

Manufacturer: Dwcetra
Job # G100463637

Model: 2000
Run BNC

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Tech ES

Pre/Post Checks

Moisture Meter Calibration Check:

Time: 8:40 AM X: ☒ Y: ☒ 12: ☒ 22: ☒

Pre-Test

Post-Test

Facility Conditions:

Air Velocity.....

..... fpm

Smoke Capture Check.....

..... ☒

Wood Heater Conditions:

Date Wood Heater Stack Cleaned.....

9-1-11

Date Dilution Tunnel Cleaned.....

—

Induced Draft Check.....

☒

Tunnel Velocity.....

0.215

0.214

Pitot Leak Check:

Side A.....

☒

Side B.....

☒

Temperature System:

Ambient (65°- 90°F).....

66 °F

Proportional Checks:

CO Analyzer Drift Check.....

CO₂ Analyzer Check.....

O₂ Analyzer Check.....

Thermocouple check.....

NA

Sampling Train ID Numbers:

Train 1

Train 2

Probe.....

7

8

Filter Front.....

73

74

Filter Back.....

75

76

Filter Thermocouple.....

19

22

Filter 5G-3 (<90°F).....

Thermocouple Identification Number

Flue..... 1
Dilution Tunnel Wet Bulb..... 4
Unit Right Side..... 7
Catalyst/Combustion Chamber..... 10

Room..... 2
Unit Top..... 5
Unit Left Side..... 8

Dilution Tunnel Dry Bulb..... 3
Unit Back..... 6
Unit Bottom..... 9

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Pre-Test Scale Audit

Scale Type	Audit Weight		Measured Weight
Platform	<u>N/A</u>	lbs., Class F	<u>N/A</u> lbs.
Wood	<u>25</u>	lbs., Class F	<u>25</u> lbs.
Analytical	<u>100</u>	mg, Class S	<u>100</u> mg.

LIMITS OF WEIGHT RANGES

ANALYTICAL SCALE: 50%-150% of dry filter weight, ± 0.1 mg

PLATFORM SCALE 20%-80% of ideal test load weight, ± 0.1 lbs. or 1%

WOOD SCALE 20%-80% of ideal test load weight, ± 0.1 lbs. or 1%

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SAMPLING EQUIPMENT CHECK OUT

Leakage Checks Tunnel Samplers

	SAMPLE 1		SAMPLE 2	
Unplugged Flow Rate = .25cfm	Pre-Test	Post-Test	Pre-Test	Post-Test
Vacuum (inches Hg.)	10	10	10	10
Final 1 minute DGM (ft ³)	0	0 785	0	0 782
Initial 1 minute DGM (ft ³)	0	0 785	0	0 782
Change (C) (ft ³)	0	0	0	0
Allowable leakage .04 x Sample rate or .02cfm	0.0100	0.0100	0.0100	0.0100
Check OK	✓	✓	✓	✓

Leakage Checks Flue Gas Sampler

Plugged Probe	Pre Test	Post Test
Vacuum (inches Hg.)		
Rotometer Reading (mm)		
Flow Rate (CFM)		
Allowable (.04 x Sample Rate)	NA	NA
Check OK		

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TEST DATA LOG

RAW DRY GAS METER READINGS

	System 1	System 2
Final (ft ³)	785 L/m	782 L/m
Initial (ft ³)	0	0

AMBIENT CONDITIONS

	Start	End
Barometer. (inches Hg)	30.21	30.16
Dry Bulb (°F)	72	81
Humidity (%)	41%	30%

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FUEL DATA

FUEL DESCRIPTION:

Kindling weight: _____ lbs. Consisting of: Scrap and paper Fire lit Time: _____
Pre-test load weight: _____ lbs. Consisting of: 2X4X inches Time loaded: _____
Pre-test moisture content: Uncorrected: _____ % Corrected Dry: _____ % Wet: _____ %

Test Air Control Settings: _____ Time: _____
Test Unit Fan Settings: _____ Time: _____

TEST LOAD

	Lower Limit	Ideal	Upper Limit
Test Load Weight:	Lbs.	lbs.	Lbs.
Fire Box Volume:	Ft. ³	Ideal Length:	Inches
Load Volume:	Ft. ³	Loading Density:	lbs/ft ³
Spacer weight	Lbs	Load Density:	lbs/ft ³

1.85 Kindling

Piece Size	Weight	Meter Moisture Content (% dry)*		
6 x 4 x 26 in.	11.13 lbs.	24.8 %	27.8 %	27.8 %
5 x 3.5 x 23 in.	7.91 lbs.	24.5 %	24.3 %	24.3 %
4 x 6 x 21 in.	10.49 lbs.	26.0 %	25.5 %	25.3 %
3 x 6 x 24 in.	10.55 lbs.	22.2 %	26.7 %	27.3 %
5 x 8 x 24 in.	10.85 lbs.	23.3 %	26.3 %	25.2 %
4 x 7 x 26 in.	13.20 lbs.	24.9 %	24.9 %	24.4 %
4 x 7 x 25 in.	8.72 lbs.	22.2 %	22.6 %	21.4 %
3.5 x 7 x 24 in.	10.24 lbs.	25.0 %	25.4 %	25.0 %
3 x 5.5 x 23.5 in.	8.23 lbs.	24.2 %	25.6 %	24.2 %
5 x 3 x 23 in.	7.78 lbs.	19.7 %	20.3 %	23.1 %
3 x 6 x 24 in.	6.80 lbs.	22.5 27.4 %	24.3 %	23.8 %
4 x 5 x 26 in.	8.41 lbs.	27.5 %	27.1 %	25.7 %
5 x 4 x 26 in.	6.04 lbs.	26.6 %	26.2 %	25.0 %
5 x 3 x 23 in.	6.98 lbs.	25.1 %	24.7 %	24.2 %
3 x 5.5 x 24 in.	6.73 lbs.	21.4 %	19.8 %	21.5 %
6 x 4.5 x 25 in.	7.10 lbs.	23.0 %	23.4 %	22.2 %
8 x 4.5 x 23 in.	9.29 lbs.	18.0 23.6 %	18.8 22.4 %	20.4 %
4 x 4 x 24 in.	6.24 lbs.	25.6 %	26.2 %	24.4 %

TEST LOAD WEIGHT: 156.69 lbs. DRY WEIGHT: _____ kg.
AVERAGE MOISTURE CONTENT:
(DRY) _____ % CORRECTED TO TWO PIN: (DRY) _____ % (WET) _____ %
COAL BED RANGE:

_____ lbs. to _____ lbs. (10% to 15% of test load)
_____ lbs. to _____ lbs. (20% to 25% of test load)

TEST CHARGE:

Time loaded: _____ Coal bed weight: _____ lbs. Coal bed weight = _____ % of test load weight

CHARCOALIZATION: good | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | poor

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DILUTION TUNNEL PARTICULATE SAMPLER DATA

FILTER TYPE: Gelman 47mm A/E

	SYSTEM 1		SYSTEM 2	
	Probe and Front Half Housing #	Filters + gaskets Numbers	Probe and Front Half Housing #	Filters + gaskets Numbers
Post Test Weight:	90.9240 grams	3.7140 grams	92.1421 grams	3.7351 grams
Pre Test Weight:	90.9238 grams	3.7092 grams	92.1415 grams	3.7306 Grams
Gain:	0.0002 grams	0.0048 grams	0.0006 grams	0.0045 Grams
	a1	b1	a2	b2

Total Gain: a1 + b1 = grams a2 + b2 = grams

Pre-test Weight Record		SYSTEM 1			SYSTEM 2			Temp	Humidity
		Probe & Housing Number	Front Filter + gasket Number	Back Filter + gasket Number	Probe & Housing Number	Front Filter + gasket Number	Back Filter + gasket Number		
Date	Time	7	73	74	8	75	76	°F	%
9-29	8:30	90.9239	1.8576	1.8701	92.1418	1.8555	1.8646		
9-30	7:56	90.9238	1.8559	1.8685	92.1418	1.8536	1.8628	67.7	37
10-1	11:00	90.9238	1.8559	1.8681	92.1415	1.8533	1.8625	65.7	34
Total		3.7092			Total	3.7306			

Post-test Weight Record		SYSTEM 1		SYSTEM 2		Temp	Humidity
		Probe & Housing Number	Combined Filter + gasket Weight Number	Probe & Housing Number	Combined Filter + gasket Weight Number		
Date	Time	7	73+75	8	74+76	°F	%
10-7	10:30	90.9244 37156	3.7156	92.1426 3.7366	3.7366	73.0	42
10-11	7:45	90.9240	3.7154	92.1421	3.7365	70.9	40
10-12	7:40	90.9240	3.7151	92.1421	3.7361	72.1	48
10-17	7:30	90.9240	3.7140	92.1421	3.7351		
10-21	8:30	90.9240	3.7140	92.1421	3.7351	68.0	26%

* NOTE: TRAIN 1 CONSISTED OF FILTERS 73+75
TRAIN 2 CONSISTED OF FILTERS 74+76