

Form OP-UA5 - Instructions
Process Heater/Furnace Attributes
Texas Commission on Environmental Quality

General:

This form is used to provide a description and data pertaining to all process heaters and furnaces with potentially applicable requirements associated with a particular regulated entity number and application. Each table number, along with the possibility of a corresponding letter (i.e., Table 1a, Table 1b), corresponds to a certain state or federal rule. If the rule on the table is not potentially applicable to a process heater and furnace, then it should be left blank and need not be submitted with the application. The following process heaters and furnaces are considered off-permit sources and do not need to be listed:

- A. In counties affected by Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), water heaters, process heaters, and furnaces that do not fire liquid or solid fuel and have a maximum rated capacity less than 1.0 MMBtu/hr, unless the unit is placed in service after June 9, 1993, as a functionally identical replacement for existing units subject to the provisions 30 TAC Chapter 117, Subchapter B.
- B. In counties not affected by 30 TAC Chapter 117, process heaters and furnaces with a heat input capacity less than or equal to 40 MMBtu/hr that do not fire liquid or solid fuel.
- C. In counties not affected by 30 TAC Chapter 117, water heaters with a heat input capacity less than 10 MMBtu/hr and do not fire liquid or solid fuel.

If the codes entered by the applicant show negative applicability to the rule or sections of the rule represented on the table, then the applicant need not complete the remainder of the table(s) that corresponds to the rule. Further instruction as to which questions should be answered and which questions should not be answered are located in the "Specific" section of the instruction text. The following is included in this form:

Tables 1a - 1c: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas, for Process Heaters

Table 2: Title 30 Texas Administrative Code Chapter 112 (30 TAC Chapter 112), Control of Air Pollution from Sulfur Compounds

Tables 3a - 3b: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), Subchapter B; Combustion Control at Major Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas, for Furnaces

Table 4: Title 30 Texas Administrative Code Chapter 111 (30 TAC Chapter 111), Subchapter A, Division 2: Incineration

Tables 5a - 5b: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart EEE: Hazardous Waste Combustors

Table 6a - 6g: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

The Texas Commission on Environmental Quality (TCEQ) regulated entity number (RNXXXXXXXXXX) and the application area name from Form OP-1 (Site Information Summary) must appear in the header of each page for the purpose of identification for the initial submittal. The date of the initial form submittal must also be included and should be consistent throughout the application (MM/DD/YYYY). **Leave the permit number blank for the initial form submittal.** If this form is included as part of the permit revision process, enter the permit number assigned by the TCEQ, the area name (from Form OP-1), the date of the revision submittal, and the regulated entity number.

Unit attribute questions that do not require a response from all applicants are preceded by qualification criteria in the instructions. If the unit does not meet the qualification criteria, a response to the question is not required. **Anytime a response is not required based on the qualification criteria, leave the space on the form blank.**

Notwithstanding any qualification criteria in the form instructions or information provided in other TCEQ guidance, the applicant may leave an attribute question blank (or indicate “N/A” for “Not Applicable”) if the attribute is not needed for the applicable requirement determinations of a regulation for a unit.

In some situations, the applicant has the option of selecting alternate requirements, limitations, and/or practices for a unit. Note that these alternate requirements, limitations, and/or practices must have the required approval from the TCEQ Executive Director and/or the U.S. Environmental Protection Agency (EPA) Administrator before the federal operating permit application is submitted.

The Texas Commission on Environmental Quality (TCEQ) **requires** that a Core Data Form be submitted on **all** incoming registrations unless all of the following are met: the Regulated Entity and Customer Reference Numbers have been issued by the TCEQ and no core data information has changed. The Central Registry, a common record area of the TCEQ, maintains information about TCEQ customers and regulated activities, such as company names, addresses, and telephone numbers. This information is commonly referred to as “core data.” The Central Registry provides the regulated community with a central access point within the agency to check core data and make changes when necessary. When core data about a facility is moved to the Central Registry, two new identification numbers are assigned: the Customer Reference (CN) number and the Regulated Entity (RN) number. The Core Data Form is required if facility records are not yet part of the Central Registry or if core data for a facility has changed. If this is the initial registration, permit, or license for a facility site, then the Core Data Form must be completed and submitted with application or registration forms. If amending, modifying, or otherwise updating an existing record for a facility site, the Core Data Form is not required, unless any core data information has changed. To review additional information regarding the Central Registry, go to the TCEQ website at www.tceq.texas.gov/permitting/central_registry.

Specific:

Table 1a: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas, for Process Heaters

- ★ **Complete only for sites that are major sources of NO_x, as defined in 30 TAC § 117.10, and are located in the Houston/Galveston/Brazoria, Beaumont/Port Arthur Eight-Hour, or Dallas/Fort Worth Eight-Hour ozone nonattainment areas.**

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Unit Type:

Select one of the following types of units from the list below. Enter the code on the form.

Code	Description
PRHTR	Process Heater (in the Houston/Galveston/Brazoria ozone nonattainment area this code should not be used to describe pyrolysis reactors)
PYRO	Pyrolysis reactors
BIF	Designated as a Boiler or Industrial Furnace regulated as an existing facility by the EPA in Title 40 Code of Federal Regulations Part 266 (40 CFR Part 266), Subpart H (as was in effect on June 9, 1993)

▼ **Continue if:**

- The “Unit Type” is “PRHTR;” or
- If the “Unit Type” is “PYRO” or “BIF” and the site is located in the Houston/Galveston/Brazoria ozone nonattainment area.

Maximum Rated Capacity:

Select one of the following ranges for maximum rated capacity (MRC), as defined in 30 TAC Chapter 117. Enter the code on the form.

For units in SOP applications:

“Unit Type” is “PRHTR” and located in the Beaumont/Port Arthur ozone nonattainment area:

Code	Description
40-	MRC is less than 40 MMBtu/hr
40-100	MRC is greater than or equal to 40 MMBtu/hr but less than 100 MMBtu/hr
100-200	MRC is greater than or equal to 100 MMBtu/hr but less than 200 MMBtu/hr
200+	MRC is greater than or equal to 200 MMBtu/hr

“Unit Type” is “PRHTR,” “PYRO,” or “BIF” and located in the Houston/Galveston/Brazoria ozone nonattainment area:

Code	Description
2-	MRC is less than or equal to 2 MMBtu/hr
2-40	MRC is greater than 2 MMBtu/hr but less than 40 MMBtu/hr
40-100	MRC is greater than or equal to 40 MMBtu/hr but less than 100 MMBtu/hr
100-200	MRC is greater than or equal to 100 MMBtu/hr but less than 200 MMBtu/hr
200+	MRC is greater than or equal to 200 MMBtu/hr

“Unit Type” is “PRHTR” and located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area:

Code	Description
5-	MRC is less than or equal to 5 MMBtu/hr
5-40	MRC is greater than 5 MMBtu/hr but less than 40 MMBtu/hr
40-100	MRC is greater than or equal to 40 MMBtu/hr but less than 100 MMBtu/hr
100+	MRC is greater than or equal to 100 MMBtu/hr

For units in GOP applications:

Code	Description
G2-	MRC is less than or equal to 2 MMBtu/hr
G2-5	MRC is greater than 2 MMBtu/hr but less than or equal to 5 MMBtu/hr
G5-40	MRC is greater than 5 MMBtu/hr but less than 40 MMBtu/hr
G40-100	MRC is greater than or equal to 40 MMBtu/hr but less than 100 MMBtu/hr

▼ **Do not continue if:**

- The “Maximum Rated Capacity” is “2-” or “G2-;” or
- If the site is located in the Dallas/Fort Worth Eight- Hour ozone nonattainment area and “Maximum Rated Capacity” is “5-” or “G2-5;” or
- If the site is located in the Beaumont/Port Arthur ozone nonattainment area and “Unit Type” is “PRHTR” and “Maximum Rated Capacity” is “40-” or “G2-,” “G2-5,” or “G5-40.”

★ **Complete “RACT Date Placed in Service” only if the site is located in the Beaumont/Port Arthur ozone nonattainment area.**

RACT Date Placed in Service:

Select one of the following options for the date placed in service. Enter the code on the form.

Code	Description
92-	On or before November 15, 1992
92-93	After November 15, 1992, and on or before June 9, 1993
93-FCD	After June 9, 1993, and before the final compliance date specified in 30 TAC §§ 117.9000, 117.9010, 117.9020(1)
FCD+	After June 9, 1993, and on or after the final compliance date specified in 30 TAC §§ 117.9000, 117.9010, 117.9020(1)

★ **Complete “Functionally Identical Replacement” only if “RACT Date Placed in Service” is “93-FCD.”**

Functionally Identical Replacement:

Select one of the following codes to identify if the unit is a functionally identical replacement for a unit or group of units that were in service on or before November 15, 1992. Enter the code on the form.

Code	Description
YES	Unit is a functionally identical replacement
NO	Unit is not a functionally identical replacement

▼ **Do not continue if located in the Beaumont/Port Arthur ozone nonattainment area and “RACT Date Placed in Service” is “93-FCD” and “Functionally Identical Replacement” is “NO,” or “RACT Date Placed in Service” is “92-93” or “FCD+.”**

Fuel Types:

Select one or more of the following options for fuel type(s) fired. Enter the code(s) on the form.

For units in SOP applications:

Code	Description
NG	Natural gas
GS	Gaseous fuel other than natural gas landfill gas or renewable non-fossil fuel gases (refinery gas or mixtures, etc.)
LFG	Landfill Gas
ORG	Renewable non-fossil fuel gas other than landfill gas
LQD	Liquid
WD	Wood
H50-A	Gaseous fuel containing more than 50% hydrogen (H2) by volume, over an annual basis, fuel gas sampled and analyzed every three hours
H50-8	Gaseous fuel containing more than 50% H2 by volume, over an eight-hour period, fuel gas sampled and analyzed every three hours
SLD	Solid fuel other than wood

For units in GOP applications:

Code	Description
NG	Natural gas (GOP applicants for GOPs 511, 512, 513, and 514 must select this option, other applicants may select this option)
GS	Gaseous fuel other than natural gas landfill gas or renewable non-fossil fuel gases (refinery gas or mixtures, etc.)
LFG	Landfill Gas
ORG	Renewable non-fossil fuel gas other than landfill gas

If a fuel-firing option consists of multiple fuel types being combusted simultaneously, enter the fuel type code for each fuel in a separate column on the same line, with a single SOP index number. If there are more than three fuels being combusted simultaneously, use multiple lines, and start each line with a different SOP index number. Start each additional fuel-firing option on a different line with a different SOP index number.

Example:

Fuel-firing Option A:

Fuel-firing Option B:

Fuel-firing Option C:

SOP Index No.		Fuel Type(s)	
R7ICI-1	GS	LQD	WD
R7ICI-2A	GS	LQD	WD
R7ICI-2B	SLD		
R7ICI-3	LQD		

★ Complete “Annual Heat Input” only if “Unit Type” is “PRHTR” or “PYRO” or “BIF” and “Maximum Rated Capacity” is “40-100,” “100-200,” “100+” or “200+.”

Annual Heat Input:

Select one of the following options for the annual heat input. Enter the code on the form.

“Unit Type” is “PRHTR,” “PYRO,” or “BIF” with a “Maximum Rated Capacity” designation of “40-100”:

Code	Description
28-	Annual heat input is less than or equal to 2.8 (10 ¹¹) Btu/yr., based on rolling 12-month average (Low annual capacity factor heaters)
28+	Annual heat input is greater than 2.8 (10 ¹¹) Btu/yr., based on rolling 12-month average

“Unit Type” is “PRHTR,” “PYRO,” or “BIF” with a “Maximum Rated Capacity” designation of “100+,” “100-200,” or “200+”:

Code	Description
22-	Annual heat input is less than or equal to 2.2 (10 ¹¹) Btu/yr., based on rolling 12-month average (Low annual capacity factor heaters)
22+	Annual heat input is greater than 2.2 (10 ¹¹) Btu/yr., based on rolling 12-month average

NOx Emission Limitation:

Title 30 TAC Chapter 117 provides options to be in compliance with the applicable limitation standards listed in 30 TAC Chapter 117, Subchapter B. Select one of the following options. Enter the code on the form.

For GOP applications:

Code	Description
103B	Title 30 TAC § 117.103(b)(1) exemption (for process heaters in the Beaumont/Port Arthur ozone nonattainment area potentially subject to RACT)
403B	Title 30 TAC § 117.403(b)(1) exemption (for process heaters in Wise County potentially subject to RACT)
103A	Title 30 TAC § 117.103(a)(2) exemption (use for process heaters, potentially subject to ESAD, located in the Beaumont/Port Arthur ozone nonattainment area and rated less than 40 MMBtu/hr)
103C	Title 30 TAC § 117.103(c) exemption (use for process heaters, potentially subject to ESAD located in the Beaumont/Port Arthur ozone nonattainment area rated greater than 40 MMBtu/hr and qualifies as a low annual capacity unit.)
110A	Title 30 TAC § 117.110(a)(2) (use for process heaters located in the Beaumont/Port Arthur ozone nonattainment area and rated greater than 40 MMBtu/hr and does not qualify as a low annual capacity unit. These units are subject to ESAD requirements)
310A	Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8) [relating to mass emissions cap and trade in Chapter 101, Subchapter H, Division 3 and Emission Specifications for Attainment Demonstration]
410A	Title 30 TAC § 117.410(a)(3) (use for units located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area)
405B	Title 30 TAC § 117.405(b)(1) (use for units located in Wise County)

For SOP applications:

For process heaters located in the Beaumont/Port Arthur ozone nonattainment area:

Code	Description
105	Title 30 TAC § 117.105 (relating to Emission Specifications for Reasonably Available Control Technology)
110A	Title 30 TAC § 117.110(a) (use for process heaters located in the Beaumont/Port Arthur ozone nonattainment area and rated greater than 40 MMBtu/hr and does not qualify as a low annual capacity unit.)
APES	Unit is complying with an Alternative Plant-wide Emissions Specification under Title 30 TAC § 117.115
ACSS	Unit is complying with an Alternative Case-specific Specification under Title 30 TAC § 117.125
SC	Unit is complying with a Source Cap under Title 30 TAC § 117.123

For PRHTR or PYRO or BIF units located in the Houston/Galveston/Brazoria ozone nonattainment area:

Code	Description
310D	Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8) [relating to mass emissions cap and trade in Chapter 101, Subchapter H, Division 3 and Emission Specifications for Attainment Demonstration]
ACF	Process heater is complying with an annual capacity factor specification under Title 30 TAC §§ 117.310(d)(3) and 117.310(a) (17)

For process heaters located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area:

Code	Description
410A	Title 30 TAC § 117.410(a)(3) (use for units located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area excluding Wise County)
405B	Title 30 TAC § 117.405(b)(1) (use for units located in Wise County)
ACF	Process heater is complying with an annual capacity factor specification under Title 30 TAC § 117.410(a)(14)
SC	Unit is complying with a Source Cap under Title 30 TAC § 117.423

- ★ Complete “Opt-in Unit” only if the site is located in the Beaumont-Port Arthur ozone nonattainment area and “Emission Limitation” from Table 1a is “APES” or “SC.”

Opt-in Unit:

Enter “YES” if the unit is an opt-in unit listed in 30 TAC § 117.115(f) that the owner or operator has chosen to include into the Plant-wide emission or Source Cap to comply with § 117.105 (for non-gas-fired process heaters). Otherwise, enter “NO.”

- ★ Complete “23C-OPTION” only if “NOx Emission Limitation” is “SC.”

23C-Option:

Select one of the following § 117.123(c)(1) or 423(c)(1) options for monitoring. Enter the code on the form.

Code	Description
23C-A	NO _x , CO, O ₂ (or CO ₂) CEMS and a totalizing fuel flow meter per § 117.123(c)(1)(A) or § 117.423(c)(1)(A).
23C-B	PEMS and a totalizing fuel flow meter per § 117.123(c)(1)(B) or § 117.423(c)(1)(B).
23C-C	Rate measured by hourly emission rate testing per § 117.123(c)(1)(C) or § 117.423(c)(1)(C). (Must use for § 117.115(f) opt-in units in the Beaumont/Port Arthur ozone nonattainment area)

Table 1b:

Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas, Process Heaters

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Diluent CEMS:

Enter “YES” if the process heater operates with a carbon dioxide (CO₂) CEMS to monitor diluent. Otherwise, enter “NO.”

- ★ Complete “30 TAC Chapter 116 Limit” only if the site is located in the Beaumont/Port Arthur ozone nonattainment area.

30 TAC Chapter 116 Limit:

Select one of the following descriptions of the 30 TAC Chapter 116 permit limit. Enter the code on the form.

For units having a 30 TAC Chapter 116 permit in effect on June 9, 1993:

Code	Description
93Y	Nitrogen oxides (NO _x) emission limit in 30 TAC § 117.105 is greater than the NO _x emission limit in a 30 TAC Chapter 116 permit
93N	NO _x emission limit in 30 TAC § 117.105 is not greater than the NO _x emission limit in a 30 TAC Chapter 116 permit

For units placed into service after June 9, 1993, and prior to the final compliance date specified in 30 TAC §§ 117.9000, 117.9010 or 117.9020, as functionally identical replacement for an existing unit or group of units and limited to the cumulative MRC of the units replaced:

Code	Description
95Y	Emission limit in 30 TAC § 117.105 is greater than the NOx emission limit in any 30 TAC Chapter 116 permit issued after June 9, 1993
95N	Emission limit in 30 TAC § 117.105, is not greater than the NOx emission limit in any 30 TAC Chapter 116 permit issued after June 9, 1993

For existing units without a 30 TAC Chapter 116 permit in effect on June 9, 1993, or for units placed in service after the final compliance date of 30 TAC §§ 117.9000, 117.9010 or 117.9020 as a functionally identical replacement for an existing unit or group of units and limited to the cumulative MRC of the units replaced:

Code	Description
N/A	NOx emission limit in 30 TAC § 117.105 applies for purposes of 30 TAC Chapter 117

NOx Emission Limit Basis:

Select one of the following options for complying with the nitrogen oxides (NOx) emission limit. Enter the code on the form.

Code	Description
30DAY	Complying with the applicable emission limit in lb/MMBtu on a rolling 30-day average
BLK1-LB	Complying with the applicable emission limit using a block one-hour average
OTHER	Other emission limit basis

NOx Reduction:

Select one of the following NOx reduction options. Enter the code on the form.

Code	Description
FRCFG	Forced flue gas recirculation
INDFG	Induced flue gas recirculation
WATER	Water or steam injection
POST1	Post combustion control technique with ammonia or urea injection
POST2	Post combustion control technique with chemical reagent injection other than ammonia or urea
OTHER	Other NOx reduction method
NONE	No NOx reduction

- ★ **Complete “Common Stack Combined” only if the unit is located in the Beaumont/Port Arthur ozone nonattainment area**

Common Stack Combined:

Enter “YES” if the unit is vented through a common stack; the total rated heat input from combined units is greater than or equal to 250 MMBtu/hr: and the annual combined heat input is greater than 2.2 (10¹¹) Btu/yr. Otherwise, enter “NO.”

- ★ **Complete “Fuel Type Heat Input” only if “NOx Emission Limitation” is “APES” (Beaumont/Port Arthur ozone nonattainment area).**

Fuel Type Heat Input:

Select one of the following options for the fuel type heat input. Enter the code on the form.

Code	Description
GAS50	Process heater is fired with gaseous and liquid fuel, and derives more than 50% annual heat input from gaseous fuel
LIQ50	Process heater is fired with gaseous and liquid fuel, and derives more than 50% annual heat input from liquid fuel
SLDCOMBO	Process heater is fired with a combination of either gaseous and solid fuels or of liquid and solid fuels
NONE	Process heater is not fired with any of the above combinations

Note: Process heaters that derive exactly 50% annual heat input from gaseous fuel and 50% from liquid fuel may choose either GAS50 or LIQ50.

NOx Monitoring System:

Select the appropriate code to indicate the type of monitoring used. Enter the code on the form.

For units without a monitoring system:

Code	Description
MERT	Maximum emission rate testing [in accordance with 30 TAC § 117.8000]

For all other units:

Code	Description
CEMS	Continuous emissions monitoring system
PEMS	Predictive emissions monitoring system
75ARCCEMS	Continuous emissions monitoring system, used to comply with Title 40 Code of Federal Regulations Part 75 (40 CFR Part 75) (pertaining to Acid Rain)
75ARPPEMS	Predictive emissions monitoring system, used to comply with 40 CFR Part 75 (pertaining to Acid Rain)

Table 1c: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas, Process Heaters

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Fuel Flow Monitoring:

Select one of the following options to indicate how fuel flow is monitored. Enter the code on the form.

Code	Description
X40A	Fuel flow is with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a)
X40A2-A	Unit operates with a NOx and diluent CEMS and monitors stack exhaust flow per 30 TAC §§ 117.140(a)(2)(A), 117.340(a)(2)(A) or 117.440(a)(2)(A)
X40A2-B	Unit vents to a common stack with a NOx and diluent CEMS and uses a single totalizing fuel flow meter per 30 TAC §§ 117.140(a)(2)(B), 117.340(a)(2)(B) or 117.440(a)(2)(B)

★ **Do not complete “CO Emission Limitation” or “CO Monitoring System” if “Unit Type” is “BIF” and “NOx Emission Limitation” is “310D.”**

CO Emission Limitation:

Title 30 TAC Chapter 117 provides several methods to be in compliance with the applicable CO emission specifications of 30 TAC Chapter 117. Select one of the following options. Enter the code on the form.

For process heaters located in the Beaumont/Port Arthur ozone nonattainment area:

Code	Description
105F	Title 30 TAC § 117.105(f) [relating to Emission Specifications for Reasonably Available Control Technology] (use for units subject to RACT in the Beaumont/Port Arthur ozone nonattainment area)
110C	Title 30 TAC § 117.110(c)(1) [relating to Emission Specifications for Attainment Demonstration] (use for units subject to ESAD requirements in the Beaumont/Port Arthur ozone nonattainment area)
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC § 117.125(a)

For PRHTR or PYRO or BIF units located in the Houston/Galveston/Brazoria ozone nonattainment area:

Code	Description
310C	Title 30 TAC § 117.310(c)(1) 400 ppmv option
310CPPMV	Title 30 TAC § 117.310(c)(1) 775 ppmv option for wood-fuel-fired process heaters
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC § 117.325(a)

For process heaters located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area:

Code	Description
410C	Title 30 TAC § 117.410(c)(1) [relating to Emission Specifications for Attainment Demonstration] (use for units subject to ESAD requirements in the Dallas/Fort Worth Eight-Hour ozone nonattainment area)
405D	Title 30 TAC § 117.405(d)(1) (use for units subject to Reasonably Available Control Technology (RACT) requirements in Wise County in the Dallas/Fort Worth Eight-Hour ozone nonattainment area)
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC § 117.425(a)

CO Monitoring System:

Select one of the following options to indicate how the unit is monitored for CO exhaust emissions. Enter the code on the form.

Code	Description
CEMS	Continuous emissions monitoring system
PEMS	Predictive emissions monitoring system
OTHER	Other than CEMS or PEMS

★ Complete “NH3 Emission Limitation” only if “NOx Reduction” is “POST1.”

NH3 Emission Limitation:

Title 30 TAC Chapter 117 provides several methods to be in compliance with the applicable NH3 emission specifications of 30 TAC Chapter 117. Select one of the following options. Enter the code on the form.

For process heaters located in the Beaumont/Port Arthur ozone nonattainment area:

Code	Description
105G	Title 30 TAC § 117.105(g) [relating to Emission Specifications for Reasonably Available Control Technology]
110C	Title 30 TAC § 117.110(c)(2) [relating to Emission Specifications for Attainment Demonstration]
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC § 117.125(a)

For PRHTR or PYRO or BIF units located in the Houston/Galveston/Brazoria ozone nonattainment area:

Code	Description
310C	Title 30 TAC § 117.310(c)(2) [relating to Emission Specifications for Attainment Demonstration]
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC § 117.325(a)

For process heaters located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area:

Code	Description
410C	Title 30 TAC § 117.410(c)(2) [relating to Emission Specifications for Attainment Demonstration]
405D	Title 30 TAC § 117.405(d)(2) [use for units subject to Reasonably Available Control Technology (RACT) requirements in Wise County in the Dallas/Fort Worth Eight-Hour ozone nonattainment area]
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC § 117.425

★ Complete “NH3 Monitoring” only if “NOx Reduction” is “POST1.”

NH3 Monitoring:

Select one of the following options to indicate how the unit is monitored for NH3 emissions. Enter the code on the form.

Code	Description
CEMS	Continuous emissions monitoring system
PEMS	Predictive emissions monitoring system
MBAL	Mass balance
OXY	Oxidation of ammonia to nitric oxide (NO)
STUBE	Stain tube

Table 2: Title 30 Texas Administrative Code Chapter 112 (30 TAC Chapter 112) Control of Air Pollution from Sulfur Compounds

★ Complete for SOP applications and Municipal Solid Waste Landfill (MSWL) GOP applications only.

★ Complete only for liquid fuel-fired heaters or furnaces.

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Effective Stack Height:

Enter “YES” if the effective stack height is less than the standard effective stack height. Otherwise, enter “NO.”

Emission Point ID No.:

Enter the identification number (ID No.) of the emission point(s) (maximum 10 characters) to which the process heater or furnace routes emissions. This number should be consistent with the unit identification number listed on Form OP-SUM.

Table 3a:

Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas, Furnaces

- ★ **Complete only for sites that are major sources of NOx, as defined in 30 TAC § 117.10, and are located in the Houston/Galveston/Brazoria or Dallas/Fort Worth Eight-Hour ozone nonattainment areas.**

Note: The Dallas/Fort Worth Eight-Hour ozone nonattainment area consists of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant counties.

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Unit Type:

Select one of the following types of units from the list below. Enter the code on the form.

For units located in the Houston/Galveston/Brazoria ozone nonattainment area:

Code	Description
HTFUR	Metallurgical heat treating furnace
RHFUR	Metallurgical reheat furnace
PLRF	Pulping liquor recovery furnace
INDFUR	Industrial Furnace - Regulated as an existing facility by the EPA in Title 40 Code of Federal Regulations Part 266 (40 CFR Part 266), Subpart H (as was in effect on June 9, 1993)
OTHER	Molten sulfur oxidation furnace or other furnace not listed above

For units located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area:

Code	Description
EARC	Electric arc melting furnace used in steel production
HTFUR	Metallurgical heat treating furnace
RHFUR	Metallurgical reheat furnace
LSCO	Lead smelting blast (cupola) and reverberatory furnaces used in conjunction
GLASS	Container glass melting furnaces
MWCOLD	Mineral wool-type cold-top electric fiberglass melting furnaces
MWREGEN	Mineral wool-type fiberglass regenerative furnaces
MWNON	Mineral wool-type fiberglass non-regenerative gas-fired furnaces
INDFUR	Industrial Furnace - Regulated as an existing facility by the EPA in Title 40 Code of Federal Regulations Part 266 (40 CFR Part 266), Subpart H (as was in effect on June 9, 1993)
PLRFOTHER	Pulping liquor recovery furnace, molten sulfur oxidation furnace or other furnace not listed above

Maximum Rated Capacity:

Select one of the following ranges for maximum rated capacity (MRC), as defined in 30 TAC Chapter 117. Enter the code on the form.

Code	Description
2-	MRC is less than or equal to 2 MMBtu/hr
2-20	MRC is greater than 2 MMBtu/hr but less than 20 MMBtu/hr
20-40	MRC is greater than 20 MMBtu/hr but less than 40 MMBtu/hr
40-100	MRC is greater than or equal to 40 MMBtu/hr but less than 100 MMBtu/hr
100-200	MRC is greater than or equal to 100 MMBtu/hr but less than 200 MMBtu/hr
200+	MRC is greater than or equal to 200 MMBtu/hr

▼ **Do not continue if:**

- The “Unit Type” is “OTHER;” or
- If the “Unit Type” is “HTFUR” or “RHFUR” and “Maximum Rated Capacity” is “2-“ or “2-20.”

▼ **Do not continue if:**

- The site is located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area and “Unit Type” is “EARC,” “PLRFOTHER,” or “INDFUR;” or
- If the “Unit Type” is “GLASS,” “MWCOLD,” “MWREGEN” or “MWNON” and “Maximum Rated Capacity” is “2”.

NOx Emission Limitation:

Title 30 TAC Chapter 117 provides options to be in compliance with the applicable limitation standards listed in 30 TAC Chapter 117, Subchapter B. Select one of the following options. Enter the code on the form.

Code	Description
310A	Title 30 TAC § 117.310(a) (use for units located in the Houston/Galveston ozone nonattainment area.)
410A	Title 30 TAC § 117.410(a)(8) or (a)(10) (use for units located in the Dallas/Fort Worth Eight Hour ozone nonattainment area)
ACF	Furnace is complying with an annual capacity factor specification under Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(17) or Title 30 TAC § 117.410(a)(14)
SC	Unit is complying with a Source Cap under Title 30 TAC § 117.423(a) (use for units located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area)

★ **Complete “23C-Option” only if “NOx Emission Limitation” is “SC.”**

23C-Option:

Select one of the following § 117.123(c)(1) or 423(c)(1) options for monitoring. Enter the code on the form.

Code	Description
23C-A	NO _x , CO, O ₂ (or CO ₂) CEMS and a totalizing fuel flow meter per § 17.423(c)(1)(A)
23C-B	PEMS and a totalizing fuel flow meter per § 117.423(c)(1)(B)
23C-C	Rate measured by hourly emission rate testing per or § 117.423(c)(1)(C)

NO_x Emission Limit Basis:

Select one of the following options for complying with the nitrogen oxides (NO_x) emission limit. Enter the code on the form.

Code	Description
30DAY	Complying with the applicable emission limit in lb/MMBtu on a rolling 30-day average
BLK1-LB	Complying with the applicable emission limit in lb/hr using a block one-hour average
OTHER	Other emission limit basis

NO_x Reduction:

Select one of the following NO_x reduction options. Enter the code on the form.

Code	Description
WATER	Water or steam injection
POST1	Post combustion control technique with ammonia or urea injection
POST2	Post combustion control technique with chemical reagent injection other than ammonia or urea
OTHER	Other NO _x reduction method
NONE	No NO _x reduction

NO_x Monitoring System:

Select the appropriate code to indicate the type of monitoring used. Enter the code on the form.

For units without a monitoring system:

Code	Description
MERT	Maximum emission rate testing [in accordance with 30 TAC § 117.8000]

For all other units:

Code	Description
CEMS	Continuous emissions monitoring system
PEMS	Predictive emissions monitoring system
75ARCCEMS	Continuous emissions monitoring system, used to comply with Title 40 Code of Federal Regulations Part 75 (40 CFR Part 75) (pertaining to Acid Rain)
75ARPPEMS	Predictive emissions monitoring system, used to comply with 40 CFR Part 75 (pertaining to Acid Rain)

Table 3b: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117), Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in Ozone Nonattainment Areas, Furnaces

- ★ Complete only for sites that are major sources of NO_x, as defined in 30 TAC § 117.10, and are located in the Houston/Galveston/Brazoria or Dallas/Fort Worth Eight-Hour ozone nonattainment areas.

Note: The Dallas/Fort Worth Eight-Hour ozone nonattainment area consists of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant counties.

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Fuel Flow Monitoring:

Select one of the following options to indicate how fuel flow is monitored. Enter the code on the form.

Code	Description
X40A	Fuel flow is with a totalizing fuel flow meter per 30 TAC §§ 117.340(a) or 117.440(a)
X40A2-A	Unit operates with a NO _x and diluent CEMS and monitors stack exhaust flow per 30 TAC §§ 117.340(a)(2)(A) or 117.440(a)(2)(A)
X40A2-B	Unit vents to a common stack with a NO _x and diluent CEMS and uses a single totalizing fuel flow meter per 30 TAC §§ 117.340(a)(2)(B) or 117.440(a)(2)(B)

CO Emission Limitation:

Title 30 TAC Chapter 117 provides several methods to be in compliance with the applicable CO emission specifications of 30 TAC Chapter 117. Select one of the following options. Enter the code on the form.

Code	Description
310C	Title 30 TAC § 117.310(c)(1) [relating to Emission Specifications for Attainment Demonstration] (use for units in the Houston/Galveston/Brazoria ozone nonattainment area)
410C	Title 30 TAC § 117.410(c)(1) [relating to Emission Specifications for Attainment Demonstration] (use for units requirements in the Dallas/Fort Worth Eight-Hour ozone nonattainment area)
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.325(a) or 117.425(a)

CO Monitoring System:

Select one of the following options to indicate how the unit is monitored for CO exhaust emissions. Enter the code on the form.

Code	Description
CEMS	Continuous emissions monitoring system
PEMS	Predictive emissions monitoring system
OTHER	Other than CEMS or PEMS

- ▼ Continue only if “NO_x Reduction” is “POST1.”

NH₃ Emission Limitation:

Title 30 TAC Chapter 117 provides several methods to be in compliance with the applicable NH₃ emission specifications of 30 TAC Chapter 117. Select one of the following options. Enter the code on the form.

Code	Description
310C	Title 30 TAC § 117.310(c)(2) [relating to Emission Specifications for Attainment Demonstration]
410C	Title 30 TAC § 117.410(c)(2) [relating to Emission Specifications for Attainment Demonstration]
ACSS	Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.325 or 117.425

NH3 Monitoring:

Select one of the following options to indicate how the unit is monitored for NH3 emissions. Enter the code on the form.

Code	Description
CEMS	Continuous emissions monitoring system
PEMS	Predictive emissions monitoring system
MBAL	Mass balance
OXY	Oxidation of ammonia to nitric oxide (NO)
STUBE	Stain tube

Table 4: Title 30 Texas Administrative Code Chapter 111 (30 TAC Chapter 111), Subchapter A, Division 2: Incineration

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Hazardous Waste:

Enter “YES” if the unit combusts hazardous waste as a fuel for energy recovery and the facility accepts hazardous waste as a fuel from off-site sources which involves a commercial transaction or a change of ownership of the waste and the facility is not regulated at 40 CFR Part 264 or 265, Subpart O. Otherwise, enter “NO”.

▼ **Continue only if “Hazardous Waste” is “YES.”**

Monitor:

Enter “YES” if the unit has a continuous opacity or carbon monoxide monitor (or equivalent). Otherwise, enter “NO.”

Table 5a: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart EEE: Hazardous Waste Combustors

★ Complete this table for HCl production furnaces that burn hazardous waste, and are located at an area source or a major source, and do not meet the criteria in Table 1 of § 63.1200(b)

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Existing Source:

Enter “YES” if the furnace is an existing source (construction or reconstruction commenced on or before April 20, 2004). Otherwise, enter “NO.”

Area Source:

Enter “YES” if the furnace is an area source as defined under § 63.2. Otherwise, enter “NO.”

★ Complete “Elective Standards” only if “Area Source” is “YES.”

Elective Standards:

Enter “YES” if the area source is electing to comply with § 63.1218 per § 266.100(b)(3). Otherwise, enter “NO.”

DIOXIN/FURAN Standard:

Select one of the following options. Enter the code on the form.

Code	Description
CO-1	Complying with the CO standard in § 63.1218(a)(1) or (b)(1)
THC-1	Complying with the THC standard in § 63.1218(a)(1) or (b)(1)

CO/THC Standard:

Select one of the following options. Enter the code on the form.

Code	Description
CO-5	Complying with the CO standard in § 63.1218(a)(5)(i) or (b)(5)(i)
THC-5	Complying with the THC standard in § 63.1218(a)(5)(ii) or (b)(5)(ii)

TOT-CI Standard:

Select one of the following options. Enter the code on the form.

Code	Description
PPMV-6	Complying with the 25 ppmv standard in § 63.1218(a)(6)(i) or (b)(6)(i)
SRE-6	Complying with the system removal efficiency (SRE) standard in § 63.1218(a)(6)(ii) or (b)(6)(ii)

Table 5b: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart EEE: Hazardous Waste Combustors

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP-SUM (Individual Unit Summary).

SOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). For additional information relating to SOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Baghouse:

Enter “YES” if the furnace is equipped with a baghouse. Otherwise, enter “NO.”

★ Complete “PM Detection” only if “Baghouse” is “YES.”

PM Detection:

Enter “YES” if a PM detection system is used. Otherwise, enter “NO.”

Dioxin-Listed:

Enter “YES” if the furnace burns the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027. Otherwise, enter “NO.”

DRE Previous Test:

Enter “YES” if previous testing was used to document conformance with the DRE standard. Otherwise, enter “NO.”

★ Complete “Feed Zone” only if “DRE Previous Test” is “YES.”

Feed Zone:

Enter “YES” if the source feeds waste at a location other than the normal flame zone. Otherwise, enter “NO.”

Table 6a: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Commence:

Select one of the following construction date options for the source. Enter the code on the form.

Code	Description
NEW	Source is new (commenced construction after June 4, 2010)
RECON	Source is reconstructed (commenced reconstruction after June 4, 2010)
EXIST	Source is existing (commenced construction or reconstruction on or before June 4, 2010)

Table Applicability:

Select one of the following options that describes the applicability of emission limitations in §63.7500(a)(1)-Tables 1 or 2. Enter the code on the form.

Code	Description
SFF10	The unit burns coal/solid fossil fuel AND has heat input equal to or greater than 10 MMBtu/hr (subject to emission limits in Table 1 or 2)
BM10	The unit burns biomass/bio-based solid fuel AND has heat input equal to or greater than 10 MMBtu/hr (subject to emission limits in Table 1 or 2)
HLIQ10	The unit burns heavy liquid fuel AND has heat input equal to or greater than 10 MMBtu/hr (subject to emission limits in Table 1 or 2)
LLIQ10	The unit burns light liquid fuel AND has heat input equal to or greater than 10 MMBtu/hr (subject to emission limits in Table 1 or 2)
GAS210	The unit burns Gas 2 fuel AND has heat input equal to or greater than 10 MMBtu/hr (subject to emission limits in Table 1 or 2)
T3.1LTD	The unit qualifies as a limited use boiler or process heater as defined in §63.7575 (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.1)
T3.1TS	The unit is designed to utilize a continuous oxygen trim system (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.1)
T3.1G1	The unit is designed to burn Gas 1 fuel AND has no continuous oxygen trim AND has heat input equal to or less than 5 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.1)
T3.1G2	The unit is designed to burn Gas 2 fuel AND has heat input equal to or less than 5 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.1)
T3.1LL	The unit is designed to burn light liquid fuel AND has heat input equal to or less than 5 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.1)

T3.2G1	The unit is designed to burn Gas 1 fuel AND has no continuous oxygen trim AND has heat input less than 10 MMBtu/hr but greater than 5 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.2)
T3.2G2	The unit is designed to burn Gas 2 fuel AND has heat input less than 10 MMBtu/hr but greater than 5 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.2)
T3.2LL	The unit is designed to burn light liquid fuel AND has heat input less than 10 MMBtu/hr but greater than 5 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.2)
T3.2HL	The unit is designed to burn heavy liquid fuel AND has heat input less than 10 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.2)
T3.2S	The unit is designed to burn solid fuel AND has heat input less 10 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.2)
T3.3G1	The unit is designed to burn Gas 1 fuel AND has no continuous oxygen trim AND has heat input equal to or greater than 10 MMBtu/hr (not subject to Table 1 or 2 emission limits but must comply with work practice standards in §63.7500(a)(1)-Table 3.3)

▼ Continue only if “Table Applicability” is “SFF10”, “BM10”, “HLIQ10”, “LLIQ10”, or “GAS210.”

HCl Emission:

Select one of the following hydrogen chloride emission limit options. Enter the code on the form.

Code	Description
BTU-HCL	Emission limits for HCl in pounds per MMBtu heat input
STM-HCL	Emission limits for HCl in pounds per MMBtu steam output (for steam generating units only)
MWH-HCL	Emission limits for HCl in pounds per MWh power output (for boilers that generate electricity only)

HCl-CMS:

Select one of the following hydrogen chloride continuous monitoring system (CMS) options. Enter the code on the form.

Code	Description
NONE	A CMS is not being used
HCL-CEMS	An HCl CEMS is used
SO2-CEMS	An SO ₂ CEMS is used

Table 6b: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

★ Complete this table only if “HCl-CMS” is “NONE.”

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

HCl-CD:

Select one of the following hydrogen chloride control device options. Enter the code on the form.

Code	Description
DS	Dry scrubber is being used
WAS	A wet acid scrubber is used
PWS-PH	A particulate wet scrubber with pH effluent operating limit
OTHER	Other control methods are being used
NONE	A control device is not used

HCl-Test:

Select one of the following hydrogen chloride performance test options. Enter the code on the form.

Code	Description
PT	Compliance is demonstrated by conducting a performance test for HCl
NPT	A performance test is not being used

HCl-FA:

Select one of the following hydrogen chloride fuel analysis options. Enter the code on the form.

Code	Description
FA	Compliance is demonstrated by conducting fuel analysis for HCl
NFA	Fuel analysis is not being used

HCl-FloMon:

Select one of the following hydrogen chloride flow monitoring system options. Enter the code on the form.

Code	Description
FMS	Operating limit requires a flow monitoring system for HCl
NFMS	Flow monitoring system is not required for HCl

HCl-pHMon:

Select one of the following hydrogen chloride pH monitoring system options. Enter the code on the form.

Code	Description
PHMON	Operating limit requires a pH monitoring system for HCl
NPH	A pH monitoring system is not required for HCl

Table 6c: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Hg Emission:

Select one of the following hydrogen chloride emission limit options. Enter the code on the form.

Code	Description
BTU-HG	Emission limits for Hg in pounds per MMBtu heat input
STM-HG	Emission limits for Hg in pounds per MMBtu steam output (for steam generating units only)
MWH-HG	Emission limits for Hg in pounds per MWh power output (for boilers that generate electricity only)

Hg-InjRate:

Enter “YES” if an operating limit requires a monitoring system to measure sorbent injection rate for Hg. Otherwise, enter “NO.”

Hg-CMS:

Select one of the following mercury continuous monitoring system (CMS) options. Enter the code on the form.

Code	Description
NONE	A CMS is not being used
HG-CEMS	An Hg CEMS is used
HGCMS	A CMS other than an Hg CEMS is used

▼ Continue on Table 6c only if “Hg-CMS” is “NONE”. If “Hg-CMS” is HG-CEMS” or “HGCMS,” skip to Table 6d.

Hg-CD:

Select one of the following mercury control device options. Enter the code on the form.

Code	Description
DS	Dry scrubber is being used
WAS	A wet acid scrubber is used
ESP-WS	An electrostatic precipitator with a wet scrubber is used
ACI	Activated carbon injection is used
OTHER	Other control methods are being used
NONE	A control device is not used

Hg-Test:

Select one of the following Hg performance test options. Enter the code on the form.

Code	Description
PT	Compliance is demonstrated by conducting a performance test for Hg.
NPT	A performance test is not being used.

Hg-FA:

Select one of the following Hg fuel analysis options. Enter the code on the form.

Code	Description
HGFA	Compliance is demonstrated by conducting fuel analysis for Hg.
NFA	Fuel analysis is not being used.

Table 6d: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

★ **Complete “BM Subcategory” only if “Table Applicability” is “BM10.”**

BM Subcategory:

Select one of the following options that describes subcategory of the boiler or process heater as listed in §63.7499. Enter the code on the form.

Code	Description
7499(I)	The unit is a stoker/sloped grate/other unit designed to burn wet biomass/bio-based solid
7499(D)	The unit is a stoker/sloped grate/other unit designed to burn kiln dried biomass/bio-based solid
7499(E)	The unit is a fluidized bed designed to burn biomass/bio-based solid
7499(F)	The unit is a suspension burner designed to burn biomass/bio-based solid
7499(J)	The unit is a Dutch oven/pile burner designed to burn biomass/bio-based solid
7499(G)	The unit is a fuel cell designed to burn biomass/bio-based solid
7499(H)	The unit is a hybrid suspension/grate burner designed to burn wet biomass/bio-based solid

PM/TSM Emission:

Select one of the following particulate matter or total selected metals emission limit options. Enter the code on the form.

Code	Description
BTU-PM	Emission limits for PM in pounds per MMBtu heat input
BTU-TSM	Emission limits for TSM in pounds per MMBtu heat input
STM-PM	Emission limits for PM in pounds per MMBtu steam output (for steam generating units only)
STM-TSM	Emission limits for TSM in pounds per MMBtu steam output (for steam generating units only)
MWH-PM	Emission limits for PM in pounds per MWh power output (for boilers that generate electricity only)
MWH-TSM	Emission limits for TSM in pounds per MWh power output (for boilers that generate electricity only)

▼ **Continue on Table 6d only if “PM/TSM-Emission” is “BTU-TSM”, “STM-TSM”, or “MWH-TSM.”. If “PM/TSM Emission” is “BTU-PM,” “STM-PM,” or “MWH-PM,” skip to Table 6e.**

TSM-CMS:

Select one of the following continuous monitoring system (CMS) options. Enter the code on the form.

Code	Description
TSMCEMS	TSM CEMS is used
TSMCMS	TSM CMS other than a TSM CEMS is used
NONE	CMS is not being used

▼ **Continue on Table 6d only if “TSM-CMS” is “NONE”. If “TSM-CMS” is “TSMCEMS” or “TSMCMS,” skip to Table 6e.**

TSM-Test:

Select one of the following TSM performance test options. Enter the code on the form.

Code	Description
PT	Compliance is demonstrated by conducting a performance test for TSM
NPT	A performance test is not being used

TSM-FA:

Select one of the following TSM fuel analysis options. Enter the code on the form.

Code	Description
FA	Compliance is demonstrated by conducting fuel analysis for TSM
NFA	Fuel analysis is not being used

Table 6e: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

★ Complete this table only if “only if “PM/TSM Emission” is “BTU-PM,” “STM-PM,” or “MWH-PM.”

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

★ Complete “PM-250” only if “Table Applicability” is “SFF10” or “HLL10.”

PM-250:

Select one of the following options for the average annual heat input. Enter the code on the form.

Code	Description
250+	Average annual heat input rate is greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid fuel
250-	Average annual heat input rate is less than or equal to 250 MMBtu per hour from solid fossil fuel and/or heavy liquid fuel

PM-CMS:

Select one of the following continuous monitoring system (CMS) options. Enter the code on the form.

Code	Description
PMCEMS	PM CEMS is used
PMCMS	PM CMS other than a PM CEMS is used
PMCPMS	PM CPMS is used to monitor a PM control device
NONE	CMS is not being used. (not a valid entry if “PM-250” is “250+”)

▼ Continue on Table 6e only if “PM-CMS” is “NONE” or “PMCMS”. If “PM-CMS” is “PMCEMS” or “PMCPMS,” skip to Table 6f.

PM-CD:

Select one of the following PM control device options. Enter the code on the form.

Code	Description
BLD	A Fabric Filter with a bag leak detection system is used
WS	A Wet Scrubber is used
ESP-WS	An Electrostatic Precipitator with a Wet Scrubber is used
OTHER	Other control methods are being used
NONE	A control device is not used

PM-Test:

Select one of the following PM performance test options. Enter the code on the form.

Code	Description
PT	Compliance is demonstrated by conducting a performance test for PM
NPT	A performance test is not being used

PM-FM:

Select one of the following flow monitoring options. Enter the code on the form.

Code	Description
FM	Operating limit requires the use of a flow monitoring system
NFM	A flow monitoring system is not required

PM-PMON:

Select one of the following pressure monitoring system options. Enter the code on the form.

Code	Description
PMON	Operating limit requires the use of a pressure monitoring system
NO	A pressure monitoring system is not required

Table 6f: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

★ Complete this table only if “TSM-CMS” is “NONE” or “PM-CMS” is PMCMS” or “NONE.”

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

Opacity-CD:

Select one of the following control device options. Enter the code on the form.

Code	Description
BLD	A fabric filter with a bag leak detection system is used
FF	A fabric filter without a bag leak detection system is used
ESP-WS	An electrostatic precipitator with a wet scrubber is used
ESP	An electrostatic precipitator without a wet scrubber is used
DRY	A dry control system is used
OTHER	Other control methods are being used
NONE	A control device is not used

- ▼ **Continue on Table 6f only if “Opacity-CD” is “FF”, “ESP”, or “DRY.” If “Opacity-CD” is “BLD,” “ESP-WS,” “OTHER,” or “NONE,” skip to Table 6g.**

COMS:

Select one of the following continuous opacity monitoring options. Enter the code on the form.

Code	Description
COMS	A continuous opacity monitoring system is used
NOCOMS	A continuous opacity monitoring system is not used

- ▼ **Continue on Table 6f only if “COMS” is “NOCOMS.” If “COMS” is “COMS,” skip to Table 6g.**

OPT-Test:

Select one of the following opacity performance test options. Enter the code on the form.

Code	Description
OPT	Compliance is demonstrated by conducting a performance test for opacity
NPTO	A performance test is not being used

Table 6g: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subpart DDDDD: Industrial, Commercial, and Institutional Process Heaters

Unit ID No.:

Enter the identification number (ID No.) for the unit (maximum 10 characters) as listed on Form OP SUM (Individual Unit Summary).

SOP/GOP Index No.:

Site operating permit (SOP) applicants should indicate the SOP index number for the unit or group of units (maximum 15 characters consisting of numeric, alphanumeric characters, and/or dashes prefixed by a code for the applicable regulation [i.e., 60KB-XXXX]). General operating permit (GOP) applicants should indicate the appropriate GOP index number in this column from the applicable GOP table (SSS-FF-XXX). Applicants should complete all applicable GOP attribute information before determining the GOP index number. For additional information relating to SOP and GOP index numbers, please see the Completing FOP Applications – Additional Guidance on the TCEQ website at www.tceq.texas.gov/permitting/air/guidance/titlev/tv_fop_guidance.html.

- ★ **Complete “SFF Subcategory” only if “Table Applicability” is “SFF10.”**

SFF Subcategory:

Select one of the following options that describes subcategory of the boiler or process heater as listed in § 63.7499. Enter the code on the form

Code	Description
7499(A)	The unit is a pulverized coal/solid fossil fuel unit
7499(B)	The unit is a stoker designed to burn coal/solid fossil fuel
7499(C)	The unit is a fluidized bed unit designed to burn coal/solid fossil fuel (without integrated heat exchanger)
7499(S)	The unit is a fluidized bed unit with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel
SUBNA	The unit is not part of the subcategories in § 63.7499(a), (b), (c) or (s)

CO Emission:

Select one of the following CO emission limit options. Enter the code on the form

Code	Description
PPM-CO	Emission limits for CO in ppm by volume not using a CEMS (valid code only if “Table Applicability” is “SFF10” or if “BM Subcategory” is “7499(I)”, “7499(E)”, “7499(F)”, “7499(J)” or “7944(H)”
CEM-CO	Emission limits for CO in ppm by volume using a CEMS (valid code only if “Table Applicability” is “SFF10” or if “BM Subcategory” is “7499(I)”, “7499(E)”, “7499(F)”, “7499(J)”, or “7944(H)”
PPM	Emission limits for CO in ppm by volume (valid code only if “Table Applicability” is “HLIQ10” or “LLIQ10”, or “GAS2” or “BM Subcategory” is “7499(D)”, or “7499(G)”
STM-CO	Emission limits for CO in pounds per MMBtu steam output (for steam generating units only).
MWH-CO	Emission limits for CO in pounds per MWh power output (for boilers that generate electricity only)

▼ Continue only if “CO Emission” is “PPM-CO,” “PPM,” “STM-CO,” or “MWH-CO.”

CO-CMS:

Select one of the following continuous monitoring system (CMS) options. Enter the code on the form.

Code	Description
COCMS	CO CMS is used
NONE	CMS is not being used

CO-Test:

Select one of the following CO performance test options. Enter the code on the form.

Code	Description
PT	Compliance is demonstrated by conducting a performance test for CO
NPT	A performance test is not being used

**Process Heater/Furnace Attributes
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Federal Operating Permit Program

**Table 1b: Title 30 Texas Administrative Code Chapter 112 (30 TAC Chapter 117)
Subchapter B: Combustion Control at Major Industrial, Commercial, and
Institutional Sources in Ozone Nonattainment Areas, Process Heaters
Texas Commission on Environmental Quality**

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	Diluent CEMS	30 TAC Chapter 116 Limit	NOx Emission Limit Basis	NOx Reduction	Common Stack Combined	Fuel Type Heat Input	NOx Monitoring System

**Process Heater/Furnace Attributes
Form OP-UA5 (Page 3)**

Federal Operating Permit Program

**Table 1c: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117)
Subchapter B: Combustion Control at Major Industrial, Commercial, and
Institutional Sources in Ozone Nonattainment Areas, Process Heaters
Texas Commission on Environmental Quality**

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	Fuel Flow Monitoring	CO Emission Limitation	CO Monitoring System	NH3 Emission Limitation	NH3 Monitoring

**Process Heater/Furnace Attributes
Form OP-UA5 (Page 4)**

Federal Operating Permit Program

**Table 2: Title 30 Texas Administrative Code Chapter 112 (30 TAC Chapter 112)
Control of Air Pollution from Sulfur Compounds
Texas Commission on Environmental Quality**

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	Effective Stack Height	Emission Point ID No.

**Process Heater/Furnace Attributes
Form OP-UA5 (Page 5)**

Federal Operating Permit Program

**Table 3a: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117)
Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in
Ozone Nonattainment Areas, Furnaces
Texas Commission on Environmental Quality**

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	Unit Type	Maximum Rated Capacity	NOx Emission Limitation	23C-Option	NOx Emission Limit Basis	NOx Reduction	NOx Monitoring System

**Process Heater/Furnace Attributes
Form OP-UA5 (Page 6)**

Federal Operating Permit Program

**Table 3b: Title 30 Texas Administrative Code Chapter 117 (30 TAC Chapter 117)
Subchapter B: Combustion Control at Major Industrial, Commercial, and Institutional Sources in
Ozone Nonattainment Areas, Furnaces
Texas Commission on Environmental Quality**

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	Fuel Flow Monitoring	CO Emission Limitation	CO Monitoring System	NH3 Emission Limitation	NH3 Monitoring

**Process Heater/Furnace Attributes
Form OP-UA5 (Page 7)**

Federal Operating Permit Program

Table 4: Title 30 Texas Administrative Code Chapter 111 (30 TAC Chapter 111)

**Subchapter A, Division 2: Incineration
Texas Commission on Environmental Quality**

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	Hazardous Waste	Monitor

Process Heater/Furnace Attributes
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Federal Operating Permit Program
Table 6b: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)
Subchapter DDDDD: Industrial, Commercial, and Institutional Process Heaters
Texas Commission on Environmental Quality

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	HCl-CD	HCl-Test	HCl-FA	HCl-FloMon	HCl-pHMon

Process Heater/Furnace Attributes
Form OP-UA5 (Page 12)
Federal Operating Permit Program
Table 6c: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)
Subchapter DDDDD: Industrial, Commercial, and Institutional Process Heaters
Texas Commission on Environmental Quality

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	Hg Emission	Hg-InjRate	Hg-CMS	Hg-CD	Hg-Test	Hg-FA

**Process Heater/Furnace Attributes
 Form OP-UA5 (Page 13)
 Federal Operating Permit Program
 Table 6d: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)
 Subchapter DDDDD: Industrial, Commercial, and Institutional Process Heaters
 Texas Commission on Environmental Quality**

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	BM Subcategory	PM/TSM Emission	TSM-CMS	TSM-Test	TSM-FA

Process Heater/Furnace Attributes
Form OP-UA5 (Page 14)
Federal Operating Permit Program
Table 6e: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)
Subchapter DDDDD: Industrial, Commercial, and Institutional Process Heaters
Texas Commission on Environmental Quality

Date	Permit No.	Regulated Entity No.

Unit ID No.	SOP/GOP Index No.	PM-250	PM-CMS	PM-CD	PM-Test	PM-FM	PM-PMON

