Daily-Boiler Testing Form:				
Name:				
Boiler No	<del></del>			
Date:				
Visual Checks	Normal Reading Range	Actual Reading		
Water Level Reading in Gauge Glass	>1.75" from bottom			
Main Supply Natural Gas Reading				
Regulated Natural Gas Reading				
Stack Temperature Reading				
Operating Pressure				
Firing Rate Percent				
Oxygen (O2%) Readings				
Equipment Tests Low Water Cut-off	Pass	Fail		
Low Water cat on				
	,			
Completion Tasks	Pass/Complete	Fail/Not Complete		
Bottom Blowdown				
Flame Observation				
	,			
Deaerator Readings	Normal Reading Range	Actual Reading		
DA Tank Temperature	227° F			
DA Tank Pressure	5 psig			
DA Tank Level				
Surge Tank Readings	Normal Reading Range	Actual Reading		
Surge Tank Temperature				
Surge Tank Level				
Additional Comments:				



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# 1. <u>SCOPE:</u>

Describes the required daily documentation log which assists in providing safe and efficient operation of the Boiler.

### 2. PURPOSE:

Provide the daily log sheet and associated instructions for the boiler. Ensure proper operating condition of the boiler and comply with the requirements of NFPA-85 and CSD-1.

# 3. **RESPONSIBILITY:**

Boiler Operators – Execute the required actions and document the findings and comments on the associated form. This must be performed on a daily basis.

### 4. **DEFINITIONS**:

N/A

### 5. PROCEDURES:

- 5.1. Daily Log At a minimum of once per day, perform the daily inspection tasks outlined below. Record your findings and comments on the Daily Log (attached). Report any issues to your supervisor and file the completed log in the boiler's log book.
  - 5.1.a. **Water Visible in Gauge Glass:** Make a visual check of the boiler level gauge glass. The water should be at a minimum of 1.75" from the bottom of the glass.
  - 5.1.b. **Combustion Visual Check**: Looking from the rear of the boiler the flame should have a blue color. Yellow tips are normal. A yellow flame at low fire is normal. A hazy or orange flame indicates poor combustion.
  - 5.1.c. **Steam Pressure:** Check the main pressure gauge and the control panel overview screen if available. Readings should match.
  - 5.1.d. **Stack temperature:** Check the stack temperature gauge and the control panel screen if available. Readings should match.
  - 5.1.e. **Firing Rate:** Check the current firing rate. Use this as a reference for the stack temperature.
  - 5.1.f. **Oxygen Reading:** Check the O2 level if available.
  - 5.1.g. **Supply Gas Pressure:** Check the main supply pressure gauge prior to the gas blocking valves.
  - 5.1.h. **Manifold Gas Pressure:** Check the pressure gauge located after the main gas blocking valves.
  - 5.1.i. **Oil Pressure:** Check the pressure gauge located next to the oil pump and record the reading if available.



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- 5.1.j. **Bottom Blowdown Boiler:** Open the front quick opening valve slowly to equalize the pressure. Slowly open the slow opening angle valve. The water level in the boiler should not drop any more than 1" in the gauge glass. Close the slow opening valve and then close the quick opening valve. Allow the water level to recover and repeat with second valve if applicable.
- 5.1.k. **Blowdown Water Column:** Slowly open the drain valve for the water column and allow water to drain from the column. The water level should drop and alarm should sound. After approximately 5 seconds close the valve and the water level should return to a normal level.
- 5.1.I. **DA Tank Temperature:** On the Deaerator tank (DA) record the DA tank temperature. It should be approximately 228F.
- 5.1.m. **DA Tank Pressure:** On the Deaerator tank (DA) record the DA tank Pressure. It should be approximately 5 psig.
- 5.1.n. **DA Tank Level:** On the Deaerator tank (DA) record the water level.
- 5.1.o. **Surge Tank Temperature:** On the surge tank record the temperature.
- 5.1.p. **Surge Tank Level:** On the surge tank record the water level.

### 6. REFERENCES:

- 6.1. NFPA-85
- 6.2. CSD-1
- 6.3. High Pressure Boilers, 5<sup>th</sup> ed, Steingress, Frost & Walker

