

## 21. BURNER START UP INFORMATION & TEST DATA

The following information shall be recorded for each burner start up:

Power Flame Model No. \_\_\_\_\_ Invoice No. \_\_\_\_\_ Serial No. \_\_\_\_\_

Installation Name \_\_\_\_\_ Start Up Date \_\_\_\_\_

Start Up Contractors Name \_\_\_\_\_ Phone \_\_\_\_\_

Name of Technician Performing Start Up \_\_\_\_\_

Type of Gas Natural  LP  Other \_\_\_\_\_ Fuel Oil Grade No \_\_\_\_\_

### Gas Firing

Gas Pressure at Train Inlet  
Burner in Off Position \_\_\_\_\_ " W.C.

Gas Pressure at Train Inlet  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Gas Pressure at Firing Head  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Gas Pressure at Pilot Test Tee  
\_\_\_\_\_

Power Supply  
Volts \_\_\_\_\_ Ph \_\_\_\_\_ Hz \_\_\_\_\_  
Control Circuit Volts \_\_\_\_\_  
Blower Motor amps at high fire \_\_\_\_\_

Flame signal Readings  
Pilot \_\_\_\_\_  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

O<sub>2</sub>  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

CO  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Input Rate BTU/HR  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Over Fire Draft  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Stack Outlet Test Point Draft  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Net Stack Temperature  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Combustion Efficiency  
Low Fire \_\_\_\_\_ %  
High Fire \_\_\_\_\_ %

NOx Measured  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

### Oil Firing

High Fire Vacuum Reading at Oil  
Pump Inlet \_\_\_\_\_ "H.G.

Gas Pressure at Pilot Train Inlet  
(if applicable) \_\_\_\_\_

Gas Pressure at Pilot Test Tee  
(if applicable) \_\_\_\_\_

Oil Nozzle Supply Pressure  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Oil Nozzle Bypass Pressure  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Power Supply  
Volts \_\_\_\_\_ Ph \_\_\_\_\_ Hz \_\_\_\_\_  
Control Circuit Volts \_\_\_\_\_  
Blower Motor amps at high fire \_\_\_\_\_

Remote Oil Pump Motor Amps at  
High Fire \_\_\_\_\_

Flame Signal Reading  
Pilot (if applicable) \_\_\_\_\_  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

GPH Firing Rate  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

CO<sub>2</sub> or O<sub>2</sub> (Specify)  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Bachrach Scale Smoke Number  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Over Fire Draft  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Stack Outlet Test Point Draft  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Net Stack Temperature  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Combustion Efficiency  
Low Fire \_\_\_\_\_ %  
High Fire \_\_\_\_\_ %

NOx Measured  
Low Fire \_\_\_\_\_  
High Fire \_\_\_\_\_

Control Settings

General	Gas	Oil
Operating control cut out setting_____	Low gas pressure switch_____in.	Low oil pressure switch_____lbs.
Operating control cut in setting_____	High gas pressure switch_____in	High oil pressure switch_____lbs.
Limit control cut out setting_____		
Limit control cut in setting_____		

Operation Checklist

Checked for Proper Operation of:	Yes	No		Yes	No
Low water cut off	( )	( )	Barometric damper	( )	( )
High water cut off	( )	( )	Boiler room combustion air and ventilation provisions correct	( )	( )
Flame safeguard control ignition failure	( )	( )	Oil tank vent system checked	( )	( )
Flame safeguard control main flame failure	( )	( )	All oil lines checked for leaks	( )	( )
Burner air flow switch	( )	( )	All gas lines checked for leaks	( )	( )
Induced draft fan controls	( )	( )	Gas lines and controls properly vented	( )	( )
Over fire draft controls	( )	( )	Other system components (specify)	( )	( )
Fresh air damper end switch	( )	( )			
Notified_____	of the following system deficiencies:_____				

NOTES