Report on the
Precipitator Guarantee Testing
Conducted for
Combustion Engineering Power Systems
At their
Installation at Arkansas Power & Light's
White Bluff Station, Unit #1
Located near Redfield, Arkansas
Purchase Order Number
2300821

Clean Air Engineering, Inc.

October 24, 1983

Clean Air Engineering, Inc.

INTRODUCTION

This report presents the test data and results of the test program conducted by Clean Air Engineering, Inc. for Combustion Engineering Power Systems.

The testing took place at their Installation at Arkansas Power and Light Company's White Bluff Station, Unit #1, located near Redfield, Arkansas.

The work is authorized by the Combustion Engineering Power System's purchase order number 2300821.

The purpose of the testing was to determine precipitator removal efficiency for guarantee.

The field portion of the testing was coordinated among the following personnel:

Mr. R. Seay	Combustion Engineering Power Systems
Mr. R. House	Arkansas Power and Light Company
Mr. R. Roberts	Arkansas Power and Light Company
Mr. G. Pavlovics	Clean Air Engineering, Inc.

The tests were conducted during the week of September 5, 1983.

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DESCRIPTION OF INSTALLATION AND PROCESS

The tests described in this report were conducted on the flue gas from a coal fired boiler. The boiler is designated as Unit #1 at Arkansas Power and Light Company's White Bluff Station.

The particulate emissions of flyash are controlled by a Combustion Engineering Power Systems electrostatic precipitator.

Information concerning the operation of the boiler and precipitator is contained in the appendix of this report.

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DISCUSSION OF RESULTS

The test conditions and results are presented in the SUMMARY OF RESULTS TABLE beginning on page 2 - 2. Additional results and test parameters are given in Section 5.

A complete copy of the raw test data and a computer analysis of that data showing the point by point Isokinetic percentages are included in the appendix.

The outlet particulate concentrations, in Grains/DSCF, were .0049, .0048, and .0054 for runs 1, 2, and 3 respectively.

The precipitator particulate efficiencies which were determined using the inlet and outlet grain loadings were 99.81%, 99.81%, and 99.77%.

To the best of our knowledge the enclosed data is accurate and reliable.

Respectfully submitted,

CLEAN AIR ENGINEERING, INC.

Larry Golden
Report Manager

Steve Korando
Source Testing Manager

LG/SK/cz

Clean Air Engineering, Inc.

TABLE I
SUMMARY OF RESULTS

RUN NO.	1	2	3
DATE, 1983	September 8	September 8	September 8
TIME (Approx.)	9:30 AM to 12:30 PM	1:30 PM to 3:50 PM	5:00 PM to 7:40 PM
INLET			
Test Method	EPA M17	EPA M17	EPA M17
Gas Temperature, °F	323	335	335
Gas Moisture, Volume %	11.9	12.6	11.9
Gas Volume			
ACFM	3,167,000	3,171,000	3,247,000
DSCFM	1,750,000	1,761,000	1,813,000
Dust Concentration GR/DSCF	2.5296	2.5400	2.3163
OUTLET			
Test Method	EPA M17	EPA M17	EPA M17
Gas Temperature, °F	326	337	335
Gas Moisture, Volume %	13.5	12.7	12.2
Gas Volume			
ACFM	3,254,000	3,191,000	3,227,000
DSCFM	1,867,000	1,824,000	1,858,000
Dust Concentration			
GR/DSCF	.0049	.0048	.0054
LB/HR	77.8	74.4	86.8
LB/MBTU*	.0090	.0088	.0114
O_2, Volume %	5.1	5.1	6.9
CO_2, Volume %	13.9	13.8	12.9
% EFFICIENCY	99.81	99.81	99.77

* Per "B" Method M19

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