METCO ENVIRONMENTAL
P.O. Box 598
Addison, TX 75001
(972) 931-7127

SOURCE EMISSIONS SURVEY
OF
ARKANSAS POWER & LIGHT COMPANY
WHITE BLUFF PLANT
UNIT NUMBER 1 STACK (SN-01)
REDFIELD, ARKANSAS
ADEQ PERMIT 263-AOP-R3
AFIN: 35-00110
FOR
ENTERGY SERVICES, INC.

AUGUST 2005

FILE NUMBER 05-16WB1

" I certify that I have personally checked and am familiar with the information submitted herein, and based on my inquiries of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. "

James R. Monfries
Senior Quality Assurance Manager

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INTRODUCTION

METCO Environmental, P.O. Box 598, Addison, Texas, conducted a source emissions survey of Arkansas Power & Light Company, located in Redfield, Arkansas, for Entergy Services, Inc., on August 22, 23, and 24, 2005. The purpose of these tests was to determine the concentrations of particulate matter, PM 10 particulate matter, and carbon monoxide being emitted to the atmosphere via the Unit Number 1 Stack (SN-01), in order to comply with ADEQ Permit 263-AOP-R3. The testing was performed while the unit was operating at an average heat input rate of 8,634.5 mmBtu/hr. The results demonstrated that the unit was in compliance with ADEQ Permit 263-AOP-R3.

The sampling was performed by the following METCO personnel: Jervey Cheveallier – Project Supervisor, Rodney Malone, Ben Goebel, Ryan Jones, Ben Weber, and John Branch.

The testing was observed by Ms. Sonji A. Moore of the Arkansas Department of Environmental Quality.

WB_00006250

SUMMARY OF RESULTS

Unit Number 1 Stack (SN-01)

Run Number	Front-Half Particulate Matter Emissions (gr/dscf*)	(lbs/hr)	(lbs/mmBtu)	Total Particulate Matter Emissions (gr/dscf*)	(lbs/hr)	(lbs/mmBtu)	Carbon Monoxide Emissions (dry ppm)	(lbs/hr)	(lbs/mmBtu)
1	0.0074	127.47	0.014	0.0116	199.86	0.022	2.4	20.98	0.002
2	0.0050	81.34	0.009	0.0062	102.00	0.012	3.2	26.67	0.003
3	0.0044	72.24	0.008	0.0072	118.94	0.014	18.5	155.17	0.018
Average	0.0056	93.68	0.010	0.0083	140.27	0.016	8.0	67.61	0.008
Allowable Emission Rate	----	----	0.1	----	453.0	----	----	3,247.0	----

Run Number	Front Half PM 10 Particulate Matter Emissions (gr/dscf*)	(lbs/hr)	Total PM 10 Particulate Matter Emissions (gr/dscf*)	(lbs/hr)
1	0.0029	47.45	0.0055	89.27
2	0.0011	17.70	0.0040	66.17
3	0.0008	12.94	0.0035	58.60
Average	0.0016	26.03	0.0043	71.35
Allowable Emission Rate	----	----	----	140

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

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SUMMARY OF RESULTS

Unit Number 1 Stack (SN-01)

EPA Method 5 Particulate Matter

Run Number	1	2	3
Date	08/24/05	08/24/05	08/24/05
Time	1010-1146	1330-1552	1740-1914
Stack Flow Rate - ACFM	3,646,096	3,586,920	3,584,700
Stack Flow Rate - DSCFM*	2,003,353	1,910,024	1,922,031
% Water Vapor - % Vol.	13.37	14.68	13.90
% CO_2 - % Vol.	13.5	13.6	13.7
% O_2 - % Vol.	4.8	5.5	5.3
% Excess Air @ Sampling Point	28.5	34.5	32.8
Stack Temperature - °F	349	361	362
Stack Pressure - "Hg	28.97	28.93	28.90
Percent Isokinetic	95.8	95.1	98.6
Particulate Matter Emissions Probe & Filter Catch grains/dscf*	0.0074	0.0050	0.0044
grains/cf @ Stack Conditions	0.0041	0.0026	0.0023
lbs/hr	127.47	81.34	72.24
lbs/mmBtu	0.014	0.009	0.008
Total Catch grains/dscf*	0.0116	0.0062	0.0072
grains/cf @ Stack Conditions	0.0064	0.0033	0.0039
lbs/hr	199.86	102.00	118.94
lbs/mmBtu	0.022	0.012	0.014

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SUMMARY OF RESULTS

Unit Number 1 Stack (SN-01)

Carbon Monoxide

Run Number	1	2	3
Carbon Monoxide Emissions – dry ppm	2.4	3.2	18.5
Carbon Monoxide Emissions – lbs/hr	20.98	26.67	155.17
Carbon Monoxide Emissions – lbs/mmBtu	0.002	0.003	0.018

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SUMMARY OF RESULTS

Unit Number 1 Stack (SN-01)

PM 10 Particulate Matter

Run Number	1	2	3
Date	08/24/05	08/24/05	08/24/05
Time	1010-1201	1330-1608	1740-1928
Stack Flow Rate - ACFM	3,430,963	3,572,269	3,579,711
Stack Flow Rate - DSCFM*	1,883,575	1,948,739	1,934,406
% Water Vapor - % Vol.	14.09	12.49	13.22
% CO_2 - % Vol.	13.5	13.6	13.7
% O_2 - % Vol.	4.8	5.5	5.3
Excess Air @ Sampling Point - %	28.5	34.5	32.8
Stack Temperature - °F	343	362	362
Stack Pressure - "Hg	28.97	28.93	28.90
Percent Isokinetic	94.6	95.3	98.7
Calculated Cut-Off Diameter - microns	10.4	10.3	10.0
PM 10 Particulate Matter Emissions Filter Catch grains/dscf*	0.0029	0.0011	0.0008
grains/cf @ Stack Conditions	0.0016	0.0006	0.0004
lbs/hr	47.45	17.70	12.94
Total Catch grains/dscf*	0.0055	0.0040	0.0035
grains/cf @ Stack Conditions	0.0030	0.0022	0.0019
lbs/hr	89.27	66.17	58.60

8727.34 8674.70 8501.42

0.010 0.008 0.007

0.0054 0.002 0.00[illegible]

PM10 [illegible]

PM2.5 [illegible]

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

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