



GUIDANCE DOCUMENT

Maryland's Toxic Air Pollutant (TAP) Regulations

1. How long has Maryland had toxic air pollutant regulations?

The toxic air pollutant (TAP) regulations were promulgated in September 1988 to protect the public from TAP emissions from stationary sources of air pollution. These regulations, while not unique in structure to other programs in the United States, are noteworthy due to the number of pollutants considered and the number of sources subject to it.

2. What is a TAP?

For new sources (constructed or reconstructed after July 1, 1988), a TAP is any of the listed pollutants in COMAR 26.11.16.06 and .07 plus any other air pollutant that is considered a health hazard, as defined by OSHA.

For existing sources (constructed before July 1, 1988), a TAP is any pollutant listed in Code of Maryland Regulations (COMAR) 26.11.16.06 or .07.

3. Who must comply with the requirements of the regulations?

The owner or operator of any source constructed (or reconstructed) on or after July 1, 1988 that discharges TAPs and is required to obtain an air quality permit to construct must comply with the requirements of the regulations. (A source is a piece of equipment or a process line that emits or has the potential to emit air pollution.)

The owner or operator of a source constructed before July 1, 1988 must comply with the regulations if the source discharges TAPs and is a type of source that was required to obtain a state permit to operate on or before March 1, 1993.

Fuel burning equipment, charbroilers and gasoline stations (COMAR 26.11.15.03B(2)) are exempt from these regulations. In addition, sources may be exempt from individual requirements of the air toxics regulations in certain cases.

4. What are the requirements?

The requirements of the regulation apply differently to sources depending on whether the source is a new source or an existing source. A new source is any source constructed (or reconstructed) on or after July 1, 1988 that discharges TAPs and is required to obtain an air quality permit to construct. An existing source is a source that is not a new source.

The regulations for toxic air pollutants have three basic requirements:

- (a) The first requirement (**COMAR 26.11.15.04**) is that the owner or operator must quantify the emissions of toxic air pollutants (TAPs) from the premises. There is some subtlety here, as the definition of what is a TAP changes depending on whether the source of air pollution is a new source or an existing source;
- (b) The second requirement (**COMAR 26.11.15.05**) specifies that the owner or operator of all new sources of air pollution and certain existing sources must apply the best available control technology for toxics (T-BACT). The T-BACT demonstration is a top-down demonstration of control strategies (including pollution prevention techniques) for the equipment starting with the most effective strategy. T-BACT is that control strategy that reduces the most toxic air pollution while still being cost effective; and
- (c) The third requirement of the TAP regulation (**COMAR 26.11.15.06**) is the ambient impact requirement. For each TAP, the owner and operator must demonstrate that the premises-wide emissions will not adversely affect public health. When evaluating the effect of a TAP on public health, the Department has established benchmarks called screening levels. Public health is protected when the emissions of a facility are less than the maximum allowable emissions or when off-site impact of the premises-wide emissions of each TAP is less than the screening levels for the TAP, as determined by modeling.

Owners and operators subject to these requirements must complete and submit Form 5T as part of their permit to construct application.

5. What is the difference between the lists in COMAR 26.11.16.06 and COMAR 26.11.16.07?

COMAR 26.11.16.06 lists Class I TAPs. The Department considers these Class I toxic air pollutants as carcinogenic, either known, probable, or potential. COMAR 26.11.16.07 lists Class I and Class II TAPs for existing sources (constructed before July 1, 1988).

6. How are screening levels for TAPs established?

COMAR 26.11.16.03 outlines procedures for establishing screening levels. Generally for threshold (non-cancer) effects, the screening level is based on taking a safe worker exposure level and dividing it by 100 to protect against multiple sources and more sensitive individuals. For carcinogenic effects, a unit risk factor from EPA is usually used that would ensure that the maximum exposed individual would not have an increased cancer risk of 1 in 100,000.

The Air Toxics Office maintains a list of screening levels. The screening levels for selected pollutants are posted on the following Air Quality Permits Program website:

<http://mde.maryland.gov/programs/Permits/AirManagementPermits/ToxicAirPollutantRegulationDocuments/Pages/index.aspx>

7. How does a source demonstrate compliance with Maryland's toxic air pollutant ambient impact requirement under COMAR 26.11.15.06?

The first step is to determine whether or not the source qualifies as a Premises Discharging Small Quantities of Class I TAPs (as defined in COMAR 26.11.15.03B(3)(b)) or Class II TAPs (as defined in COMAR 26.11.15.03B(3)(a)). If the emission rate and screening level(s) for a TAP qualifies as a small emitter, the applicant is exempt from the ambient impact requirement (and the T-BACT requirement) for that TAP.

If a TAP does not qualify under the small emitter exemption, then follow the guidance document "Demonstrating Compliance with the Ambient Impact Requirement under the Toxic Air Pollutant (TAP) Regulations (COMAR 26.11.15.06." The evaluation for demonstrating compliance with the ambient impact requirement consists of a series of tests. Once a TAP passes a test in the series of demonstration methodologies, compliance is demonstrated for that TAP, and no further analysis is required for that TAP.

If an owner or operator cannot show compliance with the ambient impact requirement after refined modeling, there are limited options for waivers or special permits, which would allow higher impacts in certain cases. Otherwise, emissions of those TAPs would need to be reduced further by limiting production levels at the facility or by reformulating materials, for example.

8. The Department analyzes each facility individually; what about the combined impacts from multiple facilities?

The screening levels for each TAP are set conservatively enough to take in to account the existence of facilities emitting the same pollutant. (The screening level is either 100 times lower than the safe concentration for workers or reflects a lifetime increased cancer risk of 1 in 100,000.)

9. The U.S. Environmental Protection Agency (U.S. EPA) is also regulating the emissions of toxic air pollutants. How are the federal rules incorporated into Maryland's TAP regulations?

The U.S. EPA has been promulgating national emission standards for hazardous air pollutants (NESHAPs) since 1970. Early standards were based on reducing the risk from a single hazardous pollutant at a particular type of facility. These standards are written into the Code of Federal Regulations (CFR), Title 40, Part 61. Maryland accepted delegation for all of the Part 61 subparts except for B, H, I, K, Q, R, T, and W.

Since 1990, the U.S. EPA has been promulgating standards that reduce emissions of multiple pollutants at a particular type of facility based on achievable technology. The new standards are commonly called "MACT" which stands for maximum achievable control technology. MACT standards are written into the Code of Federal Regulations (CFR), Title 40, Part 63.

For its Urban Air Toxics Strategy, the U.S. EPA has identified "urban air toxics," and area source categories (business types) that pose the greatest potential health threat in urban areas. For these area sources within each business category, the U.S. EPA has developed standards or requirements which use "generally available control technologies or management practices" or GACT standards rather than the more stringent MACT standards required for major sources. These area source standards are also promulgated under 40 CFR, Part 63.

In COMAR, the definition of NESHAP includes pollutants regulated under both Part 61 and Part 63. Part 61 NESHAPs are defined in COMAR 26.11.01.01B(21)(a). Part 63 NESHAPs are defined in COMAR 26.11.01.01B(21)(b).

If a source is subject to a Part 61 NESHAP, the source must comply with the Part 61 NESHAP and quantify emissions under Maryland's regulations, but it is exempt from the T-BACT and ambient impact requirements of Maryland's regulations. However, the exemption applies only to the pollutants that are covered by the Part 61 NESHAP. The source must comply with the requirements of Maryland's regulations for any other pollutants emitted.

If a source is subject to a MACT (Part 63 NESHAP), then the source must comply with the MACT standard. In addition, the Maryland TAP regulations still apply to the source, that is, the source must quantify emissions, apply T-BACT (if applicable), and perform an ambient impact demonstration. For those sources that must apply T-BACT for a pollutant, compliance with the MACT satisfies the T-BACT requirement for the target hazardous air pollutant(s) regulated by the MACT standard.