09.02EMB-02.01to	TO System to Start Up [Unit 2 MV BUS 2G and 2H(02EMB-02.01)]	16	100%	03-25-14 A	03-26-14 A
ST09.02EMB-02.01es	Energize Switchgear Bus Unit 2 MV BUS 2G and 2H(02EMB-02.01)]	8	100%	06-24-14 A	06-24-14 A
<b>T/O Packs: PWR.01EMB-02.01 Unit 1 MV BUS 1G and 1H (6.9KV)</b>					
ST09.01EMB-02.01to	TO System to Start Up [Unit 1 MV BUS 1G and 1H(01EMB-02.01)]	16	100%	03-25-14 A	03-26-14 A
ST09.01EMB-02.01es	Energize Switchgear Bus [Unit 1 MV BUS 1G and 1H(01EMB-02.01)]	8	100%	06-24-14 A	06-24-14 A
<b>T/O Packs: PWR.02ELS-02.01 Unit 2 LV Bus Absorber - 480V</b>					
ST09.02ELS-02.01to	TO System to Start Up [Unit 2 LV Bus Absorber(02ELS-02.01)]	16	100%	02-11-14 A	02-12-14 A
ST09.02ELS-02.01cs	Commission System [Unit 2 LV Bus Absorber(02ELS-02.01)]	24	100%	06-04-14 A	06-06-14 A
<b>T/O Packs: PWR.00ELS-01.01 LV Bus AQC-PDC Common - 480V</b>					
ST09.00ELS-01.01to	TO System to Start Up [LV Bus AQC-PDC Common(00ELS-01.01)]	16	100%	02-11-14 A	02-12-14 A
ST09.00ELS-01.01es	Energize SWGR [LV Bus AQC-PDC Common(00ELS-01.01)]	32	100%	05-27-14 A	05-30-14 A
<b>T/O Packs: PWR.00ELM-01.01 LV MCC's 18A/28A - Service Water - 480V</b>					
ST09.00ELM-01.01to	TO System to Start Up [LV MCC's 18A/28A-Service Water (00ELM-01.01)]	16	100%	03-25-14 A	03-26-14 A
ST09.00ELM-01.01em	Energize MCC [LV MCC's 18A/28A-Service Water (00ELM-01.01)]	48	100%	05-27-14 A	05-30-14 A
<b>T/O Packs: PWR.00ELS-03.01 LV Bus Limestone-Fly Ash-Common - 480V</b>					
ST09.00ELS-03.01to	TO System to Start Up [LV Bus Limestone-Fly Ash-Common(00ELS-03.01)]	16	100%	03-28-14 A	03-28-14 A
ST09.00ELS-03.01es	Energize SWGR [LV Bus Limestone-Fly Ash-Common(00ELS-03.01)]	16	100%	07-02-14 A	07-03-14 A
<b>T/O Packs: PWR.00ELS-02.01 LV Bus Emergency - Common 480V</b>					
ST09.00ELS-02.01to	TO System to Start Up [LV Bus Emergency-Common(00ELS-02.01)]	16	100%	02-14-14 A	02-17-14 A
ST09.00ELS-02.01es	Energize SWGR [LV Bus Emergency-Common(00ELS-02.01)]	16	100%	06-11-14 A	06-12-14 A
<b>T/O Packs: PWR.02ELM-02.01 LV MCC's 22A/23A - Absorber Unit 2 - 480V</b>					
ST09.02ELM-02.01to	TO System to Start Up [LV MCC's 22A/23A-Absorber Unit 2(02ELM-02.01)]	8	100%	02-13-14 A	02-14-14 A
ST09.02ELM-02.01em	Energize MCC [LV MCC's 22A/23A-Absorber Unit 2(02ELM-02.01)]	32	100%	06-10-14 A	06-12-14 A
<b>T/O Packs: PWR.00ELM-04.01 LV MCC's 16A/26A - Limestone Handling - Fly Ash - 480V</b>					
ST09.00ELM-04.01to	TO System to Start Up [LV MCC's 16A/26A-Limestone Handling(00ELM-04.01)]	8	100%	02-13-14 A	02-14-14 A
ST09.00ELM-04.01em	Energize MCC [LV MCC's 16A/26A-Limestone Handling(00ELM-04.01)]	24	100%	07-02-14 A	07-03-14 A
<b>T/O Packs: PWR.00ELM-02.01 LV MCC's 17B/27B - Limestone - Slurry - 480V</b>					
ST09.00ELM-02.01to	TO System to Start Up [LV MCC's 17B/27B-Limestone-Slurry(00ELM-02.01)]	16	100%	04-03-14 A	04-04-14 A
ST09.00ELM-02.01em	Energize MCC [LV MCC's 17B/27B-Limestone-Slurry(00ELM-02.01)]	32	100%	07-22-14 A	07-25-14 A
<b>T/O Packs: PWR.02ELS-01.01 Unit 2 LV Bus FF-ABS - 480V</b>					
ST09.02ELS-01.01to	TO System to Start Up [Unit 2 LV Bus FF(02ELS-01.01)]	8	100%	02-13-14 A	02-14-14 A
ST09.02ELS-01.01ep	Commission [Unit 2 LV Bus FF(02ELS-01.01)]	16	100%	06-12-14 A	06-13-14 A
<b>T/O Packs: PWR.02ELM-01.01 LV MCC's 24A/25A - FF Unit 2 - 480V</b>					
ST09.02ELM-01.01to	TO System to Start Up [LV MCC's 24A/25A-FF Unit 2(02ELM-01.01)]	16	100%	04-04-14 A	04-04-14 A
ST09.02ELM-01.01em	Energize MCC [LV MCC's 24A/25A-FF Unit 2(02ELM-01.01)]	32	100%	07-22-14 A	07-25-14 A
<b>T/O Packs: PWR.00ELM-03.01 LV MCC's 17A/27A - ESS - 480V</b>					
ST09.00ELM-03.01to	TO System to Start Up [LV MC MCC's 17A 27A-ESS(00ELM-03.01)]	16	100%	04-03-14 A	04-04-14 A
ST09.00ELM-03.01em	Energize MCC [LV MC MCC's 17A 27A-ESS(00ELM-03.01)]	32	100%	07-22-14 A	07-25-14 A
<b>T/O Packs: PWR.02ELM-03.01 LV MCC's 24B/ 25B SCR MCC U2</b>					
ST09.02ELM-03.01to10	TO System to Start Up [LV MCC's 24B/ 25B MCC U2(02ELM-03.01)]	16	100%	08-08-14 A	08-08-14 A
ST09.02ELM-03.01em10	Energize MCC [LV MCC's 24B/ 25B MCC U2(02ELM-03.01)]	24	100%	12-04-14 A	12-05-14 A
<b>T/O Packs: PWR.00EMG-01.01 Emergency Diesel Generator</b>					
ST09.00EMG-01.01to	TO System to Start Up [Emergency Diesel Generator (00EMG-01.01)]	16	100%	08-29-14 A	08-29-14 A
ST09.00EMG-01.01cp	Commission [Emergency Diesel Generator (00EMG-01.01)]	40	100%	11-26-14 A	12-19-14 A
<b>T/O Packs: AIR Air T/O Packs</b>					
<b>T/O Packs: AIR.00CAS-01.01 Air Compressors / Receivers</b>					
ST09.00CAS-01.01to	TO System to Start Up [Air Compressors/Receivers(00CAS-01.01)]	8	100%	05-21-14 A	05-21-14 A
ST09.00CAS-01.01cs	Commission System [Air Compressors/Receivers(00CAS-01.01)]	32	100%	07-10-14 A	07-24-14 A
<b>T/O Packs: AIR.00IA-01.01 IA-ID Fans</b>					
ST09.00IA-01.01to	TO System to Start Up [IA-ID Fans(00IA-01.01)]	16	100%	08-08-14 A	08-08-14 A
ST09.00IA-01.01mc	Mechanical Equip Pre-Comm Checks [IA-ID Fans(00IA-01.01)]	8	100%	08-11-14 A	08-20-14 A
ST09.00IA-01.01in	Instrumentation Pre-Comm Checks [IA-ID Fans(00IA-01.01)]	8	100%	08-20-14 A	11-26-14 A
<b>T/O Packs: AIR.00IA-01.02 IA - Fly Ash</b>					
ST09.00IA-01.02to	TO System to Start Up [IA-Fly Ash(00IA-01.02)]	16	100%	06-30-14 A	06-30-14 A
ST09.00IA-01.02in	Instrumentation Pre-Comm Checks [IA-Fly Ash(00IA-01.02)]	32	100%	09-15-14 A	09-18-14 A
ST09.00IA-01.02mc	Mechanical Equip Pre-Comm Checks [IA-Fly Ash(00IA-01.02)]	112	100%	08-11-14 A	09-26-14 A
ST09.00IA-01.02el	Electrical Equip Pre-Comm Checks [IA-Fly Ash(00IA-01.02)]	32	100%	11-17-14 A	11-20-14 A
<b>T/O Packs: AIR.00IA-01.05 IA- FF Unit 2</b>					
ST09.00IA-01.05to	TO System to Start Up [IA-FFU2(00IA-01.05)]	16	100%	06-30-14 A	06-30-14 A
ST09.00IA-01.05mc	Mechanical Equip Pre-Comm Checks [IA-FFU2(00IA-01.05)]	60	100%	08-11-14 A	08-15-14 A
ST09.00IA-01.05in	Instrumentation Pre-Comm Checks [IA-FFU2(00IA-01.05)]	8	100%	09-15-14 A	09-15-14 A
ST09.00IA-01.05el	Electrical Equip Pre-Comm Checks [IA-FFU2(00IA-01.05)]	60	100%	10-06-14 A	10-13-14 A
<b>T/O Packs: AIR.00IA-01.03 IA - FF Unit 1</b>					
ST09.00IA-01.03to	TO System to Start Up [IA-FF(00IA-01.03)]	16	100%	06-24-14 A	06-24-14 A
ST09.00IA-01.03mc	Mechanical Equip Pre-Comm Checks [IA-FF(00IA-01.03)]	152	100%	08-11-14 A	09-26-14 A
ST09.00IA-01.03in	Instrumentation Pre-Comm Checks [IA-FF(00IA-01.03)]	128	100%	09-19-14 A	11-26-14 A
<b>T/O Packs: AIR.00IA-01.04 IA - Lime / PAC</b>					
ST09.00IA-01.04to	TO System to Start Up [IA-Lime/PAC(00IA-01.04)]	16	100%	07-16-14 A	07-17-14 A
ST09.00IA-01.04in	Instrumentation Pre-Comm Checks [IA-Lime/PAC(00IA-01.04)]	40	100%	07-28-14 A	08-01-14 A
ST09.00IA-01.04mc	Mechanical Equip Pre-Comm Checks [IA-Lime/PAC(00IA-01.04)]	40	100%	07-28-14 A	08-01-14 A
ST09.00IA-01.04el	Electrical Equip Pre-Comm Checks [IA-Lime/PAC(00IA-01.04)]	40	100%	07-28-14 A	08-01-14 A
<b>T/O Packs: AIR.00SA-01.02 Service Air - Limestone / Flyash</b>					