**MARYLAND DEPARTMENT OF THE ENVIRONMENT**
Air and Radiation Management Administration ● Air Quality Permits Program
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## FORM 5T: Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration

Applicant Name: _____

**Step 1: Quantify premises-wide emissions of Toxic Air Pollutants (TAP) from new and existing installations in accordance with COMAR 26.11.15.04. Attach supporting documentation as necessary.**

| Toxic Air Pollutant (TAP) | CAS Number | Class I or Class II? | Screening Levels (µg/m$^3$) | | | Estimated Premises Wide Emissions of TAP | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Actual Total Existing TAP Emissions | Projected TAP Emissions from Proposed Installation | Premises Wide Total TAP Emissions | |
| | | | 1-hour | 8-hour | Annual | (lb/hr) | (lb/hr) | (lb/hr) | (lb/yr) |
| *ex. ethanol* | *64175* | *II* | *18843* | *3769* | *N/A* | *0.60* | *0.15* | *0.75* | *1500* |
| *ex. benzene* | *71432* | *I* | *80* | *16* | *0.13* | *0.5* | *0.75* | *1.00* | *400* |
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(attach additional sheets as necessary.)

**Note: Screening levels can be obtained from the Department's website (http://www.mde.maryland.gov) or by calling the Department.**

**Step 2: Determine which TAPs are exempt from further review. A TAP that meets either of the following Class I or Class II small quantity emitter exemptions is exempt from further TAP compliance demonstration requirements under Step 3 and Step 4.**

Class II TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(a))
A Class II TAP is exempt from Step 3 and Step 4 if the Class II TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour, and any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m$^3$.

Class I TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(b))
A Class I TAP is exempt from Step 3 and Step 4 if the Class I TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour and 350 pounds per year, any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m$^3$, and any applicable annual screening level for the TAP must be greater than 1 µg/m$^3$.

**If a TAP meets either the Class I or Class II TAP Small Quantity Emitter Exemption Requirements, no further review under Step 3 and Step 4 are required for that specific TAP.**

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**Step 3: Best Available Control Technology for Toxics Requirement (T-BACT, COMAR 26.11.15.05)**
In the following table, list all TAP emission reduction options considered when determining T-BACT for the proposed installation. The options should be listed in order beginning with the most effective control strategy to the least effective strategy. Attach supporting documentation as necessary.

| Target Pollutants | Emission Control Option | % Emission Reduction | Costs | | T-BACT Option Selected? (yes/no) |
|---|---|---|---|---|---|
| | | | Capital | Annual Operating | |
| *ex. ethanol and benzene* | *Thermal Oxidizer* | *99* | *$50,000* | *$100,000* | *no* |
| *ex. ethanol and benzene* | *Low VOC materials* | *80* | *0* | *$100.000* | *yes* |
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(attach additional sheets as necessary)

**Step 4: Demonstrating Compliance with the Ambient Impact Requirement (COMAR 26.11.15.06)**
Each TAP not exempt in Step 2 must be individually evaluated to determine that the emissions of the TAP will not adversely impact public health. The evaluation consists of a series of increasingly non-conservative (and increasingly rigorous) tests. Once a TAP passes a test in the evaluation, no further analysis is required for that TAP. "Demonstrating Compliance with the Ambient Impact Requirement under the Toxic Air Pollutant (TAP) Regulations (COMAR 26.11.15.06)" provides guidance on conducting the evaluation. Summarize your results in the following table. Attach supporting documentation as necessary.

| Toxic Air Pollutant (TAP) | CAS Number | Screening Levels ($\mu g/m^3$) | | | Premises Wide Total TAP Emissions | | Allowable Emissions Rate (AER) per COMAR 26.11.16.02A | | Off-site Concentrations per Screening Analysis ($\mu g/m^3$) | | | Compliance Method Used? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1-hour | 8-hour | Annual | (lb/hr) | (lb/yr) | (lb/hr) | (lb/yr) | 1-hour | 8-hour | Annual | AER or Screen |
| *ex. ethanol* | *64175* | *18843* | *3769* | *N/A* | *0.75* | *1500* | *0.89* | *N/A* | *N/A* | *N/A* | *N/A* | *AER* |
| *ex. benzene* | *71432* | *80* | *16* | *0.13* | *1.00* | *400* | *0.04* | *36.52* | *1.5* | *1.05* | *0.12* | *Screen* |
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(attach additional sheets as necessary)

**If compliance with the ambient impact requirement cannot be met using the allowable emissions rate method or the screening analysis method, refined dispersion modeling techniques may be required. Please consult with the Department's Air Quality Permit Program prior to conducting dispersion modeling methods to demonstrate compliance.**