

INSTRUCTIONS:

Section 6.6: Controlled Emission Point (with combustion)

IMPORTANT: Do NOT use pencil to fill out the application. Please type responses or print using black ink. If you have any questions, feel free to contact the Nebraska Department of Water, Energy, and Environment (DWEE) via DWEE.AirQuality@nebraska.gov or the Air Quality Permitting Section at (402) 471-2186.

Complete the information on the top of each page. Enter the name of the company/facility as it is known in Nebraska. The facility name on every page of the application should be identical. Enter the date the form was completed. Enter the DWEE Facility Identification (FID) number assigned by the Nebraska Department of Water, Energy, and Environment. If this is a new facility, leave this space blank. Enter the Emission Point Identification Number. Each place where emissions are emitted into atmosphere from your facility should be labeled with an individual identification number.

Form 6.0, Section 6.6 should be used for an emission point that is controlled by control equipment that **combusts fuel**. Examples of control equipment that combust fuel include thermal oxidizers, thermal oxidizers with heat recovery steam generators, regenerative thermal oxidizers, etc. This form can be used if one or more emission units are controlled by the control device, routed to the same stack, and then vented into the atmosphere. There is room on this form to provide information on up to six emission units that are routed through the control device and emitted to the atmosphere via a single emissions point. If more than six emission units are being routed through a single controlled emission point, multiple Section 6.6 forms must be completed in order for all emission units to be identified. However, each Section 6.6 form should have identical emission point identification numbers if multiple units are routed to the same emission point. This form can also be used if both combustion units and non-combustion units are being controlled by the control device. If the emissions being routed through this emission point are being controlled by a control device that does not combust fuel (i.e., a scrubber, baghouse, etc.), Section 6.5 should be completed in lieu of Section 6.6. If the emissions are not controlled by a control device, Section 6.4 should be completed.

General Information

Attach the manufacturer's information for each the control device unit as part of the application (**Step 14 Manufacturer Specifications**).

- 1) Enter the control equipment identification number assigned to the control device that controls the emissions exiting the emission point identified on the top of the page.
- 2) Enter the date the control equipment was installed at the facility. Include a month, day, and year. If the unit is new, select the "new unit" box.
- 3) Enter the name of the control equipment or provide brief description of the unit's purpose.
- 4) Enter the maximum rated capacity, in units of million British thermal units per hour (MMBtu/hr) for the control device.
- 5) If the device is a thermal oxidizer (TO), indicate whether the unit is a regenerative or recuperative unit by selecting the appropriate box. If the unit is not a TO, select the "N/A" box.
- 6) If the device is a regenerative thermal oxidizer, indicate whether the unit regenerates via an online or offline process by selecting the appropriate box.

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7) Emission Unit Information

Enter ALL of the emission units whose emissions will be controlled and then emitted from the emission point ID identified at the top of the page. Enter each emission unit on its own line and all unit information requested. Include the unit ID number, unit type, unit name, maximum capacity (be sure to include appropriate units), and the installation date. Include a month, day, and year of installation if known. If this is a new unit, select the box in the “New Unit” column. If more than six (6) emission units are controlled and then emitted through the emission point, then complete multiple Section 6.6 forms for the emission point in order to account for all emission units.

Attach the manufacturer’s information for each emission unit as part of the application (**Step 14 Manufacturer Specifications**).

8) Stack Information

- a) If this emission point does not have a “stack” through which the point’s emissions exhaust, select the “N/A” box.
- b) Enter the height of the stack in feet.
- c) Enter the inside diameter (in feet) of the top of the stack where the emissions are discharged.
- d) Indicate whether the stack discharges horizontally, vertically, or vertically with a rain cap by selecting the appropriate box.
- e) Enter the velocity in meters per second of the gas as it discharges from the top of the stack.
- f) Enter the exit temperature (Kelvin) of the gas exiting the top of the stack.

9) Control Information

- a) Enter the types of pollutants the control equipment controls (i.e., reduces). If numerous pollutants are controlled, indicate the different pollutants controlled in line with their respective control efficiencies.
- b) Enter the control efficiency of the control equipment for each pollutant being controlled. This is the percentage of the pollutant that is controlled/reduced by the control equipment.
- c) If more than six pollutants are controlled by the control equipment that combusts fuel, attach additional pages so that all the controlled pollutants are accounted for in the application.

10) Control Equipment Fuel Information

Space is provided in the “Control Equipment Fuel Information” section so that you can present information on the control equipment that combusts fuel. If the control device combusts more than two types of fuel, additional pages should be used in order to account for all fuel types.

- a) Enter the type/grade of fuel that is combusted in the control device (examples: No. 2 fuel oil, coal, natural gas).

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10) Control Equipment Fuel Information (continued)

- b) Enter the maximum fuel capacity of this unit. If this unit was operating continuously (8,760 hours per year), how much fuel would it consume? If enough fuel will not be produced or collected (example: biogas from an anaerobic treatment system) for the unit to operate year-round, enter the total amount of fuel that will be produced/collected. Be sure to indicate this amount is all that will be produced/collected and not the maximum fuel capacity by attaching additional information to the form. Be sure to include the appropriate units (i.e., MMscf/year, tons/year, gallons/year, etc)
- c) Enter the heat content of the fuel being combusted. Be sure to include the appropriate units (i.e., MMBtu/MMscf, MMBtu/ton, MMBtu/gallon, etc).
- d) For fuel specifications, enter the percent sulfur by weight that is contained in the fuel. Enter N/A if the fuel type contains negligible amounts of sulfur. If combusting coal or used oil, enter the maximum ash content as a weight percent.
- e) Enter any current operating limits that apply to the fuel type or any operating limitations being requested with this permitting action. Typically for combustion units, this limit may be an hourly restriction on how long the unit can combust a certain fuel type (hours/year) or a specific fuel amount the unit can combust each year. Be sure to include the appropriate units. If there are no operating limits or none are being requested, select the N/A box.
- f) If you complete this form for the purpose of obtaining an operating permit, indicate the amount of fuel used for the past five years. Be sure to include appropriate units. If this is a new source (i.e., obtaining its initial operating permit), provide the fuel usage for the past year.

11) Control Equipment New Source Performance Standard (NSPS) Applicability

If this combustion control equipment is subject to an NSPS subpart, select the subpart this unit is subject to. If you do not know whether or not the unit is subject to a specific NSPS, contact the DWEE NSPS Coordinator at 402-471-2186.

12) Controlled Unit Fuel Information

Space is provided in the "Controlled Unit Fuel Information" section for you to present information on one combustion emission unit whose emissions are routed through the controlled emission point. If more than one emission unit that contributes emissions to the emission point combusts fuel, additional pages of this form need to be completed to account for all emission units that combust fuel. If the combustion unit combusts more than two types of fuel, additional pages should be used in order to account for all fuel types in each unit.

- a) Identify whether or not combustion units contribute to the emissions exhausted through the emission point identified at the beginning of the section.
- b) Enter the emission unit ID number of the combustion unit.
- c) Enter the maximum rated capacity of the combustion unit in units of million British thermal units per hour (MMBtu/hr).
- d) Enter the name of the combustion unit or provide brief description of the unit's purpose.

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12) Controlled Unit Fuel Information (continued)

- e) Enter the type/grade of fuel that is combusted in the combustion unit (examples: No. 2 fuel oil, coal, natural gas).
- f) Enter the maximum fuel capacity of this unit. If this unit was operating continuously (8,760 hours per year), how much fuel would it consume? If enough fuel will not be produced or collected (example: biogas from an anaerobic treatment system) for the unit to operate year-round, enter the total amount of fuel that will be produced/collected. Be sure to indicate this amount is all that will be produced/collected and not the maximum fuel capacity by attaching additional information to the form. Be sure to include the appropriate units (i.e., MMscf/year, tons/year, gallons/year, etc).
- g) Enter the heat content of the fuel being combusted. Be sure to include the appropriate units (i.e., MMBtu/MMscf, MMBtu/ton, MMBtu/gallon, etc).
- h) For fuel specifications, enter the percent sulfur by weight that is contained in the fuel. Enter N/A if the fuel type contains negligible amounts of sulfur. If combusting coal or used oil, enter the maximum ash content as a weight percent.
- i) Enter any current operating limits that apply to the fuel type or any operating limitations being requested with this permitting action. Typically for combustion units, this limit may be an hourly restriction on how long the unit can combust a certain fuel type (hours/year) or a specific fuel amount the unit can combust each year. Be sure to include the appropriate units. If there are no operating limits or none are being requested, select the N/A box.
- j) If you complete this form for purposed of obtaining an operating permit, indicate the amount of fuel used for the past five years. Be sure to include appropriate units. If this is a new source (i.e., obtaining its initial operating permit), provide the fuel usage for the past year.

13) Potential to Emit (PTE) Calculations

PTE calculations are required to be submitted with this application. If there are questions on calculating the potential emissions associated with the emission point, contact the Department. The Department may be able assist you in calculating the potential emissions. Calculation spreadsheets are also available on the Department's website. Be sure the potential emission calculations are attached and select the box to indicate it has been done.

14) Manufacturer Specifications Information

Attach the manufacturer's information for each emission unit listed under **7) Unit Information** and for the control device described under **General Information**. Select the box to indicate it has been done.

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15) Actual Emission Calculations

Actual emission calculations must be submitted with this application if you are applying for an operating permit (initial or renewal). If there are questions on calculating the actual emissions associated with the emission point, contact the Department. The Department may be able to assist you in calculating the actual emissions. Calculation spreadsheets are also available on the Department's website. Be sure the actual emission calculations are attached and select the box.

16) Additional Information

Please include any additional information associated with the emission point you feel should be submitted with this application. Only select the "YES" box if information is being included that is not required elsewhere in the application.