COMMONWEALTH OF VIRGINIA
STATE AIR POLLUTION CONTROL BOARD
REGULATIONS FOR THE CONTROL AND ABATEMENT OF AIR POLLUTION

9 VAC 5 CHAPTER 10
GENERAL DEFINITIONS

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9VAC5-10-10 General

A. For the purpose of the Regulations for the Control and Abatement of Air Pollution and subsequent amendments or any orders issued by the board, the words or terms shall have the meanings given them in 9 VAC 5-10-20.

B. Unless specifically defined in the Virginia Air Pollution Control Law or in the Regulations for the Control and Abatement of Air Pollution, terms used shall have the meanings given them by 9 VAC 5-170-20 (definitions, Regulation for General Administration), or commonly ascribed to them by recognized authorities, in that order of priority.

C. In addition to the definitions given in this chapter, some other major divisions (i.e. chapters, parts, articles, etc.) of the Regulations for the Control and abatement of Air Pollution have within them definitions for use with that specific major division.

9VAC5-10-20 Terms defined.

[Revised; the SIP effective dates are May 14, 2004, as corrected June 8, 2004, September 18, 2006, April 26, 2010, April 15, 2011, and October 6, 2014.]

[Note: Asterisks (***) indicate the omission of terms which are not part of the SIP.]

"Actual emissions rate" means the actual rate of emissions of a pollutant from an emissions unit. In general actual emissions shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during the most recent two-year period or some other two-year period which is representative of normal source operation. If the board determines that no two-year period is representative of normal source operation, the board shall allow the use of an alternative period of time upon a determination by the board that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

"Administrator" means the administrator of the U.S. Environmental Protection Agency (EPA) or his authorized representative.

"Affected facility" means, with reference to a stationary source, any part, equipment, facility, installation, apparatus, process or operation to which an emission standard is applicable or any other facility so designated. The term "affected facility" includes any affected source as defined in 40 CFR 63.2.

"Air pollution" means the presence in the outdoor atmosphere of one or more substances which are or may be harmful or injurious to human health, welfare or safety; to animal or plant life; or to property; or which unreasonably interfere with the enjoyment by the people of life or property. **[Note: Same definition is found in 9 VAC 5-170-20]**

"Air quality" means the specific measurement in the ambient air of a particular air pollutant at any given time.

"Air quality control region" means any area designated as such in 9VAC5-20-200.

"Alternative method" means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method, but which has been demonstrated to the satisfaction of the board, in specific cases, to produce results adequate for its determination of compliance.

"Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.

"Ambient air quality standard" means any primary or secondary standard designated as such in 9VAC5-30 (Ambient Air Quality Standards).

"Board" means the State Air Pollution Control Board or its designated representative. **[Note: Same definition is found in 9 VAC 5-170-20]**

"Certified mail" means electronically certified or postal certified mail, except that this definition shall only apply to the mailing of plan approvals, permits, or certificates issued under the provisions of these regulations and only where the recipient has notified the department of the recipient's consent to receive plan approvals, permits, or certificates by electronic mail. Any provision of these regulations requiring the use of certified mail to transmit special orders or administrative orders pursuant to enforcement proceedings shall mean postal certified mail.

"Class I area" means any prevention of significant deterioration area (i) in which virtually any deterioration of existing air quality is considered significant and (ii) designated as such in 9VAC5-20-205.

"Class II area" means any prevention of significant deterioration area (i) in which any deterioration of existing air quality beyond that normally accompanying well-controlled growth is considered significant and (ii) designated as such in 9VAC5-20-205.

"Class III area" means any prevention of significant deterioration area (i) in which deterioration of existing air quality to the levels of the ambient air quality standards is permitted and (ii) designated as such in 9VAC5-20-205.

"Continuous monitoring system" means the total equipment used to sample and condition (if applicable), to analyze, and to provide a permanent continuous record of emissions or process parameters.

"Control program" means a plan formulated by the owner of a stationary source to establish pollution abatement goals, including a compliance schedule to achieve such goals. The plan may be submitted voluntarily, or upon request or by order of the board, to ensure compliance by the owner with standards, policies and regulations adopted by the board. The plan shall include system and equipment information and operating performance projections as required by the board for evaluating the probability of achievement. A control program shall contain the following increments of progress:

1. The date by which contracts for emission control system or process modifications are to be awarded, or the date by which orders are to be issued for the purchase of component parts to accomplish emission control or process modification.

2. The date by which the on-site construction or installation of emission control equipment or process change is to be initiated.

3. The date by which the on-site construction or installation of emission control equipment or process modification is to be completed.

4. The date by which final compliance is to be achieved.

"Criteria pollutant" means any pollutant for which an ambient air quality standard is established under 9VAC5-30 (Ambient Air Quality Standards).

"Day" means a 24-hour period beginning at midnight.

"Delayed compliance order" means any order of the board issued after an appropriate hearing to an owner which postpones the date by which a stationary source is required to comply with any requirement contained in the applicable implementation plan.

"Department" means any employee or other representative of the Virginia Department of Environmental Quality, as designated by the director.

"Director" or "executive director" means the director of the Virginia Department of Environmental Quality or a designated representative.

"Dispersion technique"

1. Means any technique which attempts to affect the concentration of a pollutant in the ambient air by:

a. Using that portion of a stack which exceeds good engineering practice stack height;

b. Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or

c. Increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.

2. The preceding sentence does not include:

a. The reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

b. The merging of exhaust gas streams where:

(1) The owner demonstrates that the facility was originally designed and constructed with such merged gas streams;

(2) After July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of "dispersion techniques" shall apply only to the emissions limitation for the pollutant affected by such change in operation; or

(3) Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emissions limitation or, in the event that no emissions limitation was in existence prior to the merging, an increase in the quantity of pollutants actually emitted prior to the merging, the board shall presume that merging was significantly motivated by an intent to gain emissions credit for greater dispersion. Absent a demonstration by the owner that merging was not significantly motivated by such intent, the board shall deny credit for the effects of such merging in calculating the allowable emissions for the source;

c. Smoke management in agricultural or silvicultural prescribed burning programs;

d. Episodic restrictions on residential woodburning and open burning; or

e. Techniques under subdivision 1 c of this definition which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year.

"Emergency" means a situation that immediately and unreasonably affects, or has the potential to immediately and unreasonably affect, public health, safety or welfare; the health of animal or plant life; or property, whether used for recreational, commercial, industrial, agricultural or other reasonable use. **[Note: Same definition is found in 9 VAC 5-170-20]**

"Emissions limitation" means any requirement established by the board which limits the quantity, rate, or concentration of continuous emissions of air pollutants, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures to assure continuous emission reduction.

"Emission standard" means any provision of 9VAC5-40 (Existing Stationary Sources), 9VAC5-50 (New and Modified Stationary Sources), or 9VAC5-60 (Hazardous Air Pollutant Sources) that prescribes an emissions limitation, or other requirements that control air pollution emissions.

"Emissions unit" means any part of a stationary source which emits or would have the potential to emit any air pollutant.

"Equivalent method" means any method of sampling and analyzing for an air pollutant which has been demonstrated to the satisfaction of the board to have a consistent and quantitative relationship to the reference method under specified conditions.

"EPA" means the U.S. Environmental Protection Agency or an authorized representative.

"Excess emissions" means emissions of air pollutant in excess of an emission standard.

"Excessive concentration" is defined for the purpose of determining good engineering practice (GEP) stack height under subdivision 3 of the GEP definition and means:

1. For sources seeking credit for stack height exceeding that established under subdivision 2 of the GEP definition, a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least 40% in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all sources that is greater than an ambient air quality standard. For sources subject to the provisions of Article 8 (9VAC5-80-1605 et seq.) of Part II of 9VAC5-80 (Permits for Stationary Sources), an excessive concentration alternatively means a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least 40% in excess of the maximum concentration experienced in the absence of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations under this provision shall be prescribed by the new source performance standard that is applicable to the source category unless the owner demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the board, an alternative emission rate shall be established in consultation with the owner;

2. For sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under subdivision 2 of the GEP definition, either (i) a maximum ground-level concentration due in whole or part to downwash, wakes or eddy effects as provided in subdivision 1 of this definition, except that the emission rate specified by any applicable implementation plan (or, in the absence of such a limit, the actual emission rate) shall be used, or (ii) the actual presence of a local nuisance caused by the existing stack, as determined by the board; and

3. For sources seeking credit after January 12, 1979, for a stack height determined under subdivision 2 of the GEP definition where the board requires the use of a field study or fluid model to verify GEP stack height, for sources seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers, and for sources seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not adequately represented by the equations in subdivision 2 of the GEP definition, a maximum ground-level concentration due in whole or part to downwash, wakes or eddy effects that is at least

40% in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

"Existing source" means any stationary source other than a new source or modified source.

"Facility" means something that is built, installed or established to serve a particular purpose; includes, but is not limited to, buildings, installations, public works, businesses, commercial and industrial plants, shops and stores, heating and power plants, apparatus, processes, operations, structures, and equipment of all types.

"Federal Clean Air Act" means Chapter 85 (§ 7401 et seq.) of Title 42 of the United States Code.

"Federally enforceable" means all limitations and conditions which are enforceable by the administrator and citizens under the federal Clean Air Act or that are enforceable under other statutes administered by the administrator. Federally enforceable limitations and conditions include, but are not limited to, the following:

1. Emission standards, alternative emission standards, alternative emissions limitations, and equivalent emissions limitations established pursuant to § 112 of the federal Clean Air Act as amended in 1990.

2. New source performance standards established pursuant to § 111 of the federal Clean Air Act, and emission standards established pursuant to § 112 of the federal Clean Air Act before it was amended in 1990.

3. All terms and conditions in a federal operating permit, including any provisions that limit a source's potential to emit, unless expressly designated as not federally enforceable.

4. Limitations and conditions that are part of an implementation plan.

5. Limitations and conditions that are part of a section 111(d) or section 111(d)/129 plan.

6. Limitations and conditions that are part of a federal construction permit issued under 40 CFR 52.21 or any construction permit issued under regulations approved by EPA in accordance with 40 CFR Part 51.

7. Limitations and conditions that are part of an operating permit issued pursuant to a program approved by EPA into an implementation plan as meeting EPA's minimum criteria for federal enforceability, including adequate notice and opportunity for EPA and public comment prior to issuance of the final permit and practicable enforceability.

8. Limitations and conditions in a Virginia regulation or program that has been approved by EPA under subpart E of 40 CFR Part 63 for the purposes of implementing and enforcing § 112 of the federal Clean Air Act.

9. Individual consent agreements issued pursuant to the legal authority of EPA.

"Good engineering practice" or "GEP," with reference to the height of the stack, means the greater of:

1. 65 meters, measured from the ground-level elevation at the base of the stack;

2. a. For stacks in existence on January 12, 1979, and for which the owner had obtained all applicable permits or approvals required under 9VAC5-80 (Permits for Stationary Sources),

$$Hg = 2.5H,$$

provided the owner produces evidence that this equation was actually relied on in establishing an emissions limitation;

b. For all other stacks,

$$Hg = H + 1.5L,$$

where:

Hg = good engineering practice stack height, measured from the ground-level elevation at the base of the stack,

H = height of nearby structure(s) measured from the ground-level elevation at the base of the stack,

L = lesser dimension, height or projected width, of nearby structure(s) provided that the board may require the use of a field study or fluid model to verify GEP stack height for the source; or

3. The height demonstrated by a fluid model or a field study approved by the board, which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, nearby structures or nearby terrain features.

"Hazardous air pollutant" means an air pollutant to which no ambient air quality standard is applicable and which in the judgment of the administrator causes, or contributes to, air pollution

which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.

"Implementation plan" means the portion or portions of the state implementation plan, or the most recent revision thereof, which has been approved under § 110 of the federal Clean Air Act, or promulgated under § 110(c) of the federal Clean Air Act, or promulgated or approved pursuant to regulations promulgated under § 301(d) of the federal Clean Air Act and which implements the relevant requirements of the federal Clean Air Act.

"Initial emission test" means the test required by any regulation, permit issued pursuant to 9VAC5-80 (Permits for Stationary Sources), control program, compliance schedule or other enforceable mechanism for determining compliance with new or more stringent emission standards or permit limitations or other emissions limitations requiring the installation or modification of air pollution control equipment or implementation of a control method. Initial emission tests shall be conducted in accordance with 9VAC5-40-30.

"Initial performance test" means the test required by (i) 40 CFR Part 60 for determining compliance with standards of performance, or (ii) a permit issued pursuant to 9VAC5-80 (Permits for Stationary Sources) for determining initial compliance with permit limitations. Initial performance tests shall be conducted in accordance with 9VAC5-50-30 and 9VAC5-60-30.

"Isokinetic sampling" means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sample point.

"Locality" means a city, town, county or other public body created by or pursuant to state law. **[Note: Same definition is found in 9 VAC 5-170-20]**

"Mail" means electronic or postal delivery.

"Maintenance area" means any geographic region of the United States previously designated as a nonattainment area and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan and designated as such in 9VAC5-20-203.

"Malfunction" means any sudden failure of air pollution control equipment, of process equipment, or of a process to operate in a normal or usual manner, which failure is not due to intentional misconduct or negligent conduct on the part of the owner or other person. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

"Monitoring device" means the total equipment used to measure and record (if applicable) process parameters.

"Nearby" as used in the definition of good engineering practice (GEP) is defined for a specific structure or terrain feature and:

1. For purposes of applying the formulae provided in subdivision 2 of the GEP definition means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (1/2 mile); and

2. For conducting demonstrations under subdivision 3 of the GEP definition means not greater than 0.8 km (1/2 mile), except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to 10 times the maximum height (Ht) of the feature, not to exceed two miles if such feature achieves a height (Ht) 0.8 km from the stack that is at least 40% of the GEP stack height determined by the formulae provided in subdivision 2 b of the GEP definition or 26 meters, whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.

"Nitrogen oxides" means all oxides of nitrogen except nitrous oxide, as measured by test methods set forth in 40 CFR Part 60.

"Nonattainment area" means any area which is shown by air quality monitoring data or, where such data are not available, which is calculated by air quality modeling (or other methods determined by the board to be reliable) to exceed the levels allowed by the ambient air quality standard for a given pollutant including, but not limited to, areas designated as such in 9VAC5-20-204.

"One hour" means any period of 60 consecutive minutes.

"One-hour period" means any period of 60 consecutive minutes commencing on the hour.

"Organic compound" means any chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic disulfide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

"Owner" means any person, including bodies politic and corporate, associations, partnerships, personal representatives, trustees and committees, as well as individuals, who owns, leases, operates, controls or supervises a source.

"Particulate matter" means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.

"Particulate matter emissions" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by the applicable reference method, or an equivalent or alternative method.

"PM_{10}" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the applicable reference method or an equivalent method.

"PM_{10} emissions" means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by the applicable reference method, or an equivalent or alternative method.

"Performance test" means a test for determining emissions from new or modified sources.

"Person" means an individual, corporation, partnership, association, a governmental body, a municipal corporation, or any other legal entity.

"Pollutant" means any substance the presence of which in the outdoor atmosphere is or may be harmful or injurious to human health, welfare or safety, to animal or plant life, or to property, or which unreasonably interferes with the enjoyment by the people of life or property.

"Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution 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 its effect on emissions is state and federally enforceable.

"Prevention of significant deterioration area" means any area not designated as a nonattainment area in 9VAC5-20-204 for a particular pollutant and designated as such in 9VAC5-20-205.

"Proportional sampling" means sampling at a rate that produces a constant ratio of sampling rate to stack gas flow rate.

"Public hearing" means, unless indicated otherwise, an informal proceeding, similar to that provided for in § 2.2-4007.02 of the Administrative Process Act, held to afford persons an opportunity to submit views and data relative to a matter on which a decision of the board is pending.

"Reference method" means any method of sampling and analyzing for an air pollutant as described in the following EPA regulations:

1. For ambient air quality standards in 9VAC5-30 (Ambient Air Quality Standards): The applicable appendix of 40 CFR Part 50 or any method that has been designated as a reference method in accordance with 40 CFR Part 53, except that it does not include a method for which a reference designation has been canceled in accordance with 40 CFR 53.11 or 40 CFR 53.16.

2. For emission standards in 9VAC5-40 (Existing Stationary Sources) and 9VAC5-50 (New and Modified Stationary Sources): Appendix M of 40 CFR Part 51 or Appendix A of 40 CFR Part 60.

3. For emission standards in 9VAC5-60 (Hazardous Air Pollutant Sources): Appendix B of 40 CFR Part 61 or Appendix A of 40 CFR Part 63.

"Regional director" means the regional director of an administrative region of the Department of Environmental Quality or a designated representative.

"Regulation of the board" means any regulation adopted by the State Air Pollution Control Board under any provision of the Code of Virginia. **[Note: Same definition is found in 9 VAC 5-170-20]**

"Regulations for the Control and Abatement of Air Pollution" means 9VAC5-10 (General Definitions) through 9VAC5-80 (Permits for Stationary Sources).

"Reid vapor pressure" means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquefied petroleum gases as determined by American Society for Testing and Materials publication, "Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method)" (see 9VAC5-20-21).

"Run" means the net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

"Section 111(d) plan" means the portion or portions of the plan, or the most recent revision thereof, which has been approved under 40 CFR 60.27(b) in accordance with § 111(d)(1) of the federal Clean Air Act, or promulgated under 40 CFR 60.27(d) in accordance with § 111(d)(2) of the federal Clean Air Act, and which implements the relevant requirements of the federal Clean Air Act.

"Section 111(d)/129 plan" means the portion or portions of the plan, or the most recent revision thereof, which has been approved under 40 CFR 60.27(b) in accordance with §§ 111(d)(1) and 129(b)(2) of the federal Clean Air Act, or promulgated under 40 CFR 60.27(d) in accordance with §§ 111(d)(2) and 129(b)(3) of the federal Clean Air Act, and which implements the relevant requirements of the federal Clean Air Act.

"Shutdown" means the cessation of operation of an affected facility for any purpose.

"Source" means any one or combination of the following: buildings, structures, facilities, installations, articles, machines, equipment, landcraft, watercraft, aircraft or other contrivances which contribute, or may contribute, either directly or indirectly to air pollution. Any activity by any person that contributes, or may contribute, either directly or indirectly to air pollution, including, but not limited to, open burning, generation of fugitive dust or emissions, and cleaning with abrasives or chemicals. **[Note: A similar but slightly different version is found in 9 VAC 5-170-20]**

"Stack" means any point in a source designed to emit solids, liquids or gases into the air, including a pipe or duct, but not including flares.

"Stack in existence" means that the owner had:

1. Begun, or caused to begin, a continuous program of physical on site construction of the stack; or

2. Entered into binding agreements or contractual obligations, which could not be canceled or modified without substantial loss to the owner, to undertake a program of construction of the stack to be completed in a reasonable time.

"Standard conditions" means a temperature of 20°C (68°F) and a pressure of 760 mm of Hg (29.92 inches of Hg).

"Standard of performance" means any provision of 9VAC5-50 (New and Modified Stationary Sources) which prescribes an emissions limitation or other requirements that control air pollution emissions.

"Startup" means the setting in operation of an affected facility for any purpose.

"State enforceable" means all limitations and conditions which are enforceable by the board or department, including, but not limited to, those requirements developed pursuant to 9VAC5-170-160; requirements within any applicable regulation, order, consent agreement or variance; and any permit requirements established pursuant to 9VAC5-80 (Permits for Stationary Sources).

"State Implementation Plan" means the plan, including the most recent revision thereof, which has been approved or promulgated by the administrator, U.S. Environmental Protection Agency, under § 110 of the federal Clean Air Act, and which implements the requirements of § 110.

"Stationary source" means any building, structure, facility or installation which emits or may emit any air pollutant. A stationary source shall include all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e., which have the same two-digit code) as described in the Standard Industrial Classification Manual (see 9VAC5-20-21).

"These regulations" means 9VAC5-10 (General Definitions) through 9VAC5-80 (Permits for Stationary Sources).

"Total suspended particulate" or "TSP" means particulate matter as measured by the reference method described in Appendix B of 40 CFR Part 50.

"True vapor pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute (API)

publication, "Evaporative Loss from External Floating-Roof Tanks" (see 9VAC5-20-21). The API procedure may not be applicable to some high viscosity or high pour crudes. Available estimates of true vapor pressure may be used in special cases such as these.

"Urban area" means any area consisting of a core city with a population of 50,000 or more plus any surrounding localities with a population density of 80 persons per square mile and designated as such in 9VAC5-20-201.

"Vapor pressure," except where specific test methods are specified, means true vapor pressure, whether measured directly, or determined from Reid vapor pressure by use of the applicable nomograph in American Petroleum Institute publication, "Evaporative Loss from Floating-Roof Tanks" (see 9VAC5-20-21).

"Virginia Air Pollution Control Law" means Chapter 13 (§ 10.1-1300 et seq.) of Title 10.1 of the Code of Virginia.

"Volatile organic compound" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions.

1. This includes any such organic compounds which have been determined to have negligible photochemical reactivity other than the following:

a. Methane;

b. Ethane;

c. Methylene chloride (dichloromethane);

d. 1,1,1-trichloroethane (methyl chloroform);

e. 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);

f. Trichlorofluoromethane (CFC-11);

g. Dichlorodifluoromethane (CFC-12);

h. Chlorodifluoromethane (HCFC-22);

i. Trifluoromethane (HFC-23);

j. 1,2-dichloro 1,1,2,2,-tetrafluoroethane (CFC-114);

k. Chloropentafluoroethane (CFC-115);

l. 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123);

m. 1,1,1,2-tetrafluoroethane (HFC-134a);

n. 1,1-dichloro 1-fluoroethane (HCFC-141b);

o. 1-chloro 1,1-difluoroethane (HCFC-142b);

p. 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);

q. Pentafluoroethane (HFC-125);

r. 1,1,2,2-tetrafluoroethane (HFC-134);

s. 1,1,1-trifluoroethane (HFC-143a);

t. 1,1-difluoroethane (HFC-152a);

u. Parachlorobenzotrifluoride (PCBTF);

v. Cyclic, branched, or linear completely methylated siloxanes;

w. Acetone;

x. Perchloroethylene (tetrachloroethylene);

y. 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);

z. 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);

aa. 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);

bb. Difluoromethane (HFC-32);

cc. Ethylfluoride (HFC-161);

dd. 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);

ee. 1,1,2,2,3-pentafluoropropane (HFC-245ca);

ff. 1,1,2,3,3-pentafluoropropane (HFC-245ea);

gg. 1,1,1,2,3-pentafluoropropane (HFC-245eb);

hh. 1,1,1,3,3-pentafluoropropane (HFC-245fa);

ii. 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);

jj. 1,1,1,3,3-pentafluorobutane (HFC-365mfc);

kk. Chlorofluoromethane (HCFC-31);

ll. 1 chloro-1-fluoroethane (HCFC-151a);

mm. 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);

nn. 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$ or HFE-7100);

oo. 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-hepta-fluoropropane ($(CF_3)_2CFCF_2OCH_3$);

pp. 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$ or HFE-7200);

qq. 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-hepta-fluoropropane ($(CF_3)_2CFCF_2OC_2H_5$);

rr. Methyl acetate;

ss. 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-$C_3F_7OCH_3$) (HFE-7000);

tt. 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500);

uu. 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea);

vv. methyl formate ($HCOOCH_3$);

ww. 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300);

xx. propylene carbonate;

yy. dimethyl carbonate;

zz. trans-1,3,3,3-tetrafluoropropene;

aaa. HCF_2OCF_2H (HFE-134);

bbb. $HCF_2OCF_2OCF_2H$ (HFE-236cal2);

ccc. $HCF_2OCF_2CF_2OCF_2H$ (HFE-338pcc13);

ddd. $HCF_2OCF_2OCF_2CF_2OCF_2H$ (H-Galden 1040x or H-Galden ZT 130 (or 150 or 180)); ~~and~~

eee. reserved;

fff. 2-amino-2-methyl-1-propanol; and

ggg. Perfluorocarbon compounds which fall into these classes:

(1) Cyclic, branched, or linear, completely fluorinated alkanes;

(2) Cyclic, branched, or linear, completely fluorinated

ethers with no unsaturations;

(3) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

(4) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

2. For purposes of determining compliance with emissions standards, volatile organic compounds shall be measured by the appropriate reference method in accordance with the provisions of 9VAC5-40-30 or 9VAC5-50-30, as applicable. Where such a method also measures compounds with negligible photochemical reactivity, these negligibly-reactive compounds may be excluded as a volatile organic compound if the amount of such compounds is accurately quantified, and such exclusion is approved by the board.

3. As a precondition to excluding these compounds as volatile organic compounds or at any time thereafter, the board may require an owner to provide monitoring or testing methods and results demonstrating, to the satisfaction of the board, the amount of negligibly-reactive compounds in the emissions of the source.

4. Exclusion of the above compounds in this definition in effect exempts such compounds from the provisions of emission standards for volatile organic compounds. The compounds are exempted on the basis of being so inactive that they will not contribute significantly to the formation of ozone in the troposphere. However, this exemption does not extend to other properties of the exempted compounds which, at some future date, may require regulation and limitation of their use in accordance with requirements of the federal Clean Air Act.

5. The following compound is a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements which apply to VOCs and shall be uniquely identified in emission reports, but is not a VOC for purposes of VOC emissions standards, VOC emission limitations, or VOC content requirements: t-butyl acetate.

"Welfare" means that language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

9 VAC 5-10-30 Abbreviations

A	-	ampere
act	-	actual
AQCR	-	Air Quality Control Region
AQMA	-	Air Quality Maintenance Area
ASTM	-	American Society for Testing and Materials
Avg	-	average
Be	-	Beryllium
Btu	-	British thermal unit
°C	-	degree Celsius (centigrade)
cal	-	calorie
cc	-	cubic centimeter
CdS	-	cadmium sulfide
cfm	-	cubic feet per minute
CFR	-	Code of Federal Regulations (40 CFR Part 35 means Part 35 of Title 40 of the Code of Federal Regulations; 40 CFR 35.20 means Section 35.20 in Part 35 of Title 40 of the Code of Federal Regulations
CO	-	carbon monoxide
CO_2	-	carbon dioxide
COH	-	Coefficient of Haze (unit of measure for the soiling index)
cu ft	-	cubic feet
d	-	day
dcf	-	dry cubic feet
dcm	-	dry cubic meter
dscf	-	dry cubic feet at standard conditions

dscm	-	dry cubic meter at standard conditions
EPA	-	U.S. Environmental Protection Agency
eq	-	equivalents
°F	-	degree Fahrenheit
FR	-	Federal Register (36 FR 1492, May 3, 1971 means page 1492, dated May 3, 1971, of Volume 36 of the Federal Register – the page indicated is the first page of the referenced material)
ft	-	feet
ft^2	-	square feet
ft^3	-	cubic feet
g	-	gram
gal	-	gallon
GEP	-	good engineering practice
g-eq	-	gram equivalents
gr	-	grain
HCL	-	hydrochloric acid or hydrogen chloride
Hg	-	mercury
hp	-	horse power
hr	-	hour
H_2O	-	water
H_2S	-	hydrogen sulfide
H_2SO_4	-	sulfuric acid
Hz	-	hertz
I.D.	-	inside diameter
in	-	inch
inHg	-	inches of mercury

inH_2O	-	inches of water
J	-	joule
°K	-	degree Kelvain
k	-	1,000
kg	-	kilogram = 10^3 gram
l	-	liter
lb	-	pount
lpm	-	liter per minute
M	-	molar
m	-	meter
m^3	-	cubic meter
meq	-	milliequivalent
Mg	-	megagram = 10^6 gram
mg	-	milligram = 10^{-3} gram
min	-	minute
ml	-	milliliter = 10^{-3} liter
mm	-	millimeter = 10^{-3} meter
mol	-	mole
mol.wt.	-	molecular weight
MSA	-	Metropolitan Statistical Area
mV	-	millivolt = 10^{-3} volt
N	-	normal
n	-	newton
N_2	-	nitrogen
ng	-	nanogram = 10^{-9} gram

nm	-	nanometer = 10^{-9} meter
NO	-	nitric oxide
NO_2	-	nitrogen dioxide
NO_x	-	nitrogen oxides
O_2	-	oxygen
O.D.	-	outside diameter
oz	-	ounce
Pa	-	pascal
ppb	-	parts per billion
PM	-	particulate matter; any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.
PM_{10}	-	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
$PM_{2.5}$	-	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
ppm	-	parts per million
psi	-	pounds per square inch
psia	-	pounds per square inch absolute
psig	-	pounds per square inch gauge
°R	-	degree Rankine
s	-	second
scf	-	cubic feet at standard conditions
scfh	-	cubic feet per hour at standard conditions
scm	-	cubic meter at standard conditions
sec	-	second
SO_2	-	sulfur dioxide

SO_3	-	sulfur trioxide
SO_x	-	sulfur oxides
sq ft	-	square feet
std	-	at standard conditions or standard
µg	-	microgram = 10^{-6} gram
µl	-	microliter = 10^{-6} liter
USC	-	United States Code
C	-	volt
v/v	-	volume per volume
VOC	-	volatile organic compound
W	-	watt
w.g.	-	water gauge
yd^2	-	square yard
yr	-	year
%	-	percent
Ω	-	ohm
§	-	section