

FG{ID}
FLEXIBLE GROUP CONDITIONS
Major Source – New or Existing Boiler Process Heater Gas 1
(Greater than 10 MMBTU/hr)

Red text identifies options. Select the option that applies to the source and change the text to black. Delete red text that does not apply and renumber conditions if necessary.

Blue text is guidance or notes on the use of the template. Delete all blue text prior to issuing the final permit or submitting it with a permit application.

This template applies to both new and existing boilers and process heaters designed to burn gas 1 subcategory fuels, as defined below. If a source that is an area source for HAPs gets a PTI that makes it a major source for HAPs and if the date of installation of the boiler(s) and process heater(s) is June 4, 2010 or earlier, this source is considered an existing source. If it was installed or reconstructed after June 4, 2010, then it is a new source.

Existing sources have 3 years to comply with the requirements of the Boiler MACT after becoming a major source per 40 CFR 63.7495(c)(2). New sources must comply with the Boiler MACT upon startup per 40 CFR 63.7495(c)(1).

This template applies to boilers or process heaters with a heat input capacity greater than 10 MMBTU/hr. Units with a heat input capacity less than 10 MMBTU/hr should use the template for small units. Staff may create separate tables for new and existing units (ex. some units may need to do initial tune-ups while other units have already done it) or combine into one table (ex. all units have done their initial tune-up).

If this template is being used for an ROP Reopening or Renewal, and the MACT conditions were established in a PTI, the appropriate footnotes which reference enforceability must be added to each applicable condition in the template.

DESCRIPTION

Requirements for (a/an; if only one unit) new/ existing/ new and existing (choose one) boiler(s) and process heater(s) that are designed to burn gas 1 subcategory fuel with a heat input capacity of 10 MMBTU/hr or greater at major sources of HAP emissions per 40 CFR Part 63, Subpart DDDDD (Boiler MACT). Units designed to burn gas 1 subcategory fuels include boilers or process heaters that burn only natural gas, refinery gas, and/or Other Gas 1 fuels. Units that burn liquid fuel for testing or maintenance purposes for less than a total of 48 hours per year, or that burn liquid fuel during periods of curtailment or supply interruptions are included in this definition. {May add specifics for the affected EU(s).}

Emission Units: {Site Specific List of Emission Units}

POLLUTION CONTROL EQUIPMENT

{Enter site specific pollution control equipment or NA}

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

OPTIONAL – Use the following condition only for EXISTING AREA SOURCES that are NOW MAJOR. Delete if not applicable (i.e. if they have the documentation to show that this has been completed) and renumber conditions appropriately. For existing sources that are now major, the DATE will be three years from the date the source becomes major.

1. The permittee must, for all boilers and process heaters installed on or before June 4, 2010, complete an initial tune-up as specified in SC III.5 by no later than DATE. **(40 CFR 63.7510(e))**

OPTIONAL – Use the following condition only for NEW SOURCES. Delete if not applicable (i.e. if they have the documentation to show that this has been completed) and renumber conditions appropriately. The DATE is 13 months after startup.

2. The permittee must, for boilers or process heaters installed after June 4, 2010, complete an initial tune-up as specified in SC III.5 by no later than DATE. **(40 CFR 63.7510(g))**

OPTIONAL – Use the following condition only for NEW SOURCES that have unit(s) with a continuous oxygen trim system. Delete if not applicable (i.e. if they have the documentation to show that this has been completed) and renumber conditions appropriately. The DATE is 61 months after startup.

3. The permittee must complete an initial tune-up of each emission unit installed after June 4, 2010 that has a continuous oxygen trim system as specified in SC III.5 by no later than DATE. **(40 CFR 63.7510(g))**

OPTIONAL – Use the following condition only for EXISTING AREA SOURCES that are NOW MAJOR. Delete if not applicable and renumber conditions appropriately. The DATE will be three years from the date the source becomes major.

4. The permittee must complete the one-time energy assessment specified in Table 3 of 40 CFR Part 63, Subpart DDDDD no later than DATE. **(40 CFR 63.7510(e))**

ALWAYS INCLUDE

5. The permittee shall conduct an annual tune up of each boiler or process heater as specified below. The annual tune-up shall be no more than 13 months after the previous tune-up. **(40 CFR 63.7500(a)(1), 40 CFR 63.7515(d), Table 3 of 40 CFR Part 63, Subpart DDDDD)**
 - a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown. Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
 - e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
6. If the unit is not operated on the required date for the tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**

OPTIONAL – Use only if there are unit(s) that have an oxygen trim system installed. Delete if not applicable.

7. The permittee shall conduct a tune-up of each emission unit that has an oxygen trim system installed in FG{ID} of the burner(s) and combustion controls, as applicable, every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi). **(40 CFR 63.7500(d), 40 CFR 63.7540(a)(12), Table 3 of 40 CFR Part 63, Subpart DDDDD)**
 - a. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. **(40 CFR 63.7515(d))**
 - b. The permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but each burner must be inspected at least once every 72 months. **(40 CFR 63.7540(a)(12))**
 - c. If the unit is not operating on the required date for the tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
8. At all times, the permittee must operate and maintain each existing gas 1 boiler or process heater, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

Permit staff – Change above UAR to Rule 201(3) if using in a PTI.

NA

OR

All the following Testing requirements are pertinent only to boilers or process heaters utilizing Other Gas 1 fuel. Other Gas 1 fuel is defined as fuel other than natural gas or refinery gas that has mercury concentrations lower than 40 micrograms/cubic meters of mercury.

OPTIONAL – The following conditions apply to Other Gas 1 sources that were existing units that are now major and to new Other Gas 1 units. Delete if not applicable and renumber appropriately.

1. The permittee must conduct an initial fuel specification analysis according to the procedures stated in **SC V.2** through **SC V.5**, and according to the frequency listed as stated in **SC V.6**, and maintain records of the results of the testing as outlined in **SC VI.2**. For samples where the initial mercury specification has not been exceeded, the permittee will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of Other Gas 1 fuels. **(40 CFR 63.7530(g))**

ALWAYS INCLUDE for sources utilizing Other Gas 1 fuels. Verify all SC numbers in red and renumber if necessary.

2. To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an Other Gas 1 fuel, as defined in 40 CFR 63.7575, the permittee must conduct a fuel specification analysis for mercury according to the procedures stated in **SC V.3** through **SC V.5** and Table 6 in 40 CFR Part 63, Subpart DDDDD, as applicable, except as listed below. Or, as an alternative where fuel specification analysis is not practical, the permittee must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an Other Gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7521(f))**
 - a. The permittee is not required to conduct the fuel specification analysis in **SC V.3** through **SC V.5** for any of the fuels listed below.
 - i. For natural gas or refinery gas. **(40 CFR 63.7521(f)(1))**
 - ii. For gaseous fuels that are subject to another subpart of 40 CFR Part 63, Part 60, Part 61, or Part 65. **(40 CFR 63.7521(f)(2))**

- iii. On gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels. **(40 CFR 63.7521(f)(3))**
 - iv. For gas streams directly derived from natural gas at natural gas production sites or natural gas plants. **(40 CFR 63.7521(f)(4))**
- 3. The permittee must develop a site-specific fuel analysis plan for Other Gas 1 fuels according to the following procedures and requirements as listed below. **(40 CFR 63.7521(g))**
 - a. If the permittee intends to use an alternative analytical method other than those required by Table 6 of 40 CFR Part 63, Subpart DDDDD, the permittee must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that the permittee intends to conduct the initial compliance demonstration described in 40 CFR 63.7510. **(40 CFR 63.7521(g)(1))**
 - b. The permittee must include the following information in the fuel analysis plan. **(40 CFR 63.7521(g)(2))**
 - i. The identification of all gaseous fuel types other than those stated in **SC V.2** anticipated to be burned in each boiler or process heater. **(40 CFR 63.7521(g)(2)(i))**
 - ii. For each anticipated fuel type, the identification of whether the permittee or a fuel supplier will be conducting the fuel specification analysis. **(40 CFR 63.7521(g)(2)(ii))**
 - iii. For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if the procedures are different from the sampling methods contained in Table 6 of 40 CFR Part 63, Subpart DDDDD. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream, it is permissible to conduct a single gas specification at the common point of gas distribution. **(40 CFR 63.7521(g)(2)(iii))**
 - iv. For each anticipated fuel type, the analytical methods from Table 6 of 40 CFR Part 63, Subpart DDDDD, with the expected minimum detection levels, to be used for the measurement of mercury. **(40 CFR 63.7521(g)(2)(iv))**
 - v. If the permittee requests to use an alternative analytical method other than those required by Table 6 of 40 CFR Part 63, Subpart DDDDD, the permittee must also include a detailed description of the methods and procedures that the permittee is proposing to use. Methods in Table 6 of 40 CFR Part 63, Subpart DDDDD shall be used until the requested alternative is approved. **(40 CFR 63.7521(g)(2)(v))**
 - vi. If the permittee will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 of 40 CFR Part 63, Subpart DDDDD. When using a fuel supplier's fuel analysis, the permittee is not required to submit the information in **SC V.3.b.iii.** **(40 CFR 63.7521(g)(2)(vi))**
- 4. The permittee must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels. **(40 CFR 63.7521(h))**
- 5. The permittee must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each Other Gas 1 fuel type according to the procedures in Table 6 of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7521(i))**
- 6. If the permittee elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn Other Gas 1 fuel, the permittee must follow the sampling frequency as listed below and conduct this sampling according to the procedures in **SC V.2** through **SC V.5.** **(40 CFR 63.7540(c))**
 - a. If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in 40 CFR 63.7575, the permittee does not need to conduct further sampling. **(40 CFR 63.7540(c)(1))**
 - b. If the initial mercury constituents are greater than half but equal to or less than 75% of the mercury specification as defined in 40 CFR 63.7575, the permittee will conduct semiannual sampling. If 6 consecutive semiannual fuel analyses demonstrate 50% or less of the mercury specification, the permittee does not need to conduct further sampling. If any semiannual sample exceeds 75% of the mercury specification, the permittee must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75% of the compliance level. **(40 CFR 63.7540(c)(2))**

- c. If the initial mercury constituents are greater than 75% of the mercury specification as defined in 40 CFR 63.7575, the permittee will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75% or less of the mercury specification, the permittee may decrease the fuel analysis frequency to semiannual for that fuel. **(40 CFR 63.7540(c)(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

Permit staff – Change above UAR to Rule 201(3) if using in a PTI.

1. The permittee must keep a copy of each notification and report that the permittee submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or annual compliance report that the permittee submitted. **(40 CFR 63.7555(a)(1))**

OPTIONAL – The following conditions are for units burning Other Gas 1 fuels. Delete if the source does not utilize Other Gas 1 fuels. If deleted, renumber as appropriate.

2. The permittee must keep a copy of the records of fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). **(40 CFR 63.7555(a)(2))**
3. If the permittee elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, the permittee must maintain monthly, or at the frequency specified in **SC V.6**, records of the calculations and results of the fuel specification for mercury in Table 6 of 40 CFR Part 63, Subpart DDDDD to demonstrate that the unit meets the specification for mercury for Other Gas 1 fuels. **(40 CFR 63.7555(g))**

ALWAYS INCLUDE

4. If the permittee uses an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under 40 CFR Part 63, Other Gas 1 fuel, or gaseous fuel subject to another subpart of 40 CFR Part 60 or Part 61, or Part 65, the permittee must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies. **(40 CFR 63.7555(h))**
5. The permittee shall maintain on-site and submit, if requested by the AQD, an annual tune-up report containing the information listed below.
 - a. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
 - b. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
 - c. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
6. The permittee's records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). **(40 CFR 63.7560(a))**
7. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5-years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.7560(b))**
8. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2-years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3-years. **(40 CFR 63.7560(c))**

VII. REPORTING

Permit Staff – SC VII.1, 2, and 3, references to Rule 213 are ROP only. Remove before putting into a PTI. Renumber as appropriate.

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be received by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be received by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

OPTIONAL – The following condition is for existing sources that were area sources that are now major and for new sources burning Other Gas 1 fuel that have not yet submitted a Notification of Compliance Status. Delete if not applicable and verify final numbering.

4. For the initial compliance demonstration for each boiler or process heater, the permittee must submit the Notification of Compliance Status before the close of business on the 60th day following the completion of all compliance demonstrations. The Notification of Compliance Status report must contain all of the information specified below.
 - a. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7545(e)(1))**
 - b. In addition to the information required in 40 CFR 63.9(h)(2), the notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official.
 - i. “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR Part 63, Subpart DDDDD at this site according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi).” **(40 CFR 63.7545(e)(8)(i))**
 - ii. **OPTIONAL – Only for existing units that were area sources and are now major. Delete if not applicable.** “The facility has had an energy assessment performed according to 40 CFR 63.7530(e).” **(40 CFR 63.7545(e)(8)(ii))**

OPTIONAL – For new units that are beginning operation and have not yet submitted an Initial Notification. Delete if not applicable and verify final numbering.

5. The permittee must submit an Initial Notification not later than 15-days after the actual date of startup of the affected source. **(40 CFR 63.7545(c))**

ALWAYS INCLUDE

6. If the permittee intends to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of 40 CFR Part 63, Part 60, Part 61, or Part 65, or Other Gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575, the permittee must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575. The notification must include the information as listed below.
 - a. Company name and address. **(40 CFR 63.7545(f)(1))**
 - b. Identification of the affected unit. **(40 CFR 63.7545(f)(2))**
 - c. Reason the permittee is unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared, or the natural gas supply interruption began. **(40 CFR 63.7545(f)(3))**
 - d. Type of alternative fuel that the permittee intends to use. **(40 CFR 63.7545(f)(4))**
 - e. Dates when the alternative fuel use is expected to begin and end. **(40 CFR 63.7545(f)(5))**
7. The permittee must submit boiler and process heater tune-up compliance reports to the AQD. The reports must be submitted by March 15 and must cover the period of January 1 through December 31 of the reporting year. For new units, the first report should cover the period of startup to December 31 of the reporting year. Compliance reports must also be submitted to EPA using the Compliance and Emissions Data Reporting Interface (CEDRI) which is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). **(40 CFR 63.7550(b))**
8. The permittee must submit a compliance report containing the following information.
 - a. Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**

- b. Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
 - c. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
 - d. **Conditions (d) through (g) are for units utilizing Other Gas 1 fuels only. Delete if not applicable. If deleted, verify all final numbering.** The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure. **(40 CFR 63.7550(c)(5)(vi))**
 - e. **ONLY Other Gas 1 fuels** A summary of any fuel specification analyses conducted according to 40 CFR 63.7521(f), stated in **SC V.2**, and 40 CFR 63.7530(g), stated **SC V.3**. **(40 CFR 63.7550(c)(5)(x))**
 - f. **ONLY Other Gas 1 fuels** If there are no deviations from any emission limits or operating limits in 40 CFR Part 63, Subpart DDDDD that apply to the permittee, a statement that there were no deviations from the emission limits or operating limits during the reporting period. **(40 CFR 63.7550(c)(5)(xi))**
 - g. **ONLY Other Gas 1 fuels** If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by the permittee during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with 40 CFR 63.7500(a)(3), stated in **SC III.6**, including actions taken to correct the malfunction. **(40 CFR 63.7550(c)(5)(xiii))**
 - h. Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**
 - i. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**
9. The permittee must submit all reports required by Table 9 of this subpart electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the EPA Region V at the appropriate address listed in 40 CFR 63.13 and to the AQD. **(40 CFR 63.7550(h)(3))**

See Appendix 8 – Permit Staff: Remove if PTI since this is ROP only.

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

- 1. The permittee shall comply with all applicable provisions of the National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters as specified in 40 CFR Part 63, Subparts A and DDDDD. **(40 CFR Part 63, Subparts A and DDDDD)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).