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Form Instructions

DV200 SERIES

Form Series DV200 collects information on the devices and processes in the facility. These devices and processes constitute the building blocks of the Permit application, as described at length in the *Application Guidebook*.

The application is structured around emissions units in the facility. Emissions units may consist of one or more device(s) and process(s). The owner/operator must describe those individual devices and processes through these forms. A number of device-specific forms have been provided, as well as one "miscellaneous device/process" form for use in describing devices and/or processes not captured under other specific forms. The following forms are included in this series:

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In structuring the forms, DEQ determined that certain industrial processes should always be defined as individual emissions units, rather than as constituent processes within a more diverse emissions unit. In Form Series EU500, the following forms address other processes not included above. If one of the following forms is appropriate for a process at the facility, the owner/operator should not complete a DV200 form for that same process.

- EU502, Painting or Coating Operation
- EU503, Printing Operation
- EU504, Facility-Wide VOC Material Balance
- EU505-EU508, Fugitive Emissions

Before proceeding to complete the appropriate forms in this series, review the discussion below.

"Identical" Devices

The device-specific forms in this series provide an option for recording information for multiple *identical* devices on a single form, rather than repeating information on a number of forms. Thus, the owner/operator of a facility with three identical boilers could complete a single Form DV202 to describe all three boilers, rather than completing three such forms--one for each boiler.

This is appropriate only when the devices truly are *identical*. *Identical* is defined as devices that:

- have the same design capacity; **and**
- burn the same fuels, dry the same wood species, store the same materials, etc., as appropriate to the device.

Example: The facility has two municipal waste combustors (MWCs). The MWCs have the same capacity and burn the same waste. The owner/operator may consider these MWCs identical and report them



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on a single Form DV211.

Example:

The facility has two veneer dryers. Although they have the same capacity, one always dries species X while the other only dries species Y. Because they dry different species, which will result in very different emissions, the owner/operator will record these devices on two separate Form DV210.

Date installation/construction commenced

The device/process forms request the date that the owner/operator commenced construction/installation of the unit. This date is collected for purposes of determining the applicability of certain standards, specifically New Source Performance Standards, MACT, and NSR/PSD. In completing this question, understand the definition of the term *commenced*. This term refers to the date on which the owner/operator first made a financial commitment to install or construct the device/process.

Date installed

The device/process forms also request the date the device/process was installed and operational. This information is used to determine the applicability of some standards in OAR 340, Divisions 208, 226, 228, 230, and 238. If the device/process being described is new, provide the anticipated date when installation of the device/process will be completed.

Emissions Data

These forms collect *design* information about the devices/processes but do *not* collect emissions data for the devices/processes. When the owner/operator completes the appropriate forms in Form Series EU500, Emissions Unit Summary, in which he/she will reflect the emissions units defined with these devices/processes, he/she will be directed to provide emissions data on emissions detail sheets, for transfer to Form Series ED600, Emissions Data.

DV201 – MISCELLANEOUS PROCESS

Complete one form for *each* process or device for which no other specific device form is available.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this process/device.
2. Enter the date that construction/installation of this device/process commenced.
3. Enter the date that this device/process was installed. If before 1970, provide only the year.
4. Does this device/process (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Briefly describe the process, including any add-on pollution control devices.
6. Indicate whether the process is continuous or batch. If batch, list the maximum number of batches processed per hour.
7. Raw material usage. Complete for *each* raw material used, as applicable.
 - Enter the type of raw material used in the process.
 - For both continuous and batch processes, enter the maximum amount of raw material used in the process operating at rated design capacity (pounds per hour or pounds per batch).
8. Production data. Complete for *each* product, as applicable.
 - Enter the type of product.
 - For both continuous and batch processes, enter the production of the process at maximum design capacity (pounds per hour or pounds per batch).
9. Attach any additional information necessary to describe this process/device and its operating and usage parameters.



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DV202 - BOILERS

Complete one form for *each* boiler at the facility. If the facility has multiple, *identical* fuel burning devices, the owner/operator may complete this form *once* for all of them. Provide in question 1 the ID number or labels for each of the identical boilers.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the device.
6. Briefly describe the boiler, including any add-on control devices, and the firing method. Include any additional information needed to adequately describe the firing method. For example, if a boiler is a traveling grate stoker, indicate whether it is overfeed or underfeed.

For liquid/gaseous fuels:

- tangential
- normal
- other (specify)

For solid fuels:

- traveling grate stoker
- spreader stoker
- other (specify)

7. Enter the rated design capacity (heat input) in British Thermal Units per hour.
8. Enter the maximum steam production rate (lbs/hr).
9. Enter the maximum operating steam pressure in pounds per square inch (gauge pressure).
10. Enter the maximum operating steam temperature, in degrees Fahrenheit.
11. Fuel usage: List all fuels that can be burned in the boiler (e.g., natural gas, #2 distillate, residual oil, etc.) and the maximum firing rate (e.g., cubic feet per hour, gallons per hour, etc.).

DV203 – LUMBER DRY KILNS

Complete one form for *each* lumber dry kiln at the facility. If the facility has multiple, *identical* lumber dry kilns, the owner/operator may complete this form *once* for all of them. Provide in question 1 the ID number or labels for *each* of the identical wood drying kilns.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the device.
6. Enter the heat source (e.g., steam, electricity, natural gas burner, etc.).
7. For each species of wood dried in the kiln, enter the average cycle time (e.g., drying time) and maximum design capacity.
8. If fuel is burned in the kiln, enter the type of fuel (i.e, natural gas, #2 distillate, etc.) and maximum amount of fuel used on an hourly basis.



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DV204 – CEMENT/LIME KILN AND CALCINERS

Complete one form for *each* cement kiln, lime kiln, or calciner at the facility. If the facility has multiple, *identical* cement kilns or *identical* lime kilns, the owner/operator may complete this form *once* for all of them. Provide in question 1 the ID number or labels for *each* of the identical devices.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the device.
5. Briefly describe the process, including any add-on pollution control devices.
7. Indicate whether this is a continuous or batch process.
8. Provide the maximum design capacity for each raw material processed.
9. Provide the maximum design capacity for each product.
10. Enter type of fuel (i.e, natural gas, #2 distillate, etc.) and maximum amount of fuel used on an hourly basis.

DV205 – MELT FURNACE SYSTEM

Complete one form for *each* furnace system at the facility. This may be an electric arc furnace at a steel mill, or it may be a series of furnaces for alloying aluminum.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this system.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the system.
6. Briefly describe the furnace system, including any add-on pollution control devices. Identify the type of furnace in the system (e.g., melting, holding, sweating, remelting, alloying, fluxing, refining, dross, etc.).
7. Enter the holding capacity of the system, in tons. If this form is completed for a series of furnaces performing a process, then base the holding capacity on the portion of the system that most limits production capacity-- that is, the "bottleneck" of the system.
8. Enter the typical cycle time (e.g., tap to tap)
9. Enter the heat source (e.g., natural gas burner, electricity, etc.)
10. Provide the furnace rating, in millions of BTUs per hour, or, if electric, in kilowatt hours.
11. Identify the types of alloying materials processed (e.g., chromium, cadmium, lead, manganese, etc.), if applicable to the furnace system. Provide the annual usage of each material. Indicate the method of alloy material introduction (e.g., pure or alloyed) for each material. If this does not apply, enter "NA".
12. Provide the maximum design capacity for each product.
13. Enter the type of fuel (i.e, natural gas, #2 distillate, etc.) and maximum amount of fuel used on an hourly basis.

DV206 – KRAFT RECOVERY FURNACE

Complete one form for *each* kraft recovery furnace at the facility. If the facility has multiple, *identical* kraft recovery furnaces, the owner/operator may complete this form *once* for all of them. Provide in question 3 one ID number or label for *each* of the identical kraft recovery furnaces.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this furnace.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the furnace.
6. Provide a brief description of the recovery process, including any add-on pollution control devices.
7. Indicate whether the hot flue gases from the recovery furnace have direct or indirect contact with the black liquor in the evaporator.



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8. Provide the requested operating data for the furnace's capacity.
 - Specify the rated design capacity of the furnace, in pounds of black liquor solids (BLS) per hour.
 - Specify the maximum firing rate of the furnace, in pounds of BLS per hour.
 - If the maximum firing rate is higher than the rated design capacity, explain why.
9. Enter the range of BLS sulfidity, in percent.
10. Enter the range of BLS going to the recovery furnace, in percent.
11. Indicate (yes or no) whether the recovery furnace is equipped with a black liquor oxidation tower.
12. Specify the firing method for auxiliary fuel for the furnace. Select from the following.
 - tangential
 - vertical
 - other (specify)
13. Indicate (yes or no) whether the recovery furnace has load burners.
14. Indicate (yes or no) whether hazardous waste is burned in the recovery furnace.
15. Enter the type of auxiliary fuel (i.e, natural gas, #2 distillate, etc.) and maximum amount of fuel used on an hourly basis.

DV207 – INTERNAL COMBUSTION DEVICES

Complete one form for *each* internal combustion device (i.e., turbine or IC engine) at the facility. If the facility has multiple, *identical* devices, the owner/operator may complete this form *once* for all of them. Provide in question 1 the ID number or labels for *each* of the identical devices.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the device.
6. Enter the type of combustion device (i.e. simple cycle combustion turbine, combined cycle combustion turbine, internal combustion engine, etc.)
7. Enter the rated design capacity in horsepower-hr.
8. Enter the rated design capacity (heat input) in British Thermal Units per hour.
9. If used for power generation, indicate the maximum electrical output (kW-hr)
10. Enter the type of fuel (i.e, natural gas, #2 distillate, etc.) and maximum amount of fuel used on an hourly basis.

DV208 – HARDBOARD/PARTICLEBOARD/PLYWOOD PRESS

Complete one form for each hardboard\particleboard press at the facility. If the facility has multiple, *identical* presses, the owner/operator may complete this form *once* for all of them. Provide in question 3 one ID number or label for each of the identical presses.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the manufacturer of the press.
6. Indicate the type of product produced in this press. Select from the following.
 - oriented strandboard (OSB)
 - particleboard
 - hardboard
 - medium density fiberboard (MDF)



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- flakeboard
 - waferboard
 - plywood
 - other (specify)
7. Enter the range in thickness in which this product is produced (inches).
 8. Enter the maximum dimensions of the pressed board (inches).
 9. Indicate the type(s) of resin(s) and additive(s) used in this product.
 10. Indicate the range in resin content of this product (%).
 11. Indicate the range in the formaldehyde:urea mole ratio in the resin.
 12. Indicate the range in wax content of this product (%).
 13. Indicate the range in press temperature (°F).
 14. Indicate the range in press cycle time (minutes).

For question 15, DEQ requires the owner/operator to provide information on *actual* hourly and annual production rates as well as those production rates *corrected* to an industry-standard product thickness. If, for example, the facility produces 1,000 square feet per hour of 3/8" particleboard, the owner/operator would correct that to 500 square feet per hour of 3/4" particleboard. Use the following industry standards for the corrections:

- **3/4" basis for particleboard**
 - **1/8" basis for hardboards (MDF and OSB)**
 - **3/8" basis for plywood**
15. For *each* type of product and thickness identified in question 6, enter the maximum hourly production, as follows. The *maximum* production rate should be based on the maximum *capacity* of the press to produce the given thickness.
 - Identify the actual thickness (e.g., 1/2") of the board.
 - Identify the actual maximum hourly production rate, in square feet per hour, for that actual thickness.
 - Identify the press cycle time
 - Identify the corrected thickness, which is the actual thickness *corrected* to the industry-standard for the board type, as specified in the instructions above (e.g., 3/8" for particleboard).
 - Calculate the corrected hourly production rate, in square feet per hour. This is the hourly production rate of a based on the industry standard.

DV209 – MATERIAL DRYER

Complete one form for each material particle dryer at the facility. If the facility has multiple, *identical* dryers, the owner/operator may complete this form *once* for all of them. Provide in question 1 the ID number or labels for each of the identical dryers.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the device.
6. Indicate the type of dryer. Select from the following:
 - rotary
 - tube
 - flashtube
 - other (specify)
7. Provide a description of the dryer.



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8. List the type of materials dried.
9. List any additives (e.g., urea/formaldehyde resin) added to the material before entering the dryer. This may be intentional or a result of re-using left over material from the production process.
10. Indicate the source(s) of heat. Select from the following all that apply:
 - steam (indirect)
 - wood waste
 - natural gas
 - oil
 - sanderdust
 - other (specify)
11. Provide the following operating ranges for each type of material dried in the dryer.
 - Moisture content (%) of material entering the dryer;
 - Moisture content (%) of material exiting the dryer;
 - Dryer exhaust gas temperature
 - Maximum hourly production rate
12. Enter the type of fuel (i.e, natural gas, #2 distillate, etc.) and maximum amount of fuel used on an hourly basis.

DV210 – VENEER DRYER

Complete one form for each veneer dryer at the facility. If the facility has multiple, *identical* dryers, the owner/operator may complete this form *once* for all of them. Provide in question 1 the ID number or labels for each of the identical dryers.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer of the device.
6. Enter the type of dryer. Select from the following.
 - jet
 - longitudinal
 - crossflow
 - other (specify)
7. Enter the heat source for the dryer. Select from the following.
 - steam
 - wood
 - natural gas
 - other (specify)
8. Enter the number of decks in the dryer.
9. Enter the number of zones in the dryer.
10. Provide the following operating parameters:
 - Species
 - Thickness (inches)
 - Dryer temperature (°F), if there are multiple zones, provide the temperature for each zone
 - Maximum hourly production (ft²/hr)
11. Enter the type of fuel (i.e, natural gas, #2 distillate, etc.) and maximum amount of fuel used on an hourly



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DV211-INCINERATOR

Complete one form for each incinerator at the facility. If the facility has multiple, *identical* incinerators, the owner/operator may complete this form *once* for all of them. Provide in question 1 the ID number or labels for each of the identical incinerators.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer.
6. Indicate the type of waste incinerated. Select from the following. Refer to OAR 340-230-0030 for definitions of solid and infectious wastes.
 - solid
 - infectious
 - other (specify)
7. Briefly describe the type of incinerator (e.g., multiple chamber controlled air).
8. Provide the charging information for the device.
 - Indicate whether the device is batch or continuous feed.
 - Describe the charging method.
 - Describe how the charge is measured.
9. Provide the following information about the primary combustion chamber.
 - Enter the minimum temperature in °F at which the primary combustion gases are maintained.
 - Enter the rated heat input of the burner, in millions of British Thermal Units per hour.
 - Enter the type and grade (if applicable) of fuel used by the burner.
10. Provide the following information about the secondary combustion chamber (if applicable).
 - Enter the minimum temperature in °F at which the secondary combustion gases are maintained.
 - Enter the residency time at which the combustion gases are held at the temperature listed.
 - Enter the rated heat input of the burner, in millions of British Thermal Units per hour.
 - Enter the type and grade (if applicable) of fuel used by the burner.
11. Indicate (yes or no) whether the incinerator is equipped with automatically controlled auxiliary burners.
12. Indicate (yes or no) whether the incinerator is equipped with an interlock system.
13. Indicate (yes or no) whether the incinerator is equipped with an air lock system.
14. Indicate (yes or not) whether the incinerator is equipped with a waste heat boiler.
15. Enter the maximum flue gas outlet temperature.
16. Enter the rated manufacturer's capacity, in tons of material burned per day.
17. Indicate whether the incinerator has an emergency bypass stack. If it does, describe the operating conditions which would require use of the stack.
18. Provide the design efficiency of the unit in incinerating the materials charged. Attach calculations.
19. For *each* incinerated material, provide the following:
 - Enter the type of material (e.g., garbage, biological waste, cultures, sharps, construction debris, office waste).
 - Enter the origin of the material (e.g., municipalities, hospitals, research labs, generated on site).
 - Estimate the percentage of the annual tons of material charged that comes from this type of waste.
 - If heat is recovered from the process, estimate the heating value from burning this type of material.
20. Attached a diagram showing the following: [An electronic version of this diagram/blueprint is not required.]
 - combustion chambers
 - waste feed ports
 - emissions stack
 - air supply fans and air feed
 - auxiliary burner



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- control equipment
- continuous monitoring system sites

DV212 – VOC STORAGE TANKS

Each form can be used to capture information about four different VOC tanks at the facility. If the facility has multiple, *identical tanks storing the same material*, complete this form *once* for all of them. If otherwise identical tanks store different materials, then separate forms must be completed for them. If they are truly identical, however, simply complete this form once and provide in question 1 the ID number or labels for *each* of the identical tanks.

1. Enter the name and identification (ID) number or label that the owner/operator has assigned to this device.
2. Enter the date that construction/installation of this device commenced.
3. Enter the date that this device was installed. If before 1970, provide only the year.
4. Does this device (yes or no) have special control requirements as a result of NSR/PSD? If yes, discuss.
5. Enter the name of the manufacturer.
6. Enter the rated capacity of the tank, in gallons.
7. Enter the height of the tank, in feet.
8. Enter the diameter of the tank, in feet.
9. Enter the approximate age of the tank.
10. Indicate (yes or no) whether the tank has a submerged fill pipe.
11. Indicate the type of tank. Select from the following.
 - external floating roof
 - fixed roof with internal floating roof
 - variable vapor space
 - pressurized
 - open top
 - fixed roof
 - other (please specify)
12. Indicate (yes or no) whether the tank is an underground storage tank. If the answer is "yes," indicate which of the following apply:
 - single point fill tube and popped vapor return
 - separate fill tube and vapor return points inside on well
 - Parker Hannifin single point fill tube
 - separate fill tube and vapor return points not inside on well.
13. If the tank is an above ground storage tank, provide the following information:
 - Pipe material.
 - Pipe size.
 - Piping drainage: Indicate (yes or no) whether the piping continuously drains downward. If the answer is "no," describe the condensate collection tank.
 - Isolation valves installed in piping (yes/no).
14. Pressure/vacuum relief valves.
 - Enter the pressure settings of the vents in pounds per square inch absolute
 - Enter the months in which the relief valves are removed to prevent freezing
15. Indicate (yes or no) whether the tank has a vent intended to conserve pressure. If the answer is "yes," specify at what pressure the vent is set, in pounds per square inch absolute.
16. Fixed roof tanks.
 - Enter the color of the roof.
 - Enter the color of the shell.
 - Enter the height of the vapor space inside the tank, on an estimated annual average.

