

### Southwest Clean Air Agency - Combustion Monitoring Worksheet

Facility Name: **XYZ Company**

SWCAA ID: **1234**

Date Performed: **1/1/2013**

Emission Unit ID: **Boiler 3**  
 Boiler Manufacturer: **ACME Boiler**  
 Boiler Model Number: **Low Emissions 17**  
 Boiler Serial Number: **57713**  
 Burner Manufacturer: **Global Burner**  
 Burner Model Number: **Super Clean 17**  
 Burner Serial Number: **12345**  
 Boiler Tuning Company: **Bob's Boiler Service**  
 Analyst Name: **Bob Smith**  
 Test Instrument Make: **Combustion King**  
 Test Instrument Model: **CK-1**

Fuel Type: **Diesel**  
 Design Firing Rate: **8** MMBtu/hr  
 Tested Firing Rate: **7.5** MMBtu/hr

Time of Pre-Test Calibration: **8:15 AM**  
 Time of Post-Test Calibration: **11:45 AM**

Does your permit have a CO or NO <sub>x</sub> limit?			Yes
	NO <sub>x</sub> Limit	CO Limit	O <sub>2</sub>
Permit No	(ppm)	(ppm)	Correction
11-2945	90	50	3

Quality Assurance Results	NO <sub>x</sub> (ppm)	CO (ppm)	O <sub>2</sub> (%)
Span Concentration:	100	55	20.9
Pre-Test Span Reading:	85	47	20.9
Post-Test Span Reading:	93	51	20.8
Pre-Test Zero Reading:	1.0	1.0	0.0
Post-Test Zero Reading:	2.0	2.0	0.1

**Results (Record at least once every 30 seconds for 5 minutes)**

Sample	Stack Temp (°F)	NO <sub>x</sub> Reading (ppm)	CO Reading (ppm)	O <sub>2</sub> Reading (%)
As Found	341	84	86	2.3
1	324	79	13	3.2
2	324	78	12	3.2
3	324	79	13	3.2
4	324	79	14	3.2
5	324	79	15	3.2
6	324	79	13	3.2
7	324	80	13	3.2
8	324	78	13	3.2
9	324	78	12	3.2
10	324	78	11	3.2
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Test Average	324.0	78.7	12.9	3.2
Drift Corrected Values		88.2	13.2	3.2
Oxygen Corrected Value		<b>89.1</b>	<b>13.3</b>	

Fuel-Factor (dscf/MMBtu) **9,190**  
 Emissions (lb/MMBtu) **0.1141**      **0.0104**

- The span gas concentration must not be less than 50% of the target/permitted pollutant concentration nor more than 200% of the target/permitted pollutant concentration. A lower concentration span gas may be used if it is more representative of measured concentrations.
- The analyzer response check is failed if the difference between the pre-test and post-test response checks is greater than 10% of the initial span value.
- No more than 12 hours may elapse between the pre-test and post-test analyzer response checks.
- Calibration and use of an NO<sub>2</sub> cell is required if significant quantities of NO<sub>2</sub> are expected (i.e. after specific catalysts, afterburners, etc.) and if no NO<sub>2</sub> → NO converter is integral or used in conjunction with the combustion analyzer.
- Submit results to SWCAA within 15 days of monitoring.
- Include available documentation of monitoring and quality assurance results such as printouts or datalog file.

**40 CFR 63 Subpart JJJJJ (Boiler MACT) Monitoring Requirements for Liquid and Solid Fueled Boilers - Must be completed every 2 years**

Was the burner inspected?	(Yes/No)
Was the flame pattern inspected and optimized?	Yes
Was the air-to-fuel ratio system operating properly?	Yes
Were total CO emissions optimized?	Yes

Described any maintenance performed on the burner or boiler system in the "Test Notes" section.

**Test Notes:**

Boiler operating at near full fire on natural gas. No unusual operating circumstances. No adjustments were made to the boiler or burner during tuning.

Testing performed by Bob Smith - January 1, 2013

**WARNINGS:**

**No Warnings**

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