

NON-TITLE V PERMIT APPLICATION INSTRUCTIONS
CONCRETE BATCH PLANT SOURCE DESCRIPTION FORM (APC 111)

This form should be used for concrete batch plant permit applications instead of the more general Process or Fuel Burning Source Description form (APC 102) and the Emission Point Description form (APC 101).

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 . 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. 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 Plant #1, Plant #2, or Plant 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. Once assigned, the Unique Source ID should not be changed. If a change is required, the reason for the change as well as the previous Unique Source ID and the new Unique Source ID should be well explained in item 19.
5. Enter the date this plant was constructed or will be constructed.
6. Under the appropriate type of mix (transit, central, or dry), enter the maximum annual production expressed in yards.
7. Indicate whether the conveyor and elevator on the cement receiving equipment is enclosed by checking yes or no. Indicate the compressed air flow in cubic feet per minute, the average load time in tons, and the normal loading time in minutes.

8. Indicate the number of storage silos for cement, fly ash, or other cement substitute and the total combined capacity of the silos in either barrels or tons. Specify which units are used. Indicate type of silo vent control listed. If "other" is checked, explain the type of control in the comments (Line 18).
9. Indicate the weigh-batcher capacity (in yards), the batching rate (in yards per hour), and the batch dumping rate (in yards per minute). Check the type of vent control for the silo to weigh-batcher.
10. Enter the amount (in yards per year) the weigh-batcher discharges to the truck, tilt, and products mixer. Check the type of control for the weigh-batcher discharge chute.
11. Emission estimates for each air contaminant emitted from this point should be based on stack sampling results or engineering calculations. Calculations should be attached on a separate sheet.
12. Indicate the emission point data for the following: (1) silo vent, (2) silo to weigh-batcher vent, and (3) weigh-batcher discharge chute. Enter the height above grade (in feet), the diameter (in feet), emission exit direction (up, down, or horizontal), and air flow rate (in cubic feet per minute).
13. 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.

- 14.** If there is a second silo, enter the stack parameter data similar to Line 11.
- 15.** If there is a second silo, enter particulate emissions similar to Line 12.
- 16.** 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.
- 17.** Indicate type of road dust control for both plant yard and access roads by checking the appropriate boxes. If roads are watered indicate approximate frequency.
- 18.** Estimate the annual tonnage of gravel and sand in the stockpiles. Indicate the number of sides of the stockpile that are enclosed. Indicate the turnover rate in terms of tons per month. Indicate whether the sand and gravel is received damp and if it is wetted when received.
- 19.** Use the comments space for further descriptions or other needed information that was not included previously or information on modifications.
- 20.** 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 Wetting Agents | 062 | Settling Chamber – Low Efficiency | 006 |
| Electrostatic Precipitator – High Efficiency | 010 | Spray Tower (Gaseous Control Only)..... | 052 |
| Electrostatic Precipitator – Medium Efficiency..... | 011 | Sulfuric Acid Plant – Contact Process..... | 043 |
| Electrostatic Precipitator – Low Efficiency | 012 | Sulfuric Acid Plant – Double Contact Process | 044 |
| Fabric Filter – High Temperature | 016 | Vapor Recovery System (Including Condensers, 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

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|---|---|
| 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 |