

Model: 5E210
Run 3

Page 17 of
Date 9-23-21
Tech Ken Slatore

FILTER TYPE: Gelman 47mm A/E

[illegible][illegible]

Manufacturer: Alternate Heating Systems
Job #G104711998
Reviewer:

Model: SE210
Run 3

Page 27 of 27
Date 9-27-21
Tech. K. Hester

Pre/Post Checks

Moisture Meter Calibration Check:

Time: <u>6:00A</u>	X: <u>✓</u>	Y: <u>✓</u>	12: <u>✓</u>	22: <u>✓</u>
--------------------	-------------	-------------	--------------	--------------

Facility Conditions:

Air Velocity

Smoke Capture Check

Pre-Test

Post-Test

<u>0</u> fpm	<u>0</u> fpm
<u>✓</u>	<u>✓</u>

Wood Heater Conditions:

Date Wood Heater Stack Cleaned

Date Dilution Tunnel Cleaned

Induced Draft Check

Tunnel Velocity

<u>9-20-21</u>	
<u>9-20-21</u>	
<u>✓</u>	<u>✓</u>
<u>0.135</u>	<u>0.123</u>

Pitot Leak Check:

Side A

Side B

<u>✓</u>	<u>✓</u>
<u>✓</u>	<u>✓</u>

Temperature System:

Ambient (65° - 90°F)

<u>74.23</u> °F

Proportional Checks:

CO Analyzer Drift Check

CO₂ Analyzer Check

O₂ Analyzer Check

Thermocouple check

<u>✓</u>
<u>✓</u>
<u>✓</u>
<u>✓</u>

Sampling Train ID Numbers:

Probe

Filter Front

Filter Back

Filter 5G-3 (<90°F)

Train 1

Train 2

Train 3

<u>7</u>	<u>8</u>	<u>9</u>
<u>13</u>	<u>15</u>	<u>17</u>
<u>14</u>	<u>16</u>	<u>18</u>
<u>✓</u>	<u>✓</u>	<u>✓</u>

Pre-Test Scale Audit

Manufacturer: Alternate Heating Systems

Model: SE210

Job #G104711998

Run

3

Reviewer:

Page 37 of 37

Date 9-23-21

Tech

K. B. Baker

Scale Type	Audit Weight	Measured Weight
Platform	25.00 lbs., Class F	25.00 lbs.
Wood	10.00 lbs., Class F	10.00 lbs.
Analytical	100.000 mg, Class S	100.000 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%

Manufacturer: Alternate Heating Systems

Model: SE210

Job #G104711998

 Run 3

Reviewer:

 Page 47 of 47

 Date 9-23-21

 Tech Ken Braker

SAMPLING EQUIPMENT CHECK OUT

Leakage Checks Tunnel Samplers

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

Leakage Checks Flue Gas Sampler

Plugged Probe	Pre Test	Post Test
Vacuum (inches Hg.)	<u>10^a</u>	<u>10ⁿ</u>
Rotometer Reading (mm)	<u>0</u>	<u>0</u>
Flow Rate (CFM)	<u>0</u>	<u>0</u>
Allowable (.04 x Sample Rate)	<u>.04</u>	<u>.04</u>
Check OK	<u>✓</u>	<u>✓</u>

Manufacturer: Alternate Heating Systems

Model: SE210

Job #G104711998

Run 3

Reviewer:

Page 5 of 7
 Date 9-23-21
 Tech. [Signature]
[Signature]

CONTINUOUS ANALYZERS

Pre-Test (Adjust and Record)

	ZERO		SPAN		CAL. (Record Only)	
CO ₂	<u>0</u>	<u>0</u>	<u>24.54</u>	<u>24.92</u>	<u>12.00</u>	<u>11.99</u>
CO	<u>0</u>	<u>0</u>	<u>7.15</u>	<u>7.748</u>	<u>3.97</u>	<u>4.00</u>
O ₂	<u>0</u>	<u>0</u>	<u>20.89</u>	<u>20.89</u>	<u>9.98</u>	<u>10.01</u>
	Actual	Should Be	Actual	Should Be	Actual	Should Be

Post Test (Record Only)

	Zero	Span	Cal.	Zero Drift	Span Drift	Cal. Drift	OK?	Not OK*
CO ₂	<u>-0.03</u>	<u>24.84</u>	<u>11.94</u>	<u>-0.03</u>	<u>0.06</u>	<u>0.06</u>	<u>✓</u>	<u>NA</u>
CO	<u>-0.13</u>	<u>7.31</u>	<u>3.69</u>	<u>-0.13</u>	<u>0.44</u>	<u>0.28</u>	<u>✓</u>	<u>NA</u>
O ₂	<u>0.02</u>	<u>20.83</u>	<u>9.96</u>	<u>0.02</u>	<u>0.06</u>	<u>0.02</u>	<u>✓</u>	<u>NA</u>

* Greater than ± 5% of the range used.

Manufacturer: Alternate Heating Systems Model: SE210
 Job #G104711998 Run 3
 Reviewer: _____

Page 6 of 7
 Date 9-23-21
 Tech. [Signature]
[Signature]

TEST DATA LOG

RAW DRY GAS METER READINGS

	System 1	System 2	System 3
Final (ft ³)	82.84	82.83	8.49
Initial (ft ³)	0	0	0

AMBIENT CONDITIONS

	Start	End
Barometer. (inches Hg)	29.10	29.97
Ambient (°F)	79.6	87.3
Humidity (%)	28.1	23.2

Job #G104711998

Run

Reviewer:

Page

7 of 7

Date

9-23-21

Tec

h

COMMENTS

5:21 AM UNIT CLEARED OUT, SCALE TARED,
82 LBS OF COAL BED AND PRETEST ADDED.

6:00 AM - UNIT STIRRED.

6:20 AM - ON IT STARR CO.

7:10 AM - UNIT STIRRED

8:58 AM - Test started

6:42 pm test completed

TEST LOAD CONFIGURATION

NA