

## **NON-TITLE V PERMIT APPLICATION INSTRUCTIONS OVEN SOURCE DESCRIPTION FORM (APC 106)**

This form should be completed for all new oven permit applications and all renewals where source conditions have changed since the previous application. This form need not be completed for permit renewals if source conditions have not changed.

If any of the information requested is considered confidential, two application forms should be submitted, along with the Confidential Information Request form. One application form must be clearly marked to indicate that it contains confidential information, which is not to be made public and another application form, which does not contain the confidential information and can be placed in our general files. Emission data normally cannot be treated as confidential by the Division. Please contact the APC Division if there are any questions concerning confidentiality of information. The Confidential Information Request form can be found on the Division's website at: <http://tn.gov/environment/article/permit-air-other-information> .

The Tennessee Air Pollution Control Division prefers that application forms be submitted via email to the email address [Air.Pollution.Control@TN.gov](mailto:Air.Pollution.Control@TN.gov) . All application forms should be scanned/combined into one PDF document and sent as an attachment to the email. If email is not available, then application forms can be mailed to the address on the form.

The items below give a brief explanation of the information being requested on the form. The following numbers refer to the specific box on the form:

1. The organization's legal name is the name under which the company is registered with the Tennessee Secretary of State (SOS). The organization's legal name and SOS control number can be found on the SOS website at <https://tnbear.tn.gov/Ecommerce/FilingSearch.aspx>. If the organization is not registered with the SOS, then the owner's name must be listed.
2. The Emission Source Reference Number(s) will be assigned by the Tennessee Air Pollution Control Division. It is an eight digit number in the following format NN-NNNN-NN.
3. Check "Yes" or "No" depending on whether the air contaminant source is subject to an NSPS rule (New Source Performance Standards) or NESHAP rule (National Emission Standard for Hazardous Air Pollutants). List the rule citation, including Part, Subpart, and applicable Sections. For example, a boiler may be subject to 40 CFR Part 60 Subpart Dc and sections §60.42c, §60.42c, §60.46c, §60.47c, and §60.48c.
4. For the type of process, check either paint bake (include lacquer and varnish), annealing, or other. If you check "other", then please describe the type of process.
5. For type of operation, check either continuous or batch type mode. If operation is batch type, indicate the normal time required to process a batch and the number of batches, or fraction thereof, processed in a normal 24 hour period.
6. Enter the oven manufacturer, model number, serial number, Unique Oven ID, and date installed. The Unique Oven ID should be a simple name/number/letter designated by the applicant which uniquely identifies the equipment covered by the application. Examples of a Unique Oven ID are Oven #1, Oven #2, Oven A, or Oven B. It will be used to identify the equipment under consideration and to distinguish it from other possibly similar equipment. If a facility diagram or process flow chart is required for any additional forms, the Unique Oven ID should match the designations on the diagram or chart. It should be referenced on all future correspondence concerning the equipment in question. Once assigned, the Unique Oven ID should not be

changed. If a change is required, the reason for the change as well as the previous Unique Oven ID and the new Unique Oven ID should be well explained in item 16.

7. Describe the articles processed in the oven.
8. Enter the process material inputs and in-process solid fuels. This list of materials will be used to determine the process weight rate for the source. If the oven is part of a paint, varnish, or lacquer operation or part of a process emission source for which a Non-Title V Process or Fuel Burning Source Description Form (APC 102) has been completed, Item 8 may be left blank. Input rates are established as follows:
  - a. For continuous or long-run, steady-state operations, it is the material input weight for the entire period of continuous operation or for a typical portion thereof divided by the number of hours of such period or portion thereof.
  - b. For cyclical or batch type operation, it is the material input weight for a period which covers a complete or an integral number of cycles divided by the hours of actual process operation during such period.
  - c. All inputs should be listed separately, however it is not expected or desired that an ultimate chemical analysis be given for process inputs. Names such as metal castings, wire coils or spun fiber are adequate identifications.
  - d. The process flow diagram should clearly represent the process emission source covered by the application. All emission points within the source should be shown and identified. If a site has more than one process emission source, a flow diagram showing all the process emission sources at the site should also be attached. The overall flow diagram needs to be included only once and does not need to be included with subsequent applications unless substantial changes have been made.
9. Indicate by checking the proper space, how oven is heated. Direct fired means it is heated by burning fuel and products of combustion come in direct contact with the material being processed. Indirect fired means the products of combustion do not contact the material processed.
10. For exhaust control, check either none, direct flame afterburner, catalytic afterburner, or other. If you check "other", please attach a detailed description.
11. Enter operating parameters relating to stack emissions or exhaust points (hoods, exhaust fans, etc.). Data for flow, velocity and moisture should be entered for both actual and standard conditions. Standard temperature is defined as 68°F for sources subject to New Source Performance Standards (NSPS), 60°F for sources subject to diffusion equation based emission standards, and 70°F for the rest of sources. Standard pressure is defined as 14.696 psia (1 atm). Dry conditions are defined as zero percent moisture.
12. What other equipment such as spray booths, etc., are used in conjunction with this oven? (Specify and list corresponding Unique Source ID of each). The Unique Source ID should be a simple name/number/letter designated by the applicant which uniquely identifies the equipment covered by the application. Examples of a Unique Source ID are Boiler #1, Boiler A, Engine #1, Engine A, Paint Line #1, or Paint Line A. It will be used to identify the equipment under consideration and to distinguish it from other possibly similar equipment. If a facility diagram or process flow chart is required for any additional forms, the Unique Source ID should match the designations on the diagram or chart. It should be referenced on all future correspondence concerning the equipment in question.
13. Include a description and the operating parameters of any control devices. Examples include bag house pressure drop, scrubber flow rate and pH of flow, temperature of thermal oxidizer, how often fabric filters are changed, etc. Typically this information can be found in the operating manual for the control device. If

the control device is covered by a federal regulation, it is acceptable to cite the applicable section(s) of the federal regulation.

14. Complete this table for all fuels used by direct or indirect fired ovens. Include primary and all standby fuels so source will have permitted authority to use such fuels. If a source is designed to use a standby fuel, but very little or none is normally used, enter the design rate for such fuels under hourly usage and indicate negligible annual usage. Leave this table blank for electric or steam heated ovens.
15. Emission estimates for each pollutant emitted from this source should be based on stack sampling results or engineering calculations. In certain cases, other estimates may be accepted. Calculations should be attached on a separate sheet. Full details regarding the calculation method and emission factors used should be included. For example:
  - (1) If U.S. EPA's Compilation of Air Emission Factors (AP-42) is used, submit the version, chapter, table, equation, etc. AP-42 can be found on the U.S. EPA's website: <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors>.
  - (2) Attach sample calculations and fully explain any assumptions, bottlenecks, etc.
  - (3) Submit any supporting information such as manufacturer's data or safety data sheets (SDS).
  - (4) If the emissions are from a source test, provide details on the source test such as the date of the test, was the test approved by the Department, etc. If the source test was not approved by the Department, submit the test details and results.
  - (5) If multiple fuels are used, use the worst case fuel to calculate emissions for each pollutant, and list the fuel in the calculation method details. Include the percent sulfur in the fuel and the BTU content of fuel, when appropriate.

Average emissions (lbs./hr.) should be representative of the following: (1) For continuous or long-run, steady-state, operations it is the total weight of pollutant emitted to the atmosphere for the entire period of continuous operation or for a typical portion thereof divided by the number of hours of such period or portion thereof; (2) for cyclical or batch type operation, it is the total weight of the pollutant emitted to the atmosphere for a period which covers a complete or an integral number of cycles divided by the hours of actual process operation during such periods.

Maximum emissions (lbs./hr.) should be determined by dividing the total highest emissions possible during any 3 hour period with control equipment working properly, by 3. This will be dependent upon such things, either singly or in combination, as maximum possible operating rate, a particular input material, product, or fuel which may result in increased emissions; periods of highest emissions for cyclical or batch type operations, etc. Concentrations should be determined for stack emissions only and should reflect average exit gas concentrations reported in the units specified on the form.

Average emissions (ton/yr) should be calculated by multiplying the average emissions (lb/hr) by the normal operating hours (hr/yr) and converting the units from pounds (lb) to tons.

Potential emissions (ton/yr) or "Potential to emit" means the maximum capacity of a source to emit an air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit an air contaminant, including air contaminant control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is "legally enforceable." Secondary emissions do not count in determining the "potential to emit" of a source.

Emission estimation method code and control device descriptions, along with corresponding codes, can be found on the last page of these instructions. The codes which most accurately describe the estimation

methods and control equipment should be used; along with the estimated control equipment efficiency for each pollutant present. Any estimation methods of control devices other than those listed in the tables should be described in the comments section.

Some hazardous air pollutants (HAPs) are considered both a HAP and an organic compound. Include these HAPs when determining organic compound totals. If necessary, additional HAPs can be listed in the Other (specify) areas or attached as an additional sheet.

- 16.** Use the comments space for further descriptions or other needed information that was not included previously or information on modifications.
- 17.** If this form is being submitted at the same time as an APC 100 form, then a signature is not required on this form. Date this form regardless of whether a signature is provided. If this form is NOT being submitted at the same time as an APC 100 form, then a signature is required. Applications should be signed by the responsible person listed in Item 7 of the APC 100 form.

**Table of Pollution Control Device and Method Codes**

**Note:** For cyclones, settling chambers, wet scrubbers, and electrostatic precipitators; the efficiency ranges correspond to the following percentages:

High: 95-99+%.                      Medium: 80-95%                      And Low: Less than 80%.

If the system has several pieces of connected control equipment, indicate the sequence. For example: 008, 010. If none of the below codes fit, use 999 as a code for other and specify in the comments.

No Equipment .....	000	Gas Adsorption Column -- Packed .....	050
Activated Carbon Adsorption .....	048	Gas Adsorption Column - Tray Type .....	051
Afterburner - Direct Flame .....	021	Gas Scrubber (General: Not Classified) .....	013
Afterburner - Direct Flame with Heat Exchanger..	022	Limestone Injection - Dry.....	041
Afterburner - Catalytic .....	019	Limestone Injection - Wet.....	042
Afterburner - Catalytic with Heat Exchanger .....	020	Liquid Filtration System .....	049
Alkalized Alumina.....	040	Mist Eliminator - High Velocity .....	014
Cartridge Filter.....	070	Mist Eliminator - Low Velocity .....	015
Catalytic Oxidation - Flue Gas Desulfurization .....	039	Process Enclosed.....	054
Cyclone - High Efficiency.....	007	Process Gas Recovery .....	060
Cyclone - Medium Efficiency.....	008	Settling Chamber - High Efficiency .....	004
Cyclone - Low Efficiency .....	009	Settling Chamber - Medium Efficiency.....	005
Dust Suppression by Chemical Stabilizers or		Settling Chamber - Low Efficiency .....	006
Wetting Agents .....	062	Spray Tower (Gaseous Control Only).....	052
Electrostatic Precipitator - High Efficiency .....	010	Sulfuric Acid Plant - Contact Process .....	043
Electrostatic Precipitator - Medium Efficiency.....	011	Sulfuric Acid Plant - Double Contact Process.....	044
Electrostatic Precipitator - Low Efficiency .....	012	Vapor Recovery System (Including Condensers,	
Fabric Filter - High Temperature .....	016	Hooding and Other Enclosures).....	047
Fabric Filter - Medium Temperature.....	017	Venturi Scrubber (Gaseous Control Only).....	053
Fabric Filter - Low Temperature .....	018	Wet Scrubber - High Efficiency.....	001
Fabric Filter - Metal Screens (Cotton Gins).....	059	Wet Scrubber - Medium Efficiency .....	002
Flaring.....	023	Wet Scrubber - Low Efficiency.....	003
		Wet Suppression by Water Sprays.....	061

**Table of Emission Estimation Method Codes**

Not applicable / Emissions are known to be zero .....	0
Emissions based on source testing .....	1
Emissions based on material balance using engineering expertise and knowledge of process.....	2
Emissions calculated using emission factors from EPA publications No. AP-42 Compilation of Air Pollution	
Emissions Factors .....	3
Judgment.....	4
Emissions calculated using a special emission factor different from that in AP-42 .....	5
Other (Specify in comments).....	6