

Policy: Emission Factors for Toxic Air Contaminants from Miscellaneous Natural Gas Combustion Sources

Policy

When site specific or source category specific emission factors are not available, the emission factors provided in the table below shall be used to calculate Toxic Air Contaminant (TAC) emissions from miscellaneous natural gas combustion source.

TAC	Emission Factor, lb/Mscf	Emission Factor, lb/therm*
Benzene	2.1 E-6	2.06 E-7
Formaldehyde	7.5 E-5	7.35 E-6
Toluene	3.4 E-6	3.33 E-7

- Based on 1020 BTU/scf

Do not use [Compilation of Air Pollutant Emission Factors \(AP-42\)](#) emission factors or [California Air Toxics Emission Factor \(CATEF\)](#) database values for any other TAC, for the reasons discussed below.

Effective date

September 7, 2005

Background

The above emission factors are from:

- [AP-42 Table 1.4-3, Emission Factors for Speciated Organic Compounds from Natural Gas Combustion](#); and
- only include TAC for which a reasonable number of sources have been tested using sound methodology.

[AP-42](#) emission factors for Polycyclic Aromatic Hydrocarbons (PAHs) are not used, because:

- they are based on single tests in which the speciated PAH emissions were found to be below detection levels; and
- Ventura and San Diego Air Pollution Control Districts (APCD) do not use these factors.

[AP-42](#) emission factors for metals are not used because:

- they are based on a small number of tests;
 - they have poor EPA data quality ratings; and
 - Ventura and San Diego APCD do not use these factors.
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Background (continued)

[CATEF](#) database values are not used because:

- there was inadequate data; or
 - the data quality was poor.
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Helpful Definitions

The following is a list of associated definitions.

- **TAC** - Toxic Air Contaminant is an air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a present or potential hazard to human health.
 - **AP-42** – [Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources](#), developed by the U.S. Environmental Protection Agency.
 - **PAHs** – Polycyclic aromatic hydrocarbons are chemical compounds that consist of fused aromatic rings.
 - **CATEF** – [California Air Toxics Emission Factor](#) database contains approximately 2000 air toxics emission factors calculated from source test data collected by the California Air Resources Board.
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Contact

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Document Control

Version	Revised By	Description	Date
1.1	JHL	New Policy	9/7/05
1.2	MCL	Mapping Policy	3/13/08

Approval

Name & Title	Signature	Date
Brian Bateman, Director of Engineering	Signed by Brian Bateman	2/28/2008
