Report on the
Precipitator Efficiency Tests
Conducted for
Combustion Engineering Power Systems
At their Installation at
Arkansas Power and Light Company's
White Bluff Station, Unit #2
Located near Redfield, Arkansas
Purchase Order Number
2400049

Clean Air Engineering, Inc.

January 23, 1984

Clean Air Engineering, Inc.

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 #2 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 was gathered by plant personnel while precipitator performance was monitored by Combustion Engineering's field personnel. Copies of these operating parameters are included 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 .0034, .0031, and .0046 for runs 1, 2, and 3 respectively.

The precipitator particulate removal efficiencies which were determined using the inlet and outlet dry and standardized grain loadings are 99.84%, 99.82%, and 99.76% for runs 1, 2, and 3 respectively.

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

Respectfully submitted,

CLEAN AIR ENGINEERING, INC.

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Report Manager

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Source Testing Manager

LG/SK/cjz

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TABLE I
SUMMARY OF RESULTS
UNIT #2

RUN NO.	1	2	3
DATE, 1983	December 14	December 14	December 14
TIME (Approx.)	9:25 AM to 12:00 PM	1:30 PM to 3:53 PM	5:10 PM to 7:25 PM
INLET			
Test Method	EPA M17	EPA M17	EPA M17
Gas Temperature, °F	281	285	283
Gas Moisture, Volume %	10.5	11.6	12.5
Gas Volume			
ACFM	3,135,000	3,182,000	3,091,000
DSCFM	1,881,000	1,878,000	1,805,000
Dust Concentration			
GR/DSCF	2.1267	1.7695	1.9045
GR/ACFW	1.2770	1.0447	1.1134
OUTLET			
Test Method	EPA M17	EPA M17	EPA M17
Gas Temperature, °F	280	283	283
Gas Moisture, Volume %	11.2	10.9	11.2
Gas Volume			
ACFM	3,080,000	3,043,000	3,033,000
DSCFM	1,872,000	1,854,000	1,845,000
Dust Concentration			
GR/DSCF	.0034	.0031	.0046
GR/ACFW	.0020	.0019	.0028
LB/HR	54.0	48.8	73.4
LB/MBTU*	.0062	.0055	.0087
O_2, Volume %	5.1	4.5	5.3
CO_2, Volume %	14.0	15.0	14.2
% EFFICIENCY	99.84	99.82	99.76

* By 'Fd' Factor Method

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