

## **Draft Questionnaire Content for Public Comment**

### **Survey Overview**

You will use this document to guide you through the question sequence. You will not enter your responses in this document, the responses will be entered in the answer key spreadsheet, which maps the question numbers in this document to columns in the spreadsheets. After you have reviewed your responses, you will e-mail all of your completed responses to [help@xxx.com](mailto:help@xxx.com) by the specified response deadline. This survey is divided into four parts:

#### **Part I – Facility Level Data**

Please answer these questions for the facility listed in the Section 114 letter you received in the mail. If you received more than one Section 114 letter for multiple facilities, you must create a separate survey response for each facility.

#### **Part II – Data from each relevant Combustion Unit\***

II.A Design, Operating, Air Pollution Control Device, and Emission Data for Small Gas-fired\* Boilers or Process Heaters

Please fill out Section II.A for all boilers or process heaters that qualify as small gas-fired\* fired combustion units.

II.B Unit Design, Operation, and Air Pollution Control Data for all other combustion units

II.C. Fuels/Materials burned in the Combustion Unit

Please fill out Sections II.B-II.C for each combustion unit that does not qualify under section II.A or PART IV. Sections II.B-II.C have been designed to request answers about a particular combustion unit before moving on to other combustion units at the facility.

II.D. Emission Data

Section II.D will collect available emissions test data, CEM data, and Permitted and Regulatory emission limits from all combustion units that were not eligible to complete Section II.A. All facilities who complete sections II.B and II.C must complete this section.

#### **Part III – Fuel/Materials Analysis Data**

Please fill out Part III for any fuel/material used in a combustion unit at the facility other than natural gas, propane, liquefied petroleum gas, and refinery gas. All facilities using any fuel/material other than natural gas, propane, liquefied petroleum gas, and refinery gas must complete this section

#### **Part IV – Data from each Incinerator Unit\***

Please fill out Part IV if you have any incinerators\* at your facility. [Otherwise you may skip this part.](#)

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#### **Part I: Facility Data**

1. Name of facility: \_\_\_\_\_

2. Complete street address of facility (physical location):

a. Address \_\_\_\_\_

b. City \_\_\_\_\_

c. State \_\_\_\_\_

d. Zip \_\_\_\_\_

e. County \_\_\_\_\_

3. Facility contact

a. Name (First Name, Last Name): \_\_\_\_\_

- b. Title: \_\_\_\_\_
- c. Telephone number: (\_\_\_\_) \_\_\_\_\_ ext. \_\_\_\_
- d. Fax number: (\_\_\_\_) \_\_\_\_\_
- e. E-mail: \_\_\_\_\_
4. If not the same as question #1, provide legal name of the owner of this facility: \_\_\_\_\_
5. Is the owner of this facility a private enterprise, not-for-profit, or a public sector entity? (select one)
- private enterprise
  - not-for-profit
  - public sector
6. Is your facility a major source\* of HAP? (Y/N)
7. Size of entity
- a. If private company owns facility:
- a1. Please enter the approximate number of employees of the business enterprise that **owns** this facility, including where applicable, the parent company and all subsidiaries, branches, and unrelated establishments owned by the parent company: (select from list)
- a2 Please enter the number of facility employees: (select from list)
- b. If public sector owns facility:
- b1. What is the population of the local government entity (city, county, town, school district, special district) that owns the facility? \_\_\_\_\_
8. Is the legal owner a small entity\* as defined by the Regulatory Flexibility Act? (select one)
- Yes
  - No
  - Don't know
9. Select facility's primary NAICS. The primary NAICS code represents the line of business that generates the most income for the facility: (select from list of 3-digit NAICS codes)
10. Do any combustion units at your facility fire any non-fossil or other\* fuels/materials? (Y/N) [If no skip questions 11 and 12.](#)
11. If the unit were to stop burning non-fossil or other\* material in your combustion unit(s), what would happen to the material? (Please answer questions 11 and 12 separately for each non-fossil fuel burned)
- (a) Select non-fossil fuel from list
- (b) Check corresponding alternative disposal method(s).
- Send to a landfill off-site
  - Dispose on-site
  - Dispose through local trash collection
  - Vent to atmosphere
  - Send to waste water treatment plant
  - Contract for special disposal service
  - Sell as a product
  - Sell it to another facility as a fuel (off-site incineration)
  - Stop purchasing material from 3<sup>rd</sup> Party
  - Don't know
  - No other alternative currently available
  - Other: \_\_\_\_\_
12. If the unit were to stop burning this non-fossil or other\* fuel/material in your combustion unit(s), how would you

compensate for the lost heating value?

(a) *Select non-fossil fuel from list*

(b) *Check corresponding compensation for lost heating value.*

- burn a fossil fuel such as coal, oil, or gas in the same units
- buy new equipment capable of burning another fuel
- not applicable, material has no heating value
- purchase steam from another nearby facility

(c) Would your combustion units likely stop combusting these non-fossil or other materials if continuing to burn these materials would result in the unit being subject to 129 instead of 112? (Y/N)

If you fire more than one type of non-fossil or other\* fuel/material at your facility, repeat questions 11 and 12 for each non-fossil or other\* fuel/material.

13. What additional annualized costs would you incur to comply with Section 129 CISWI rule (40 CFR Part 60 Subpart CCCC) as compared to the vacated Boiler MACT? (Check appropriate cost range, and provide note on cost components evaluated).

- a.
- \$0 to \$50,000
  - \$50,001 to \$100,000
  - \$100,001 to \$500,000
  - \$500,001 to \$1,000,000
  - >\$1,000,000

b. Indicate the cost components evaluated in your cost estimate above:

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## **II.A Design, Operation, Air Pollution Control Device, and Emission Data for Small Gas-Fired\* Boilers or Process Heaters**

1. Please provide a brief inventory of each similar group of small natural gas fired **boilers**:
- a. Enter the number of natural-gas fired boilers less than or equal to 10 million Btu/hr (mmBtu/hr) design capacity? \_\_\_\_\_
- b. Please classify any tune-up practices performed on this group of boilers along with the corresponding frequency (i.e., daily, monthly, quarterly, semiannually, annually, every two years, every five years or longer). Tune-up practices include activities that involve checking the unit's combustion processes and adjusting as needed:
- using the scheduled tune-up and procedures provided by the boiler manufacturer
  - Inspection and cleaning, as necessary, of fireside and water-side surfaces.
  - Inspecting, cleaning and/or reconditioning of fuel systems.
  - Checking all electrical and combustion control systems.
  - Testing of exhaust gases (CO, CO<sub>2</sub>, other) as necessary to calculate combustion efficiency and make necessary adjustments to the combustion system. If this option is checked, indicate what level the CO is adjusted to: \_\_\_\_\_
  - Inspection and repair of all valves (relief, safety, hydraulic, pneumatic, etc.).
  - Inspection and repair of refractories.
  - Cleaning and inspecting fan housing, blades, and inlet screens.
  - Cleaning/reconditioning and inspecting the feedwater system.

- c. Please classify any good combustion practices performed on this group of boilers, along with the corresponding frequency (i.e., daily, monthly, quarterly, semiannually, annually, every two years, every five years or longer) of each practice:

- Using up to date operating procedures, training, recordkeeping
- Maintenance knowledge (including training on applicable equipment and procedures)
- Maintenance practices including maintenance procedures and recordkeeping
- Fuel/air ratio periodic checks
- Automatic O<sub>2</sub>/CO trim control systems
- Monitoring furnace residence time and temperature
- Fuel quality and proper fuel handling (including monitoring quality, periodic sampling and analysis, fuel supplier certification, if used)
- Proper fuel distribution in the combustion zone
- Combustion air distribution based on observations with periodic or continuous adjustments
- Low NO<sub>x</sub> burners

- d. If any of these boilers are subject to a CO limit, please provide the numerical limit with units.

CO numerical limit \_\_\_\_\_  
Fuel associated with numerical limit (select from list) \_\_\_\_\_  
Corresponding Averaging Time (i.e., 30-day rolling average, hourly, other) for CO limit: \_\_\_\_\_  
Corresponding O<sub>2</sub> concentration (if applicable) \_\_\_\_\_  
Corresponding CO<sub>2</sub> concentration (if applicable) \_\_\_\_\_  
CO limit units \_\_\_\_\_

2. Please provide a brief inventory of each similar group of small natural gas fired **process heaters**:

- a. Enter the number of natural-gas fired process heaters less than or equal to 10 million Btu/hr (mmBtu/hr) design capacity? \_\_\_\_\_
- b. Please classify any tune-up practices performed on this group of process heaters along with the corresponding frequency (i.e., daily, monthly, quarterly, semiannually, annually, every two years, every five years or longer). Tune-up practices include activities that involve checking the unit's combustion processes and adjusting as needed:

- using the scheduled tune-up and procedures provided by the boiler manufacturer
- Inspection and cleaning, as necessary, of fireside and water-side surfaces.
- Inspecting, cleaning and/or reconditioning of fuel systems.
- Checking all electrical and combustion control systems.
- Testing of exhaust gases (CO, CO<sub>2</sub>, other) as necessary to calculate combustion efficiency and make necessary adjustments to the combustion system. If this option is checked, indicate what level the CO is adjusted to: \_\_\_\_\_
- Inspection and repair of all valves (relief, safety, hydraulic, pneumatic, etc.).
- Inspection and repair of refractories.
- Cleaning and inspecting fan housing, blades, and inlet screens.
- Cleaning/reconditioning and inspecting the feedwater system.

- c. Please classify any good combustion practices performed on this group of process heaters, along with the corresponding frequency (i.e., daily, monthly, quarterly, semiannually, annually, every two years, every five years or longer) of each practice:

- Using up to date operating procedures, training, recordkeeping
- Maintenance knowledge (including training on applicable equipment and procedures)
- Maintenance practices including maintenance procedures and recordkeeping
- Fuel/air ratio periodic checks
- Automatic O<sub>2</sub>/CO trim control systems
- Monitoring furnace residence time and temperature
- Fuel quality and proper fuel handling (including monitoring quality, periodic sampling and analysis, fuel supplier certification, if used)
- Proper fuel distribution in the combustion zone
- Combustion air distribution based on observations with periodic or continuous adjustments

Low NOx burners

- d. If any of these process heaters are subject to a CO limit, please provide the numerical limit with units.

CO numerical limit \_\_\_\_\_  
Fuel associated with numerical limit (select from list) \_\_\_\_\_  
Corresponding Averaging Time (i.e., 30-day rolling average, hourly, other) for CO limit: \_\_\_\_\_  
Corresponding O2 concentration (if applicable) \_\_\_\_\_  
Corresponding CO2 concentration (if applicable) \_\_\_\_\_  
CO limit units \_\_\_\_\_

2. For each small gas-fired\* combustion unit, provide the results of the most recent stack test data for each of the pollutants listed in the emission test spreadsheet by completing the spreadsheet linked below. EPA is not requesting actual test reports at this time; however we reserve the right to request actual copies in the future. EPA will also accept other supporting emission test data to document any earlier emission tests on the unit with similar controls and fuels. You may also submit a spreadsheet of any other information available relative to trials or tests of emission control methods or R&D efforts. The Agency is requesting these data only as they may already be available; no additional sampling or analyses are required to provide these data. [INSERT LINK to NATURAL GAS EMISSIONS TEST SPREADSHEET]

Provide the daily averages of continuous emissions monitor (CEM) data for CO, O2, CO2, if available for the most recent 30 days of operation, and the highest single data point within the most recent calendar year of CEM data. You should exclude data from the averages if they are from periods of start-up, shutdown, or malfunctions. You can submit this data by completing the CEM data spreadsheet linked below. [INSERT LINK to NATURAL GAS CEM TEST SPREADSHEET]

3. Do you have any non-natural gas fired combustion units at your facility? Y/N

If no, you are done with the survey. Please review your answers and submit your response to EPA by the deadline listed in the Section 114 letter.

## Part II.B Unit Design, Operation, and Air Pollution Control Device Data for non-natural gas\* boilers and process heaters

### 1. General Information

Facility Name: (pass through data from Part I)

- a. Combustion device ID: \_\_\_\_\_
- b. Year built: \_\_\_\_\_
- c. Design capacity (heat input) value: \_\_\_\_\_
- d. Fuel type associated with design capacity (heat input) value (select from list): \_\_\_\_\_
- e. Design capacity units (select one): (insert list)
- f. Furnace heat release rate (Btu/ ft<sup>3</sup>): \_\_\_\_\_
- g. Is unit subject to NSPS? Yes/No
- h. If you indicated yes to question g, indicate the year of NSPS:
  - 1971
  - 1984/1986
  - 1989
  - 1997
  - 2006
- i. Primary combustion device use (check all that apply):
  - steam generation
  - space heat
  - process heat
  - electricity generation
  - waste incineration
  - cogeneration
  - Other (please explain): \_\_\_\_\_
- j. Additional combustion device uses (select all that apply):
  - steam generation
  - space heat
  - process heat

- electricity generation
- waste incineration
- cogeneration
- Other (please explain): \_\_\_\_\_

k. For boilers only, check **all that apply** (several may apply to your unit):

k.1 Erection Design

- Package (shop erected)
- Field Erected
- Modular (part shop erected and part field erected)

k.2 Unit Design

- Water tube
- Fire tube
- Hybrid (if hybrid is selected, check the appropriate subtype)
  - main combustion zone design is watertube
  - main combustion zone design is firetube

k.3 Suspension Firing

- tangential
- wall-fired
- combination of suspension firing and grate firing (i.e., oil and bark)
- other (please explain)

l. For solid-fuel\* boilers only, check **all that apply** (several may apply to your unit):

- |  |   |
|--|---|
| <input type="checkbox"/> Stoker                        | <input type="checkbox"/> Cyclone                                  |
| <input type="checkbox"/> spreader                      | <input type="checkbox"/> Other                                    |
| <input type="checkbox"/> mass feed                     | <input type="checkbox"/> fuel cells                               |
| <input type="checkbox"/> manual feed                   | <input type="checkbox"/> suspension burners                       |
| <input type="checkbox"/> other (please specify): _____ | <input type="checkbox"/> sloped-grate                             |
| <input type="checkbox"/> Fluidized Bed                 | <input type="checkbox"/> dutch oven                               |
| <input type="checkbox"/> circulating                   | <input type="checkbox"/> gasifier                                 |
| <input type="checkbox"/> bubbling                      | <input type="checkbox"/> other not listed (please specify): _____ |
| <input type="checkbox"/> Pulverized Coal               |   |

m. For process heaters only, check **all that apply**:

- Erection Design
- Package (shop erected)
- Field Erected
  
- Unit Design
- Fire tube
- Water tube
- Thermal oil heaters
- Other (please explain): \_\_\_\_\_
  
- Draft Configuration
- natural draft
- forced draft

## 2. Operating Parameters

a. Hours of Operation (hr/yr)  
Typical: \_\_\_\_\_

b. Duty Cycle: (select one)

- base-loaded
- load following
- stand-by

c. Is the operation seasonal\*? Y/N

## 3. Air Pollution Control

You will first be asked to list all add-on control devices, in the order contacted by the exhaust, and then you will be asked to identify good combustion practices used, followed by combustion controls. Specify the control device type using the descriptions provided in the drop-down menus.

a1. Control device currently installed (select from list)

a2. Year control device installed:

a3. Has an upgrade/modification been made to the control device since it was installed? Y/N

a4. Was an upgrade/modification/installation / replacement of the control device in a1 made to comply with 40 CFR 63 Subpart DDDDD? Y/N (skip to a9 if no)

a5. If yes to question a4 above, please provide the month and year that the upgrade/modification/replacement to the control device was made (mm/yyyy): \_\_\_\_\_

a6. If yes to a4, what was the control device prior to complying with 40 CFR 63 Subpart DDDDD? (select from list)

a7. If yes to a4, provide the date when the control device selected in a6 was installed or last upgraded/modified (whichever date is most recent)? (year)\_\_\_\_\_

a8. If yes to a4, was the prior control device removed or added to in order to comply with DDDDD?

- removed
- added to

a9. Is the control device used as a common control device for more than one combustion unit?

- Not common
- Common, list names of units affected by this control in comments section below: \_\_\_\_\_

Below is an example table from the answer key for how one might answer questions a1-a9 on the control devices installed on a particular combustion unit. In this case, a fabric filter was replaced an existing ESP to comply with the vacated DDDDD standard, and a venturi scrubber was installed in 1992. The fabric filter is a common control device

shared with two engines.

<i>Example</i>				<i>Answer Only if a4 was 'Yes'</i>				
<i>a1.</i>	<i>a2.</i>	<i>a3.</i>	<i>a4.</i>	<i>a5.</i>	<i>a6.</i>	<i>a7.</i>	<i>a8.</i>	<i>a9.</i>
<i>Fabric Filter</i>	<i>2005</i>	<i>N</i>	<i>Y</i>	<i>2005</i>	<i>ESP</i>	<i>1988</i>	<i>Removed</i>	<i>Two reciprocating engines</i>
<i>Venturi Scrubber</i>	<i>1992</i>	<i>N</i>	<i>Y</i>					<i>Not Common</i>

b. Is oxygen or carbon monoxide used for boiler/process heater combustion air trim control? (select one)

- oxygen
- carbon monoxide
- neither

c. Please classify any tune-up practices performed on this combustion unit along with the corresponding frequency (i.e., daily, monthly, quarterly, semiannually, annually, every two years, every five years or longer). Tune-up practices include activities that involve checking the unit's combustion processes and adjusting as needed:

- using the scheduled tune-up and procedures provided by the boiler manufacturer
- Inspection and cleaning, as necessary, of fire-side and water-side surfaces.
- Inspecting, cleaning and/or reconditioning of fuel systems.
- Checking all electrical and combustion control systems.
- Testing of exhaust gases (CO, CO<sub>2</sub>, other) as necessary to calculate combustion efficiency and make necessary adjustments to the combustion system. Indicate what level the CO is adjusted to:  
\_\_\_\_\_
- Inspection and repair of all valves (relief, safety, hydraulic, pneumatic, etc.).
- Inspection and repair of refractories.
- Cleaning and inspecting fan housing, blades, and inlet screens.
- Cleaning/reconditioning and inspecting the feedwater system.

d. Please classify any good combustion practices performed on this combustion unit, along with the corresponding frequency (i.e., daily, monthly, quarterly, semiannually, annually, every two years, every five years or longer) of each practice:

- Using up to date operating procedures, training, recordkeeping
- Maintenance knowledge (including training on applicable equipment and procedures)
- Maintenance practices including maintenance procedures and recordkeeping
- Fuel/air ratio periodic checks
- Automatic O<sub>2</sub>/CO trim control systems
- Monitoring furnace residence time and temperature
- Fuel quality and proper fuel handling (including monitoring quality, periodic sampling and analysis, fuel supplier certification, if used)
- Proper liquid atomization
- Proper fuel distribution in the combustion zone
- Combustion air distribution based on observations with periodic or continuous adjustments
- fly ash reinjection
- combustion of drier fuel
- better fuel distribution in firebox
- co-firing
- low NO<sub>x</sub> burners

#### 4. Stack

a. Does combustion unit emit through its own stack? (Y/N) (If no, answer question b below)



b. List quantity and category of all other combustion units venting to this common stack: (example: 2 coal fired boilers venting to common stack)

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**Part II.C Fuels/Materials burned in the Combustion Unit**

You will be asked to enter each fuel/material combusted in the combustion unit in the following order:

- Start-up\* fuel/material
- Individual and co-fired fuels/material combusted during normal operation
- Additional fuels/materials combusted on an intermittent basis
- Additional Fuels/Materials that are not routinely combusted

Facility Name: (pass through facility name on each page) Combustor ID: (pass through combustor ID on each page)

1. If start-up\* fuel is different than normal fuel, please answer question 1 parts a, b, and c, otherwise proceed to question 2:

- a. Select fuel/material from drop-down menu (if other is selected on drop-down menu provide a space to explain other)
- b. Number of start-ups per year \_\_\_\_\_
- c. Typical length of time for start-up (hours) \_\_\_\_\_

2. Fuels/Materials Combusted During Normal Operation:

Please complete the table below in the answer key for each fuel stream combination fired in the combustion unit. A new fuel stream combination ID should be entered when there is a change in the types of fuels that make up the fuel stream. A new fuel stream ID should not be entered when there is a variation in the feed rates of different fuels that make up the fuel stream. The variation among individual fuel feed rates is captured by providing the maximum and annual or season average for a combination of fuel types. In the *example* below, this boiler has two fuel combinations: 2,500 hours per year the boiler fires a combination of bituminous coal, switchgrass, and #2 fuel oil. The switchgrass is fired seasonally, and when it is no longer fired, the boiler operates at a lower rate using bituminous coal and #2 fuel oil.

Fuel Stream Combination ID	Fuel/Material	Is fuel/material fed directly to combustion unit or fed to a gasifier located upstream (G)	Is this fuel/material used seasonally (S)* or annually (A)?	Hours used per year	Heat Input (mmBtu/hr)			Permitted Limit	
					Max 2f	Annual or Seasonal Average* 2g	Design Capacity 2h	Value 2i	Units 2j
Question 2a	2b	2c	2d	2e	Max 2f	Annual or Seasonal Average* 2g	Design Capacity 2h	Value 2i	Units 2j
<i>Example:</i>									
1	Bituminous Coal	B	A	2500	100	80	200	100	ton/day
1	#2 Fuel Oil	B	A	2500	30	25	100	25	Gallons per minute
1	Switchgrass	B	S	2500	100	75	150	175	ton/day
2	Bituminous Coal	B	A	5900	150	100	200	100	ton/day
2	#2 Fuel Oil	B	A	5900	30	25	100	25	Gallons per minute

3. Fuels/Materials NOT Routinely Combusted

Please complete the table below in the answer key. This table is similar to question 2 above, however it applies to fuels/materials NOT routinely fired in the combustion unit. An example response is shown below.

Fuel Stream Combination ID	Fuel/Material	Is fuel/material fed directly to combustion unit or fed to a gasifier located upstream (G)	Describe Conditions for Fuel Use	Hours used per year	Heat Input (mmBtu/hr)			Permitted Limit	
					Max 3f.	Annual or Seasonal Average* 3g.	Design Capacity 3h..	Value 3i.	Units 3j.
<i>Example:</i>									
<i>I</i>	<i>Wood: Pellets</i>	<i>B</i>	<i>Switchgrass unavailable during seasonal operation</i>	<i>200</i>	<i>100</i>	<i>80</i>	<i>150</i>	<i>120</i>	<i>ton/day</i>

4. Do you have an emission test report available for this unit? (EPA is not requesting actual test reports at this time; however we reserve the right to request actual copies in the future.) Y/N

5. If yes to question 5 above, please list where the available test report occurred:

- dedicated control device, dedicated stack
- common control device, dedicated stack
- dedicated control device, common stack
- common control device, common stack

6. Do you have another combustion unit you need to add to this survey? Y/N (If Yes, re-start at part II.B, otherwise proceed to part II.D)

#### Part II.D Emission Data from Combustion Device

Provide the results of the most recent stack test data for each of the pollutants listed in the emission test spreadsheet by completing and e-mailing the Excel spreadsheet linked below to [help@xxx.com](mailto:help@xxx.com). EPA is not requesting actual test reports at this time; however we reserve the right to request actual copies in the future. EPA will also accept other supporting emission test data to document any earlier emission tests on the unit with similar controls and fuels. You may also submit a spreadsheet of any other information available relative to trials or tests of emission control methods or R&D efforts. The Agency is requesting these data only as they may already be available; no additional sampling or analyses are required to provide these data. [INSERT LINK to EMISSIONS TEST SPREADSHEET]

Provide the daily averages of continuous emissions monitor (CEM) data for NO<sub>x</sub>, SO<sub>2</sub>, CO, O<sub>2</sub>, CO<sub>2</sub>, and opacity, if available for the most recent 30 days of operation, and the highest single data point within the most recent calendar year of CEM data. You should exclude data from the averages if they are from periods of start-up, shutdown, or malfunctions. You can submit this data by completing the CEM data spreadsheet and e-mailing it to [help@xxx.com](mailto:help@xxx.com). [INSERT LINK to CEM TEST SPREADSHEET]

Provide a summary of permitted or regulatory emission limits, if applicable to your unit for each pollutant listed in the Permitted and Regulatory Emission Limit Worksheet. If the unit does not have a limit for a given unit, you may leave this entry blank. You can submit this data by completing the permitted and regulatory spreadsheet and e-mailing it to [help@xxx.com](mailto:help@xxx.com). [INSERT LINK to PERMITTED REGULATORY LIMIT SPREADSHEET]

#### Part III: Fuel/Material Data

If available, provide the results of the most recent fuel/materials analysis for all fuels and materials (excluding natural gas) combusted on-site in combustion units. Use the fuel categories from the list below, when available. Select the 'other' fuel description only if the fuel burned at this unit is not on the list. If 'other' is selected please provide a brief

name for this fuel. Select the most descriptive name as possible. For example, "landfill gas (LFG)" is more useful than "waste-gas"; "bituminous coal" or "anthracite coal" is more useful than "coal".

Please e-mail an electronic copy of the fuel analysis to [help@xxx.com](mailto:help@xxx.com). The fuel analysis should be formatted according to the linked Excel spreadsheet below. Please identify the fuel name, facility name, and combustor ID consistently with how you answered Parts I and II. You may also provide a summary of any earlier fuel analyses, as long as these are representative of fuels/materials still used in the boiler/process heater.

Facility Name: (pass through facility name on each page)

1. Fuel/Material Description (select from list and be consistent with selections made in Section II.B. Question 2)

2. Where does fuel/material originate?

On-site\*

Off-site

Both (i.e., some bark from on-site combined with some bark generated off-site)

3. Is fuel/material analysis available? (Y/N)

If you have a fuel/material analysis available, please complete the Fuel Analysis Excel spreadsheet to [help@xxx.com](mailto:help@xxx.com) for each individual fuel.

4. Do any of your boilers burn another fuel/material? Y/N

If yes, repeat questions 1-3 for each fuel/material combusted in a process heater or boiler.

#### **Part IV – Data from each Incinerator Unit\***

Complete this section for each incinerator\* at your facility. If you do not have any incinerators at your facility, you are done with the survey. Please review your answers and submit your response to EPA by the deadline listed in the Section 114 letter.

1. Unit-Data

a. Combustion device ID: \_\_\_\_\_

b. Unit Design Information (check all that apply):

single batch fed

starved air

fixed hearth

rotary hearth

intermittent batch fed

excess air

rotary kiln

moving grate

continuously fed

single chamber

multi-chamber/afterburner

spreader stoker

other:

- c. Manufacturer: \_\_\_\_\_
- d. Model Number: \_\_\_\_\_
- e. Installation Date: \_\_\_\_\_
- f. Dates/descriptions of major renovations: \_\_\_\_\_
- g. Design Capacity (tons waste per day): \_\_\_\_\_
- h1. Typical Hours Operated, Per Year: \_\_\_\_\_
- h2. Per day: \_\_\_\_\_

## 2. Air Pollution Control Device and Equipment Modifications Information

Repeat this section for each control device or equipment modification made to the incinerator.

(a) Is your incinerator equipped with an air pollution control device (e.g. wet scrubber, fabric filter, electrostatic precipitator)? If yes, please specify the type and provide any details as specified below for each control device:

- a1. Type: \_\_\_\_\_
- a2. Year Installed: \_\_\_\_\_
- a3. Manufacturer: \_\_\_\_\_
- a4. Model No.: \_\_\_\_\_
- a5. Percent of incinerator operating time that control device is operated: \_\_\_\_\_ %
- a6. Control device air flow capacity (typically in acfm): \_\_\_\_\_
- a7. Date control device(s) were last modified, repaired, or rebuilt: \_\_\_\_\_
- a8. Annual hours of control device downtime for repairs and maintenance: \_\_\_\_\_
- a9. Is control device shared with other equipment? (Y/N) If yes, please identify the other equipment that is routed to the same control device: \_\_\_\_\_

- b1. What were the installed capital costs of the control device? (\$, year) \_\_\_\_\_
- b2. What are the annual operating costs?(\$, year) \_\_\_\_\_

(c) If your unit is equipped with a control device, please list the applicable operating parameters: c1. Wet scrubber pressure drop (in. H<sub>2</sub>O): \_\_\_\_\_

c2. Fabric filter air-to-cloth ratio: \_\_\_\_\_

c3. Other: \_\_\_\_\_

c. If you have made modifications to the incinerator(s) to reduce emissions:

c1. When were the modifications made? \_\_\_\_\_

c2. Briefly describe the type of modifications? \_\_\_\_\_

c3. Do you have information on the costs of the modifications? Y/N \_\_\_\_\_  
(If you answered "Yes", please attach copy of cost information)

## 3. Waste Segregation or Recycling Practices

- a. Does the facility currently employ waste segregation or recycling practices that reduce the volume of waste being incinerated? Y/N (if no, skip to question 4)
- b. When were waste segregation practices begun? (month, year) \_\_\_\_\_

c. What types of materials are segregated from the waste stream? (please check all that apply)

paper/cardboard

glass

plastics

batteries

fluorescent light bulbs

other metal containing materials (please list)

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other chlorine containing materials (please list)

---

other (please list)

---

d. What is done with the materials that are segregated from the waste stream?

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e. Estimate the current cost of your waste segregation/recycling program (please indicate whether cost estimate is on an annual basis, monthly basis, or other).

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f. Do you have any emissions test data that would show the effects of segregating materials from the waste stream (e.g., test data before and after waste segregation practices began)? Y/N

If yes, please attach complete copies of the test reports and any analyses of the impact of waste segregation on emissions.

#### 4. Emission Test Data

a. Has emissions testing ever been conducted on this unit(s): Y/N \_\_\_\_\_

b. If so, please provide complete copies of the test reports that document all emission testing that has been conducted in the last 10 years. You may provide electronic versions of the test reports in lieu of attaching paper copies.

5. Do you have another incinerator unit you need to add to this survey? Y/N (If Yes, repeat part IV for another unit. Otherwise you are done with the survey. Please review your answers and submit your response to EPA by the deadline listed in the Section 114 letter).

## **Draft Definitions for Questionnaire**

### **Definitions:**

1. *For purposes of this survey, combustion units are the following devices:*

*Boiler* means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Waste heat boilers are excluded from this definition.

*Process heater* means an enclosed device using controlled flame, that is not a boiler, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves.

Any other combustion unit combusting non-fossil fuel/material whether covered under another MACT standard or not.

*Incinerator* refers to a combustion unit with the primary purpose of destroying matter and/or reducing the volume of the materials and is neither a boiler or process heater.

2. *Small gas-fired boilers or process heaters* mean boilers or process heaters that have a heat input capacity less than 10 mmBtu/hr that: (1) burn natural gas, propane, liquefied petroleum gas (LPG), or refinery gas not combined with any other fuels; (2) if a unit burns distillate liquid fuel only during periods of gas curtailment, gas supply emergencies, or for periodic testing of liquid fuel and the periodic testing of liquid fuel does not to exceed a combined total of 48 hours during any calendar year, this unit is still a gas-fired boiler for the purpose of this survey.

3. On-site means the fuel/material generated from a process located at the facility. Off-site means either a raw material or other material generated from a process not located at the same facility as the combustion unit.

4. *Major sources* are those plant sites with the potential to emit 10 tons per year (tpy) of any one hazardous air pollutant (HAP) or 25 tpy of a combination of HAPs. Section 112(b) of the Clean Air Act Amendments contains the list of HAPs.

5. *Small Entity* is defined as follows:

- (1) for Private Businesses it is determined for each NAICS of the owning entity based on number of employees and/or company revenue. Please see [http://www.sba.gov/idc/groups/public/documents/sba\\_homepage/serv\\_sstd\\_tablepdf.pdf](http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf) to evaluate the small entity status of your facility;
- (2) for local government entities, such as a city, county, town, school district or special district with a population of less than 50,000; and
- (3) for not-for-profits an organization that is independently owned and operated and is not dominant in its field.

6. *Solid fuel* fired units are any boilers or process heaters that fire solid fuel alone or in conjunction with other fuel types

7. Seasonal operation indicates an operating pattern that varies heat input demand depending on time of year, but follows the same pattern annually.

8. Seasonal average is the mean value of number (emission rate or operating parameter) over an entire operating season. For example, if bagasse is fired 120 days per year, 24 hours per day, the seasonal

average heat input rate would be the average of all the heat input rates during the 120 day period.

9. Start-up means the setting in operation of an affected combustion unit for any purpose. Start-up fuel does not apply to stabilization fuels. You should include stabilization fuels as part of your response to questions II.C.2 and II.C.3.

10. *Non-fossil or other fuel/material* is defined as any material that is not coal, fuel oil, or natural gas, or derived from coal (i.e., waste coal, coal refuse (culm, gob, coal tar), oil, or natural gas. For illustrative purposes only, EPA has provided a detailed (though not extensive) list of non-fossil fuels. This definition or list does not represent or imply any regulatory definition of non-fossil fuel.

Non-Fossil Fuel/Material		
Acetone: New and Used Solvent	Glycerol Distillation Byproduct	Red oil (steam stripper steam condensate, incl terpenes, terpenoids, methanol, TRS)
Agricultural Residue	Hardboard Dust	Refuse
Agricultural Residue: Corn Fiber	Hardboard Residues	Refuse derived fuel (RDF)
Agricultural Residue: Corn Gluten Feed	Heavy Recycle	Reinjection char
Agricultural Residue: Corn Mill Dryer Off-gas	High Caustic Fuel	Reprocessed oil
Agricultural Residue: Corn Starch Residue	Hog fuel: Hardwood	Resin Solid
Agricultural Residue: Corn Stover	Hog fuel: Softwood	Restaurant oils & greases
Agricultural Residue: Cotton And Corn	Hog fuel: Urban	Sander Dust
Agricultural Residue: Cotton Gin Residue	Hydro Pulper Refuse	Sawdust
Agricultural Residue: Cotton Stalks	Industrial Plastics	Sawmill scrap
Agricultural Residue: Cottonseed Hulls	Ink Solvents	Scrap X-Ray Film
Agriculture Residue: Almond Shells	Knots and Knotter Rejects	Screen rejects
Agriculture Residue: Almond Tree Prunings	Laminate Production Scrap Dust	Sewage gas
Agriculture Residue: Barley dust and chaff	Lamination Finishing Plant Residue	Sewage Sludge
Agriculture Residue: Barley Needles	Lamination Plant Residue	Shredded cloth
Agriculture Residue: Fruit Pits	Landfill Gas	Silvicultural wood
Agriculture Residue: Nut Shells	Latex Paint Water	Sludge
Agriculture Residue: Oat Hulls	Light weight Asphalt	Solid paraffin
Agriculture Residue: Olive cake	Lignin	Solvents
Agriculture Residue: Olive kernel	Liquefied Chicken Fat	Spent Coffee Grounds
Agriculture Residue: Orchard Prunings	Log yard Cleanup	Spent Oxide
Agriculture Residue: Pecan hulls	Low carbonate corn fiber (LCCF)	Stripper condensate
Agriculture Residue: Post harvest biomass residues	Lumber Refuse (hogged pallet boards/other non-treated scrap)	Sulfur Free Organic Byproduct
Agriculture Residue: Rice Hulls	Malt Sprouts	Sunwax- Diatomaceous earth with sunflower oil wax
Agriculture Residue: Soybean Hulls	Manure	Tall oil, tall oil derivatives
Agriculture Residue: Straw	Manure, bedding and yard residues	Tallow
Agriculture Residue: Straw	Mechanical Pulp Mill Rejects	Tar



Agriculture Residue: Sunflower Hulls	Medium Density Fiber Board Sander Dust	Tire Chips
Agriculture Residue: Sunflower husks	Medium Density Fiber Board Trim (some with water based primer)	Tire Derived Fuel (TDF)
Agriculture Residue: Sunflower Pellets	Mill feed	Tires (whole)
Agriculture Residue: Switchgrass	Mill trash	Toluene
Agriculture Residue: Wheat fiber (WF)	Mixed liquid residues	Toluene
Alcohol: Ethanol	Mixed wood residues	Turkey brood woodwaste
Alcohol: Solvent	Neutralene	Turpentine
Animal Fats	Noncondensable Gas (includes stripper offgas)	Used Alcohol
Bagasse	Nonhalogenated Solvent	Used #6 Oil
Bio liquids	Nonhazardous byproduct solvent	Used Gear Oil
Biogas (Excluding Sewage Sludge)	Oil Booms	Used hydraulic oil
Biomass	Oil Residues/excesses/byproducts -- #6, asphalts	Used Lube Oil
Bitumen	Oil Seed (Rape, Canola, Corn, Beans)	Used Motor Oil
Black Liquor	Oil Spill cleanup Residues	Used Oil
Blast Furnace Gas	Oily rags	Used thermal oil
Blond Fiber	Old Corrugate Cardboard (OCC) scraps	Vegetable oil
Boiler ash	Old corrugated container rejects	Virgin Hydraulic Scrap
Cardboard	Oriented strand board trim/dry residuals	Waste Derived Liquid Fuel
Carpet Scrap	Other biomass	Wastewater Treatment Residuals
Char	Other: Please Explain	Wax and cellophane wrapper and packaging trimmings
Coal Tar Oil	Paint Rags	Wood
Coal Tar plus soil	Paint residues	Wood: Bark
Coating Residues	Palm oil plantation byproducts (palm kernel exfoliate, fiber, shell, EFB)	Wood: Briquettes
Coating Sludge	Paper	Wood: char
Coke Oven Gas	Paper broke	Wood: Chips
Composite Water	Paper Byproducts: knots and paper fines	Wood: chips- old
Compressed Paper	Paper cores	Wood: Hardwood chipping and residues
Construction/Demolition Derived Material	Paper- office waste	Wood: Hardwood pellets (hammer-milled, dried, pelletized - sold as fuel)
Cotton Stalks	Paper wrapper and packaging trimmings	Wood: Hogged Bark
Crankcase Oil	Particle Board sander dust	Wood: Laminated
Deinking residuals	Particle Board trim	Wood: Mixed
Dewatered combustible residues	Paunch Manure	Wood: Pallets
Diaper scraps	Peat	Wood: Pellets
Digester Gas	Petroleum Distillation Solvent	Wood: Pitch
Distiller Grains (DG)	Petroleum Refining Scrap Oil	Wood: Pitch/wood waste
Distiller Grains Stillage (DGS)	Pine tar	Wood: Plywood trim
Distiller Wet Grains (DWG)	Poultry litter	Wood: Shavings
Dried Distiller Grains with Solubles (DDGs)	Process derived liquid fuel	Wood: Silvicultural
Dry Distiller Grains (DDG)	Process Gas	Wood: unadulterated hardwood

Engineered Wood Plant Scrap	Pulp liquor	Wood: unadulterated softwood
Envirofuel Pellets	Pulp Mill Gas	Wood: waste-clean
Filters	Railroad Ties	Wood: Whole Tree Chips
Foam Residues	Railroad Ties Chipped	Wood: Whole tree chips/harvest residue
Fuel cubes (paper diaper clippings/refuse)	Reclaimed Ink Solvent	Wood: chips- fines
Fuel Oil Solids (tank clean out residue)	Recovered Gaseous Butane	Woodex Pellets
Fume Filter Oil	Rectified methanol	Woodworking residuals (cabinet mfg)
Gluten free pellets		Yellow grease (used cooking oils- sold as commercial fuel)

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