

**§ 60.3069 Am I required to apply for and obtain a title V operating permit for my air curtain incinerator that burns only wood waste, clean lumber, and yard waste?**

Yes, if your air curtain incinerator is subject to this subpart, you are required to apply for and obtain a title V operating permit as specified in §§ 60.3059 and 60.3060.

MODEL RULE—EQUATIONS

**§ 60.3076 What equations must I use?**

(a) *Percent oxygen.* Adjust all pollutant concentrations to 7 percent oxygen using Equation 1 of this section.

$$C_{adj} = C_{meas} * (20.9 - 7) / (20.9 - \%O_2) \quad (\text{Eq. 1})$$

Where:

$C_{adj}$  = pollutant concentration adjusted to 7 percent oxygen

$C_{meas}$  = pollutant concentration measured on a dry basis

$(20.9 - 7)$  = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis)

20.9 = oxygen concentration in air, percent

$\%O_2$  = oxygen concentration measured on a dry basis, percent

(b) *Capacity of a very small municipal waste combustion unit.* For very small municipal waste combustion units that can operate continuously for 24-hour periods, calculate the unit capacity based on 24 hours of operation at the maximum charge rate. To determine the maximum charge rate, use one of two methods:

(1) For very small municipal waste combustion units with a design based on heat input capacity, calculate the maximum charging rate based on the maximum heat input capacity and one of two heating values:

(i) If your very small municipal waste combustion unit combusts refuse-derived fuel, use a heating value of 12,800 kilojoules per kilogram (5,500 British thermal units per pound).

(ii) If your very small municipal waste combustion unit combusts municipal solid waste, use a heating value of 10,500 kilojoules per kilogram (4,500 British thermal units per pound).

(2) For very small municipal waste combustion units with a design not based on heat input capacity, use the maximum design charging rate.

(c) *Capacity of a batch very small municipal waste combustion unit.* Calculate

the capacity of a batch OSWI unit as the maximum design amount of municipal solid waste it can charge per batch multiplied by the maximum number of batches it can process in 24 hours. Calculate the maximum number of batches by dividing 24 by the number of hours needed to process one batch. Retain fractional batches in the calculation. For example, if one batch requires 16 hours, the OSWI unit can combust 24/16, or 1.5 batches, in 24 hours.

(d) *Carbon monoxide pollutant rate.* When hourly average pollutant rates ( $E_{hj}$ ) are obtained (e.g., CEMS values), compute the rolling average carbon monoxide pollutant rate ( $E_a$ ) for each 12-hour period using the following equation:

$$E_a = \frac{1}{12} \sum_{j=1}^{12} E_{hj} \quad (\text{Eq. 2})$$

Where:

$E_a$  = Average carbon monoxide pollutant rate for the 12-hour period, ppm corrected to 7 percent  $O_2$ .

$E_{hj}$  = Hourly arithmetic average pollutant rate for hour "j," ppm corrected to 7 percent  $O_2$ .

MODEL RULE—DEFINITIONS

**§ 60.3078 What definitions must I know?**

Terms used but not defined in this subpart are defined in the Clean Air Act and subpart A (General Provisions) of this part.

*Administrator* means:

(1) For approved and effective State section 111(d)/129 plans, the Director of the State air pollution control agency, or his or her delegatee;

(2) For Federal section 111(d)/129 plans, the Administrator of the EPA, an employee of the EPA, the Director of the State air pollution control agency, or employee of the State air pollution control agency to whom the authority has been delegated by the Administrator of the EPA to perform the specified task; and

(3) For NSPS, the Administrator of the EPA, an employee of the EPA, the Director of the State air pollution control agency, or employee of the State air pollution control agency to whom the authority has been delegated by

the Administrator of the EPA to perform the specified task.

*Air curtain incinerator* means an incineration unit operating by forcefully projecting a curtain of air across an open, integrated combustion chamber (fire box) or open pit or trench (trench burner) in which combustion occurs. For the purpose of this subpart and subpart EEEE only, air curtain incinerators include both firebox and trench burner units.

*Auxiliary fuel* means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

*Batch OSWI unit* means an OSWI unit that is designed such that neither waste charging nor ash removal can occur during combustion.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 consecutive days starting on January 1 and ending on December 31.

*Chemotherapeutic waste* means waste material resulting from the production or use of anti-neoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

*Class II municipal solid waste landfill* means a landfill that meets four criteria:

(1) Accepts, for incineration or disposal, less than 20 tons per day of municipal solid waste or other solid wastes based on an annual average;

(2) Is located on a site where there is no evidence of groundwater pollution caused or contributed to by the landfill;

(3) Is not connected by road to a Class I municipal solid waste landfill, as defined by Alaska regulatory code 18 AAC 60.300(c) or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and

(4) Serves a community that meets one of two criteria:

(i) Experiences for at least three months each year, an interruption in access to surface transportation, preventing access to a Class I municipal solid waste landfill; or

(ii) Has no practicable waste management alternative, with a landfill lo-

cated in an area that annually receives 25 inches or less of precipitation.

*Class III municipal solid waste landfill* is a landfill that is not connected by road to a Class I municipal solid waste landfill, as defined by Alaska regulatory code 18 AAC 60.300(c) or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill, and that accepts, for disposal, either of the following two criteria:

(1) Ash from incinerated municipal waste in quantities less than one ton per day on an annual average, which ash must be free of food scraps that might attract animals; or

(2) Less than five tons per day of municipal solid waste, based on an annual average, and is not located in a place that meets either of the following criteria:

(i) Where public access is restricted, including restrictions on the right to move to the place and reside there; or

(ii) That is provided by an employer and that is populated totally by persons who are required to reside there as a condition of employment and who do not consider the place to be their permanent residence.

*Clean lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote, or manufactured wood products that contain adhesives or resins (e.g., plywood, particle board, flake board, and oriented strand board).

*Collected from* means the transfer of material from the site at which the material is generated to a separate site where the material is burned.

*Contained gaseous material* means gases that are in a container when that container is combusted.

*Continuous emission monitoring system or CEMS* means a monitoring system for continuously measuring and recording the emissions of a pollutant from an OSWI unit.

*Continuous OSWI unit* means an OSWI unit that is designed to allow waste

charging and ash removal during combustion.

*Deviation* means any instance in which a unit that meets the requirements in § 60.2991, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any unit that meets requirements in § 60.2991 and is required to obtain such a permit; or

(3) Fails to meet any emission limitation, operating limit, or operator qualification and accessibility requirement in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart.

*Dioxins/furans* means tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Energy recovery* means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

*EPA* means the Administrator of the EPA or employee of the EPA that is delegated the authority to perform the specified task.

*Institutional facility* means a land-based facility owned and/or operated by an organization having a governmental, educational, civic, or religious purpose such as a school, hospital, prison, military installation, church, or other similar establishment or facility.

*Institutional waste* means solid waste (as defined in this subpart) that is combusted at any institutional facility using controlled flame combustion in an enclosed, distinct operating unit: Whose design does not provide for energy recovery (as defined in this subpart); operated without energy recovery (as defined in this subpart); or operated with only waste heat recovery (as defined in this subpart). Institutional waste also means solid waste (as defined in this subpart) combusted on site in an air curtain incinerator that

is a distinct operating unit of any institutional facility.

*Institutional waste incineration unit* means any combustion unit that combusts institutional waste (as defined in this subpart) and is a distinct operating unit of the institutional facility that generated the waste. Institutional waste incineration units include field-erected, modular, cyclonic burn barrel, and custom built incineration units operating with starved or excess air, and any air curtain incinerator that is a distinct operating unit of the institutional facility that generated the institutional waste (except those air curtain incinerators listed in § 60.2994(b)).

*Intermittent OSWI unit* means an OSWI unit that is designed to allow waste charging, but not ash removal, during combustion.

*Low-level radioactive waste* means waste material that contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

*Metropolitan Statistical Area* means any areas listed as metropolitan statistical areas in OMB Bulletin No. 05-02 entitled "Update of Statistical Area Definitions and Guidance on Their Uses" dated February 22, 2005 (available on the Web at <http://www.whitehouse.gov/omb/bulletins/>).

*Modification or modified unit* means an incineration unit you have changed on or after June 16, 2006 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the unit (not including the cost of land) updated to current costs (current dollars). For an

OSWI unit, to determine what systems are within the boundary of the unit used to calculate these costs, see the definition of OSWI unit.

(2) Any physical change in the OSWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

*Municipal solid waste* means refuse (and refuse-derived fuel) collected from the general public and from residential, commercial, institutional, and industrial sources consisting of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials and non-combustible materials such as metal, glass and rock, provided that: (1) The term does not include industrial process wastes or medical wastes that are segregated from such other wastes; and (2) an incineration unit shall not be considered to be combusting municipal solid waste for purposes of this subpart if it combusts a fuel feed stream, 30 percent or less of the weight of which is comprised, in aggregate, of municipal solid waste, as determined by § 60.2993(b).

*Municipal waste combustion unit* means, for the purpose of this subpart and subpart EEEE, any setting or equipment that combusts municipal solid waste (as defined in this subpart) including, but not limited to, field-erected, modular, cyclonic burn barrel, and custom built incineration units (with or without energy recovery) operating with starved or excess air, boilers, furnaces, pyrolysis/combustion units, and air curtain incinerators (except those air curtain incinerators listed in § 60.2994(b)).

*Other solid waste incineration (OSWI) unit* means either a very small municipal waste combustion unit or an institutional waste incineration unit, as defined in this subpart. Unit types listed in § 60.2993 as being excluded from the subpart are not OSWI units subject to this subpart. While not all OSWI units will include all of the following components, an OSWI unit includes, but is not limited to, the municipal or institutional solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The OSWI unit does not in-

clude air pollution control equipment or the stack. The OSWI unit boundary starts at the municipal or institutional waste hopper (if applicable) and extends through two areas:

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and

(2) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The OSWI unit includes all ash handling systems connected to the bottom ash handling system.

*Particulate matter* means total particulate matter emitted from OSWI units as measured by Method 5 or Method 29 of appendix A of this part.

*Pathological waste* means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

*Reconstruction* means rebuilding an incineration unit and meeting two criteria:

(1) The reconstruction begins on or after June 16, 2006.

(2) The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the unit (not including land) updated to current costs (current dollars). For an OSWI unit, to determine what systems are within the boundary of the unit used to calculate these costs, see the definition of OSWI unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

*Shutdown* means the period of time after all waste has been combusted in the primary chamber. For continuous OSWI, shutdown shall commence no less than 2 hours after the last charge to the incinerator. For intermittent OSWI, shutdown shall commence no

**Environmental Protection Agency**

**Pt. 60, Subpt. FFFF, Table 1**

less than 4 hours after the last charge to the incinerator. For batch OSWI, shutdown shall commence no less than 5 hours after the high-air phase of combustion has been completed.

*Solid waste* means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1342), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2014).

*Standard conditions*, when referring to units of measure, means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).

*Startup period* means the period of time between the activation of the system and the first charge to the OSWI unit. For batch OSWI, startup means the period of time between activation of the system and ignition of the waste.

*Very small municipal waste combustion unit* means any municipal waste combustion unit that has the capacity to combust less than 35 tons per day of municipal solid waste or refuse-derived fuel, as determined by the calculations in § 60.3076.

*Waste heat recovery* means the process of recovering heat from the combustion flue gases outside of the combustion

firebox by convective heat transfer only.

*Wet scrubber* means an add-on air pollution control device that utilizes an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

*Wood waste* means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.

(2) Construction, renovation, or demolition wastes.

(3) Clean lumber.

(4) Treated wood and treated wood products, including wood products that have been painted, pigment-stained, or pressure treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote, or manufactured wood products that contain adhesives or resins (e.g., plywood, particle board, flake board, and oriented strand board).

*Yard waste* means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. Yard waste comes from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(1) Construction, renovation, and demolition wastes.

(2) Clean lumber.

TABLE 1 TO SUBPART FFFF OF PART 60—MODEL RULE—COMPLIANCE SCHEDULE

As stated in § 60.3000, you must comply with the following:

Complete this action	By this date <sup>a</sup>
Final compliance <sup>b</sup> .....	(Dates to be specified in State plan) <sup>c</sup> .

<sup>a</sup> Site-specific schedules can be used at the discretion of the State.

<sup>b</sup> Final compliance means that you complete all process changes and retrofit of control devices so that, when the incineration unit is brought on line, all process changes and air pollution control devices necessary to meet the emission limitations operate as designed.

<sup>c</sup> The date can be no later than 3 years after the effective date of State plan approval or December 16, 2010, whichever is earlier.