ENVIRONMENTAL
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SOURCE EMISSIONS SURVEY
OF
ARKANSAS POWER AND LIGHT
WHITE BLUFF STEAM ELECTRIC STATION
UNIT NUMBER 1 STACK
REDFIELD, ARKANSAS
FOR
ENTERGY

JUNE 1995

FILE NUMBER 95-142WB1T5

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INTRODUCTION

METCO Environmental, Dallas, Texas, conducted a source emissions survey of Arkansas Power and Light, White Bluff Steam Electric Station, located in Redfield, Arkansas, for Entergy, on June 13 and 14, 1995. The purpose of these tests was to determine the concentrations of particulate matter, carbon monoxide, and total hydrocarbons being emitted to the atmosphere via the Unit Number 1 Stack.

The sampling followed the procedures set forth in the Appendix to the Code of Federal Regulations, Title 40, Chapter I, Part 60, Methods 1, 2, 3A, 3B, 4, 5, 10, and 25A.

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SUMMARY OF RESULTS

Unit Number 1 Stack

Run Number	Particulate Matter Emissions (gr/dscf*)	Particulate Matter Emissions (lbs/hr)	Carbon Monoxide Emissions (ppm)	Carbon Monoxide Emissions (lbs/hr)	Total Hydrocarbons Emissions as Propane (ppm)	Total Hydrocarbons Emissions as Propane (lbs/hr)
1	0.0213	322.79	1,950	15,074.4	5.1	61.96
2	0.0213	318.73	1,875	14,309.2	< 0.6	< 7.20
3	0.0185	272.66	1,900	14,292.5	≤ 0.6	≤ 7.09
Average	0.0204	304.73	1,908	14,558.7	< 2.1	< 25.42

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

SUMMARY OF RESULTS

Unit Number 1 Stack

Run Number	1	2	3
Date	06/14/95	06/14/95	06/14/95
Time	0932-1057	1128-1248	1310-1432
Stack Flow Rate - ACFM	3,039,071	3,053,560	3,052,961
Stack Flow Rate - DSCFM*	1,771,499	1,748,835	1,723,810
% Water Vapor - % Vol.	12.50	12.83	13.50
% CO_2 - % Vol.	15.4	15.2	15.2
% O_2 - % Vol. (orsat)	4.0	4.2	4.2
% O_2 - % Vol. (monitor)	4.0	4.2	4.2
% Excess Air @ Sampling Point	23	25	25
Stack Temperature -°F	314	324	329
Stack Pressure - "Hg	29.11	29.08	29.08
Percent Isokinetic	96.0	97.6	99.0
Particulate Matter Emissions			
Probe & Filter Catch			
grains/dscf*	0.0083	0.0111	0.0067
grains/cf @ Stack Conditions	0.0048	0.0063	0.0038
lbs/hr	125.64	166.27	99.09
Total Catch			
grains/dscf*	0.0213	0.0213	0.0185
grains/cf @ Stack Conditions	0.0123	0.0121	0.0104
lbs/hr	322.79	318.73	272.66

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

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SUMMARY OF RESULTS

Unit Number 1 Stack

Run Number	1	2	3
Carbon Monoxide Emissions - ppm	1,950	1,875	1,900
Carbon Monoxide Emissions - lbs/hr	15,074.4	14,309.2	14,292.5
Total Hydrocarbons Emissions as Propane - wet ppm	4.5	< 0.5	< 0.5
Total Hydrocarbons Emissions as Propane - dry ppm	5.1	< 0.6	< 0.6
Total Hydrocarbons Emissions as Propane - lbs/hr	61.96	< 7.20	< 7.09