

PART 5
Standards for Toxic Air Contaminants and Hazardous Air Pollutants

REGULATION 5.01 General Provisions

Air Pollution Control District of Jefferson County
Jefferson County, Kentucky

Relates To: KRS Chapter 77 Air Pollution Control

Pursuant To: KRS Chapter 77 Air Pollution Control

Necessity And Function: KRS 77.180 authorizes the Air Pollution Control Board to adopt and enforce all orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation establishes the general provisions for toxic air contaminants, the requirement for environmental acceptability of toxic air contaminant emissions, and the requirement that new or modified processes or process equipment comply with all applicable emission standards upon commencing operation.

SECTION 1 Definitions

Terms used in this regulation that are not defined in this regulation shall have the meaning given to them in Regulation 1.02 *Definitions*. As used in Regulations 5.01, 5.20, 5.21, 5.22, 5.23, and 5.30, the following terms shall have the meaning given to them in this section.

- 1.1 “Benchmark ambient concentration” means the concentration of a toxic air contaminant that is used in determining environmental acceptability pursuant to Regulation 5.21 *Environmental Acceptability for Toxic Air Contaminants*.
- 1.1.1 The benchmark ambient concentration for a carcinogen (BAC_C) is the concentration, including an averaging time frame, of a toxic air contaminant that is representative of an additional lifetime cancer risk of one in one million (1×10^{-6}). The benchmark ambient concentration for a carcinogen is established pursuant to Regulation 5.20 *Methodology for Determining Benchmark Ambient Concentration for a Toxic Air Contaminant* Section 3.
- 1.1.2 The benchmark ambient concentration for the noncarcinogenic effects of a toxic air contaminant (BAC_{NC}) is the concentration, including an averaging time frame, of a toxic air contaminant that is likely to be without an appreciable risk of deleterious effects during a lifetime. The benchmark ambient concentration for the noncarcinogenic effects of a toxic air contaminant is established pursuant to Regulation 5.20 Section 4.
- 1.2 “Category 1 TAC” means a toxic air contaminant listed in Regulation 5.23 *Categories of Toxic Air Contaminants* Section 1.
- 1.3 “Category 2 TAC” means a toxic air contaminant listed in Regulation 5.23 Section 2.
- 1.4 “Category 3 TAC” means a toxic air contaminant listed in Regulation 5.23 Section 3.
- 1.5 “Category 4 TAC” means a toxic air contaminant listed in Regulation 5.23 Section 4.
- 1.6 “De minimis emission” means any of the following:
 - 1.6.1.1 If the estimation of the emission of a TAC that may be contained in a purchased mixture of chemicals is based only upon the information contained on the Material Safety Data Sheet (MSDS) for that mixture, then any resulting emission of the TAC is deemed to be de minimis if the concentration of the TAC in the purchased mixture is listed as “trace” or is less than either of the following:
 - 1.6.1.1.1 For a TAC that is determined to be a carcinogen, 0.1%, by weight, or

- 1.6.1.1.2 For any other TAC, 1.0%, by weight,
- 1.6.1.2 However, if the owner or operator of the process or process equipment performs an analysis to determine the amount of the TAC in a mixture that had been deemed de minimis pursuant to section 1.6.1.1, then, beginning with the process step for which the analysis is applicable and for any subsequent process steps, the emission of that TAC shall no longer be deemed de minimis pursuant to section 1.6.1,
- 1.6.2 The emissions from a process or process equipment or activity that is included on the Trivial Activity list that is part of the District's EPA-approved Title V Operating Permit Program, available on the Internet at "<http://www.louisvilleky.gov/APCD/STAR/STARLinks.htm>",
- 1.6.3 The emissions from a process or process equipment or activity that is included on the Insignificant Activity list that is part of the District's EPA-approved Title V Operating Permit Program, available on the Internet at "<http://www.louisvilleky.gov/APCD/STAR/STARLinks.htm>". This includes both of the following:
 - 1.6.3.1 A process or process equipment or activity at a Group 1 stationary source that was approved on a case-by-case basis pursuant to Regulation 2.16 *Title V Operating Permits* section 1.22.1.2 and is identified in the Title V Operating Permit, and
 - 1.6.3.2 A process or process equipment or activity at a Group 2 stationary source that was approved by the District as having met the provisions of Regulation 2.16 sections 1.22.1.2.1 and 1.22.1.2.2 and for which there was an opportunity for public review and comment, or
- 1.6.4 The allowed emission of a TAC from a process or process equipment that is equal to or less than the amounts calculated by using the following method:
 - 1.6.4.1 Determine the benchmark ambient concentrations pursuant to Regulation 5.20 *Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant* Section 4 (BAC_{NC}) and, if the TAC is determined to be a carcinogen, Section 3 (BAC_C),
 - 1.6.4.2 Multiply the BAC_{NC} (in $\mu\text{g}/\text{m}^3$) by:
 - 1.6.4.2.1 The applicable (based upon the averaging time period of the BAC_{NC}) 1-Hour Factor in Regulation 5.22 *Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant* Section 2 Table 1) to derive the pound-per-hour de minimis value for the BAC_{NC} , and
 - 1.6.4.2.2 The applicable (based upon the averaging time period of the BAC_{NC}) Annual, 24-Hour, or 8-Hour Factor in Regulation 5.22 Section 2 Table 1 to derive the applicable pound-per-averaging time period de minimis value for the BAC_{NC} ,
 - 1.6.4.3 If the TAC is a carcinogen, multiply the BAC_C (in $\mu\text{g}/\text{m}^3$) by:
 - 1.6.4.3.1 0.54 (the 1-Hour Factor in Regulation 5.22 Section 2 Table 1) to derive the pound-per-hour de minimis value for the BAC_C , and
 - 1.6.4.3.2 480 (the Annual Factor in Regulation 5.22 Section 2 Table 1) to derive the annual pound-per-year de minimis value for the BAC_C ,
 - 1.6.4.4 If the TAC is not determined to be a carcinogen, then an emission of that TAC that is equal to or less than both the pound-per-hour de minimis value determined in section 1.6.4.2.1 and the applicable pound-per-averaging time period de minimis value determined in section 1.6.4.2.2 is deemed to be a de minimis emission,
 - 1.6.4.5 If the TAC is determined to be a carcinogen, then compare the pound-per-hour de minimis values derived in sections 1.6.4.2.1 and 1.6.4.3.1 to determine which value is smaller. An emission of that TAC that is equal to or less than both the

smaller pound-per-hour de minimis value and the corresponding applicable averaging time period de minimis value determined in section 1.6.4.2.2 or 1.6.4.3.2 is deemed to be a de minimis emission,

- 1.6.5 The emissions from a new or modified surface coating process, including a coating change, or process equipment, as defined in Regulation 5.21 section 1.6, and for which the potential volatile organic compound emissions are less than 5.0 tons per year. These emissions shall no longer be deemed “de minimis emissions” 18 months after beginning operation of the new or modified surface coating process, including a coating change, or process equipment, and shall comply with Regulation 5.21,
- 1.6.6 The emissions from a motor vehicle fueling or refueling process and process equipment for gasoline and other liquid fuels, or
- 1.6.7 The emissions from the combustion of natural gas. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler or turbine, but does not include the other emissions from a process or process equipment that are not the products of combustion of natural gas.
- 1.7 “Exempt stationary source” means any of the following, but does not include a stationary source that has a permitted process or process equipment other than the processes and process equipment identified in the following sections:
 - 1.7.1 A gasoline dispensing facility subject to the provisions of Regulation 6.40 *Standards of Performance for Gasoline Transfer to Motor Vehicles (Stage II Vapor Recovery and Control)*, that may also include a cold cleaner subject to the provisions of Regulation 6.18 *Standards of Performance for Solvent Metal Cleaning Equipment Section 4 Cold Cleaners*,
 - 1.7.2 A stationary source subject to the provisions of Regulation 6.44 *Standards of Performance For Existing Commercial Motor Vehicle And Mobile Equipment Refinishing Operations* or Regulation 7.79 *Standards of Performance For New Commercial Motor Vehicle And Mobile Equipment Refinishing Operations*, that may also include a cold cleaner subject to the provisions of Regulation 6.18,
 - 1.7.3 A stationary source subject to the provisions of Regulation 5.02 *Adoption of National Emission Standards for Hazardous Air Pollutants* section 3.12 *National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities*, or
 - 1.7.4 A stationary source whose only permitted process or process equipment is a cold cleaner subject to the provisions of Regulation 6.18 Section 4.
- 1.8 “Group 1 stationary source” means a stationary source subject to Regulation 2.16 *Title V Operating Permits*.
- 1.9 “Group 2 stationary source” means a stationary source that either:
 - 1.9.1 Is not a Group 1 or Exempt stationary source, and has applied for an operating permit pursuant to Regulation 2.17 *Federally Enforceable District Origin Operating Permits (FEDOOP stationary source)*, or
 - 1.9.2 Is not a Group 1, FEDOOP, or Exempt stationary source, and the actual emissions from the stationary source are 25 or more tons per year individually of sulfur dioxide, particulate matter, volatile organic compounds, or oxides of nitrogen.
- 1.10 “Peer review” means a documented, in-depth assessment of the assumptions, calculations, extrapolations, alternate interpretations, methodology, acceptance criteria, and conclusions pertaining to a specific scientific or technical work product and its supporting documentation. A peer review shall be conducted by qualified organizations or individuals

who are independent of, but collectively at least equivalent in technical expertise to, those who performed the original work. A peer review shall assess whether the evaluated activities were technically adequate, competently performed, properly documented, and satisfied established quality requirements. A peer review is usually characterized by a one-time interaction or a limited number of interactions by the independent peer reviewers.

SECTION 2 Applicability

This regulation applies to the owner or operator of any process or process equipment that emits or may emit a toxic air contaminant or hazardous air pollutant or for which a toxic air contaminant or hazardous air pollutant emission standard or other requirement is prescribed in a Part 5 regulation. A new or modified process or process equipment shall comply with all applicable emission standards upon commencing operation.

SECTION 3 General Duty

The owner or operator of a process or process equipment from which a toxic air contaminant is or may be emitted shall provide the utmost care and consideration to prevent the potential harmful effects of the emissions resulting from the process or process equipment. A person shall not allow any process or process equipment to emit a toxic air contaminant in a quantity or duration as to be harmful to the health and welfare of humans, animals, and plants.

SECTION 4 Effect on Federal and SIP Emission Standards

If the application of Regulation 5.01, 5.20, 5.21, 5.22, 5.23, or 5.30 results in an emission standard that is less stringent than an applicable federal emission standard promulgated under the Clean Air Act or an applicable emission standard in the State Implementation Plan (SIP), then the federal or SIP emission standard shall apply.

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