



Texas Commission on Environmental Quality
Form OP-UA05
Process Heater/Furnace Attributes

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:

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

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 Web site at www.tceq.texas.gov/permitting/central_registry/index.html.

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 index numbers, please go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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 “Unit Type” is “PRHTR;” or if “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 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 “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-.”**
- ★ **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:

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

Fuel-firing Option A:

Fuel-firing Option B:

Fuel-firing Option C:

★ 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(1011) Btu/yr, based on rolling 12-month average (Low annual capacity factor heaters)
28+	Annual heat input is greater than 2.8(1011) 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(1011) Btu/yr, based on rolling 12-month average (Low annual capacity factor heaters)
22+	Annual heat input is greater than 2.2 (1011) 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)
203B	Title 30 TAC § 117.203(b)(1) exemption (for process heaters in the Dallas/Fort Worth ozone nonattainment area potentially subject to 30 TAC Chapter 117, Subchapter B, Division 2)
303B	Title 30 TAC § 117.303(b)(1) exemption (for process heaters in the Houston/Galveston/Brazoria ozone nonattainment area 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(a)(8) (use for unit located in the Houston/Galveston/Brazoria ozone nonattainment area)
410B	Title 30 TAC § 117.410(b)(3) (use for units located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area)

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
410B	Title 30 TAC § 117.410(b)(3) (use for units located in the Dallas/Fort Worth Eight-Hour ozone nonattainment area)
ACF	Process heater is complying with an annual capacity factor specification under Title 30 TAC § 117.410(b)(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) or § 117.110 (for gas-fired 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 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 go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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 (NOx) emission limit in 30 TAC § 117.105 is greater than the NOx emission limit in a 30 TAC Chapter 116 permit
93N	NOx emission limit in 30 TAC § 117.105 is not greater than the NOx 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	Emission limit in lb/MMBtu on a rolling 30-day average
BLK1-LB	Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average
OTHER	Other emission limit basis

▼ **Continue only if application type is SOP**

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 post combustion control method
NONE	None

★ **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 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 go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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
410D	Title 30 TAC § 117.410(d)(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)
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 complying with 30 TAC § 117.8100(a)(1)
PEMS	Predictive emissions monitoring system complying with 30 TAC § 117.8100(b)
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
410D	Title 30 TAC § 117.410(d)(2) [relating to Emission Specifications for Attainment Demonstration]
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 index numbers, please go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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.**

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/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]). For additional information relating to SOP index numbers please go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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 “Unit Type” is “OTHER;” or “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” or “INDFUR;” or if “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.)
410B	Title 30 TAC § 117.410(b)(8) or (b)(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(b)(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	NOx, CO, O2 (or CO2) 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).

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	Emission limit in lb/MMBtu on a rolling 30-day average
BLK1-LB	Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on 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
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 post combustion control method
NONE	None

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 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 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.**

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/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]). For additional information relating to SOP index numbers, please go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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)
410D	Title 30 TAC § 117.410(d)(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]
410D	Title 30 TAC § 117.410(d)(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]). For additional information relating to SOP index numbers, please go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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/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]). For additional information relating to SOP index numbers, please go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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/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]). For additional information relating to SOP index numbers, please go to the TCEQ Web site at www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/additional_fop_guidance.pdf.

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."

TCEQ 10025 (APDG 5701v10, Revised 07/13) OP-UA05

This form is for use by facilities subject to air quality permit requirements and may be revised periodically. (Title V Release 08/10)

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."

**Texas Commission on Environmental Quality
 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**

Date:	Permit:	Regulated Entity No.:
Area Name:		Customer Reference No.:

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

**Texas Commission on Environmental Quality
 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**

Date:	Permit:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Unit ID No.	SOP Index No.	Fuel Flow Monitoring	CO Emission Limitation	CO Monitoring System	NH ₃ Emission Limitation	NH ₃ Monitoring

**Texas Commission on Environmental Quality
 Process Heater/Furnace Attributes
 Form OP-UA5 (Page 8)
 Federal Operating Permit Program**

Table 5a: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)

Subpart EEE: Hazardous Waste Combustors

Date:	Permit:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Unit ID No.	SOP/GOP Index No.	Existing Source	Area Source	Elective Standards	Dioxin/Furan Standard	CO/THC Standard	TOT-CI Standard

**Texas Commission on Environmental Quality
 Process Heater/Furnace Attributes
 Form OP-UA5 (Page 9)
 Federal Operating Permit Program**

Table 5b: Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63)

Subpart EEE: Hazardous Waste Combustors

Date:	Permit:	Regulated Entity No.:
Area Name:		Customer Reference No.:

Unit ID No.	SOP/GOP Index No.	Baghouse	PM Detection	Dioxin-Listed	DRE Previous Test	Feed Zone