

**AGENCY OF NATURAL RESOURCES**

**Waterbury, Vermont**

**ENVIRONMENTAL PROTECTION REGULATIONS**

**CHAPTER 5**

**AIR POLLUTION CONTROL**

**Subchapter I. Definitions\***

**Section 5-101 As Used in This Part, All Terms Not Defined Herein Shall Have The Meaning Given Them in The Act**

- (1) "Act" refers to the Air Pollution Control Act, 10 V.S.A. Section 551 et seq., as amended.
- (2) "Actual Emissions" means the rate of emissions, as of a particular date, which equals the average rate at which a source actually emitted the contaminant during the preceding two-year period. The Secretary may allow the use of a different time period upon a determination that it is more representative of normal source operation. For any source which has not begun normal operations on the particular date, actual emissions shall equal the allowable emissions of the source on that date.
- (3) "Adverse Impact on Visibility" means visibility impairment which, as determined on a case-by-case basis by the Air Pollution Control Officer, interferes with the management, protection, preservation or enjoyment of a person's visual experience when visiting any sensitive area or any Class I Federal area. Any such determination will take into account the geographic extent, intensity, duration, frequency and time of visibility impairment and how these factors correlate with (1) times of visitor use and (2) the frequency and timing of natural conditions that reduce visibility.
- (4) "Agency" means the Agency of Natural Resources.
- (5) "Air Contaminant" means dust, fumes, mist, smoke, other particulate matter, vapor, gas, odorous substances, or any combination thereof.

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\*Note: Definitions which have been Incorporated By Reference into the Vermont State Implementation Plan are numbered consecutively above by EPA, and do not necessarily correspond to the State's assigned definition number in the Vermont State Regulation. It is Vermont's practice to renumber their definitions in Section 5-101 whenever definitions are added or deleted from the State Regulation.

- (6) "Air Pollution" means the presence in the outdoor atmosphere of one or more air contaminants in such quantities, and duration as is or tends to be injurious to human health or welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life, or property, in accordance with the establishment of ambient air quality standards for the state as a whole or any part thereof, based on nationally recognized criteria applicable to the State of Vermont.
- (7) "Air Pollution Control Officer" means the person whose functional responsibility is to direct and coordinate the air pollution control activities and program for the State.
- (8) "Allowable Emissions" means the emission rate calculated using the maximum rated capacity of the source and, if applicable, either:
  - (a) The applicable emission standard contained in these regulations, if any, or
  - (b) The emission rate or design, operational or equipment standard specified in any order or agreement issued under these regulations.
- (9) "Ambient Air" means that portion of the atmosphere, external to buildings, to which the general public has access.
- (10) "Ambient Air Quality Standards" means any standard which establishes the largest allowable concentration of a specific air contaminant in the ambient air space.
- (11) "Attainment Area" (see definition of nonattainment area).
- (12) "Bulk Gasoline Plant" means a gasoline storage and distribution facility with an average daily throughput of 20,000 gallons (76,000 liters) of gasoline or less on a 30-day rolling average.
- (13) "Bulk Gasoline Terminal" means a gasoline storage and distribution facility with an average daily throughput of more than 20,000 gallons (76,000 liters) of gasoline on a 30-day rolling average.
- (14) "CFR" means the Code of Federal Regulations.
- (15) "Capture Efficiency" means the weight per unit time of VOC entering a capture system and delivered to a control device divided by the weight per unit time of total VOC generated by a source of VOC, expressed as a percentage.
- (16) "Capture System" means all equipment (including, but not limited to, hoods, ducts, fans, booths, ovens, dryers, etc.) that contains, collects, and transports an air contaminant to a control device.

- (17) "Class I Federal Area" means any area identified in 40 CFR 81, Subpart D.
- (18) "Coating" means a material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealants, adhesives, inks, maskants, and temporary protective coatings.
- (19) "Coating Unit" means a series of one or more coating applicators and any associated drying area and/or oven wherein a coating is applied dried and/or cured. A coating unit ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating. It is not necessary to have an oven or a flashoff area in order to be included in this definition
- (20) "Combustion Contaminants" are air contaminants discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.
- (21) "Commence Operation" means to begin using, on a full time basis, any equipment in a manner that represents normal operational procedures.
- (22) "Control Device" means equipment (such as an incinerator or carbon adsorber) used to reduce, by destruction or removal, the amount of air contaminants in an air stream prior to discharge to the ambient air.
- (23) "Emission" means a release of air contaminants into the ambient air space.
- (24) "Equivalent Method" means any method of sampling and/or analyzing for an air contaminant which has been demonstrated to the Air Pollution Control Officer's satisfaction to have a consistent and quantitatively known relationship to a reference method under specific conditions.
- (25) "Federal Land Manager" means the Secretary of the department with authority over a Class I Federal area or his or her representative.
- (26) "Federally Enforceable" means all limitations and conditions which are enforceable by the U.S. Environmental Protection Agency, whether contained in federal regulations, a state implementation plan, or construction or operating permits.
- (27) "Flashoff Area" means the space between the coating application area and the oven.
- (28) "Flue Gas" means air contaminants which enter the ambient air through a flue or stack.
- (29) "Forest Land Area" means at least 25 acres of land that is at least 10% stocked with trees of any size.
- (30) "Fossil Fuel" means coal, coke, distillate oil, residual oil, and natural gas.

- (31) "Fuel" - any form of combustible matter--solid, liquid or gas, including combustible refuse.
- (32) "Fuel-Burning Equipment" means any furnace, boiler, and/or apparatus, used in the process of burning fuel for the primary purpose of producing heat or power.
- (33) "Fugitive Particulate Matter" means any particulate matter generated by a process operation which is emitted into the ambient air space from points other than a stack.
- (34) "Garbage" -- waste resulting from distribution, preparation and serving of food.
- (35) "Gaseous Matter" is any material that exists in the gaseous state at standard conditions.
- (36) "Gasoline Dispensing Facility" means any site where gasoline is transferred from a stationary storage tank to a motor vehicle gasoline tank used to provide fuel to the engine of that motor vehicle.
- (37) "Gasoline Tank Truck" means a delivery tank truck with a capacity of 4000 gallons or greater used at bulk gasoline plants, bulk gasoline terminals or gasoline dispensing facilities that is loading or unloading gasoline.
- (38) "Greenhouse Gases" means carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and any other chemical or physical substance emitted into the air that the Secretary may reasonably anticipate to cause or contribute to climate change.
- (39) "Hazardous Air Contaminant" means an air contaminant for which no ambient air quality standard has been adopted and which in the judgment of the Secretary, taking into account its quantity, concentration or physical, chemical or infectious characteristics, 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.
- (40) "Hearing Officer" means an employee or representative of the Agency appointed by the Secretary to hear any or all matters in any case properly before the Secretary under Subchapter VI of these regulations.
- (41) "Heat Input" shall be the aggregate heat content of all fuels introduced into any fuel burning equipment. For the purposes of review of the construction or installation of an air contaminant source, the heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater.
- (42) "Horsepower (H.P.)" is a unit that is equal to 10 square feet of boiler heating surface.

- (43) "Incinerator" is any structure or furnace in which combustion takes place, the primary purpose of which is the reduction in volume and weight of an unwanted material.
- (44) "Major Modification" means any modification of a major stationary source that would result in a significant increase in actual emissions of any air contaminant.
- (45) "Major Stationary Source" means any stationary source or modification whose allowable emissions of any air contaminant, except for lead and greenhouse gases, are equal to or greater than 50 tons per year. For the air contaminant lead, "major stationary source" means any stationary source or modification whose allowable emissions of lead are equal to or greater than five tons per year. For the air contaminant that is greenhouse gases, "major stationary source" means any stationary source or modification whose allowable emissions of total greenhouse gases are: (1) on a mass basis, equal to or greater than the thresholds in 40 C.F.R. §51.166(b)(1)(i), and (2) on a carbon dioxide equivalent (CO<sub>2</sub>e) basis, subject to regulation at that stationary source or modification.
- (46) "Modification" means any physical change in, or change in the method of operation of, a stationary source which increases the actual emission rate of any air contaminant, regardless of any emission reductions achieved at the source, except that routine maintenance, repair and replacement shall not be considered physical changes.
- (47) "Motor Vehicle" shall include all vehicles propelled or drawn by power other than muscular power, except tractors used entirely for work on the farm, vehicles running only on stationary rails or tracks, motorized highway building equipment, road making appliances.
- (48) "Multiple Chamber Incinerator" is any article, machine, equipment, contrivance, structure, or part of a structure used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned.
- (49) "Municipal Waste Combustor Acid Gases (measured as sulfur dioxide and hydrogen chloride)" means all acid gases emitted in the exhaust gases from MWC units including, but not limited to, sulfur dioxide and hydrogen chloride gases.
- (50) "Municipal Waste Combustor Metals (measured as particulate matter)" means metals and metal compounds emitted in the exhaust gases from MWC units.
- (51) "Municipal Waste Combustor Organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans)" means organic compounds emitted in the exhaust gases from MWC units and includes total tetra- through octa-chlorinated dibenzo-p-

dioxins and dibenzofurans.

- (52) “Municipal Solid Waste Landfill Emissions (measured as nonmethane organic compounds)” means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.
- (53) "Natural Wood" -- for the purposes of these regulations, natural wood means trees, including logs, boles, trunks, branches, limbs, and stumps, lumber including timber, logs or slabs, especially when dressed for use. This definition shall also include pallets which are used for the shipment of various materials so long as such pallets are not chemically treated with any preservative, paint, or oil. This definition shall not extend to materials which have resulted from the demolition of any building, or to other wood products such as sawdust.
- (54) "Nonattainment Area" means, for any air contaminant, an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the Secretary to be reliable) to exceed any applicable ambient air quality standard for such contaminant. "Attainment Area" means all other areas, except those areas for which there is not sufficient data to allow classification ("unclassified areas").
- (55) "Odor" means that property of gaseous, liquid, or solid materials that elicits a physiologic response by the human sense of smell.
- (56) "Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of any object in the background.
- (57) "Open Burning" -- the burning of any type of combustible material in the open where the products of combustion are emitted directly into the ambient air space without passing through a stack, chimney, or other enclosure. Burning shall include ignition, permitting or causing ignition and suffering, allowing or maintaining burning.
- (58) "Oven" means a chamber which is used to bake, cure, polymerize, and/or dry a coating.
- (59) "Overall Emission Reduction Efficiency" means the weight per unit time of VOC removed or destroyed by a control device divided by the weight per unit time of VOC generated by a source, expressed as a percentage. The overall emission reduction efficiency can also be calculated as the product of the capture efficiency and the control device destruction or removal efficiency.
- (60) "Particulate Matter" means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than one-hundred (100) micrometers.
- (61) “Particulate Matter Emissions” means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by applicable reference

methods, or an equivalent or alternative method, specified in 40 CFR Chapter 1. Emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures.

- (62) "Party" means any person named or admitted as a party under the Act or Subchapter VI of these regulations, or properly seeking and entitled as of right to be admitted as a party thereunder.
- (63) "Pathological Waste" -- human and animal remains consisting of carcasses, organs and solid organic waste.
- (64) "Person" means any individual, or group of individuals organized for fraternal or any other purpose, partnership, firm, association, municipality, public or private corporation, state agency or subdivision of the state, or any other legal entity.
- (65) "PM<sub>10</sub>" means particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers as measured by a reference method based on Appendix J of 40 CFR Part 50 and designated in accordance with 40 CFR Part 53, or by an equivalent method designated in accordance with 40 CFR Part 53.
- (66) "PM<sub>10</sub> Emissions" means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method, specified in 40 CFR Chapter 1. Emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures.
- (67) "PM<sub>2.5</sub>" means particulate matter with an aerodynamic diameter less than or equal to a nominal two-and-a-half (2.5) micrometers as measured by a reference method based on Appendix L of 40 CFR Part 50 and designated in accordance with 40 CFR Part 53, or by an equivalent method designated in accordance with 40 CFR Part 53.
- (68) "PM<sub>2.5</sub> direct emissions" means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal two-and-a-half (2.5) micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method, specified in 40 CFR Chapter 1. Emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. It does not include emissions of other gaseous precursors which may subsequently contribute to formation of secondary PM<sub>2.5</sub> particles through chemical reactions.
- (69) "Prevention of Significant Deterioration (PSD)" means the protection of the public health and welfare from any actual or potential adverse effect which in the Secretary's judgment may reasonably be anticipated to occur from air pollution which would deteriorate air quality in any portion of the State where existing air quality is better than the ambient air

quality standards.

- (70) "Process Unit" refers to a unique and/or distinct part of the total process, where raw or partially processed materials undergo a chemical or physical change which generates air contaminants. Within any process unit when any material undergoes a series of operations which are capable of emitting particulate matter and which employ any combination of machines, equipment, or other devices used for processing the material either continuously or in batches, the total process weight for the series of operations shall be the weight of materials introduced to the series as a whole. Any material which is the product of any operation in the series shall not be counted as part of the process weight for any other operation in the series.
- (71) "Process Weight" is the total weight of all materials introduced into any process unit which may cause discharge into the ambient air space of particulate matter. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not. "THE PROCESS WEIGHT PER HOUR" will be derived by dividing the total process weight by the number of hours in a complete operation from beginning of any given process to the completion thereof, excluding any time during which the equipment is idle.
- (72) "Public Notice" -- notice given to the public by prominent advertisement in the State announcing the date(s), time(s), and place(s) of public hearings as required in the Code of Federal Regulations, CFR Title 40, Part 51.4. Notice shall be given at least 30 days prior to the date of such hearings.
- (73) "Reasonable Progress Toward the Remediating of Existing Man-made Visibility Impairment in a Sensitive Area" means achieving and maintaining a statewide average emission rate of less than or equal to 1.2 pounds of sulfur dioxide released per million British thermal units of heat input for the category of sources including all fuel-burning equipment with a rated heat input greater than or equal to 100 million British thermal units per hour, by no later than 1995 as described in the Implementation Plan for the Protection of Visibility in Vermont.
- (74) "Reasonably Available Control Technology" means devices, systems, process modifications, or other apparatus or techniques designed to prevent or control emissions that are reasonably available, taking into account the social, environmental and economic impact of such controls, and alternative means of emission control.
- (75) "Refuse" -- garbage, rubbish, and mixed municipal wastes.
- (76) "Respondent" means any adverse party in a case or enforcement action under these regulations.
- (77) "Ringelmann Chart" -- the chart published and described in U.S. Bureau of Mines



Information Circular 8333 (May 1967) and on which are illustrated graduated shades of grey for use in estimating the light obscuring capacity of smoke.

- (78) "Rubbish" -- solids or liquids not considered to be highly flammable or explosive, such as, but not limited to, paper, rags, ashes, leaves, tree branches, yard trimmings, furniture, tin cans, glass, crockery, demolition wastes, junk automobiles, tires, automotive parts and other similar materials.
- (79) "Secretary" means the Secretary of the Agency of Environmental Conservation or such person as the Secretary may designate.
- (80) "Significant" means, in reference to a modification's increase in actual emissions or a source's allowable emissions of any of the following air contaminants, a rate of emissions that would equal or exceed any of the following rates:

<b>Air Contaminant</b>	<b>Tons Per Year</b>
Carbon monoxide	50
Nitrogen oxides	40
Sulfur dioxide	40
Particulate matter emissions	25
PM <sub>10</sub> emissions	15
PM <sub>2.5</sub> * <sup>1</sup>	
PM <sub>2.5</sub> direct emissions	10
Sulfur dioxide	40
Nitrogen oxides	40
Volatile organic compounds(VOC)	40
Lead	0.6
Fluorides	3
Sulfuric acid mist	7
Hydrogen sulfide (H <sub>2</sub> S)	10
Total reduced sulfur (including H <sub>2</sub> S)	10
Reduced sulfur compounds (including H <sub>2</sub> S)	10

Ozone* <sup>2</sup>	
Volatile organic compounds (VOC)	40
Nitrogen oxides	40
Municipal waste combustor organics (measured as total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans)	3.5 x 10 <sup>-6</sup>
Municipal waste combustor metals (measured as particulate matter)	15
Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride)	40
Municipal solid waste landfill emissions (measured as nonmethane organic compounds)	50
Greenhouse gases * <sup>3</sup>	

\*<sup>1</sup> For PM<sub>2.5</sub>, significant means either 10 tons per year or more of direct PM<sub>2.5</sub> emissions, 40 tons per year or more of sulfur dioxide emissions, or 40 tons per year or more of nitrogen oxides emissions.

\*<sup>2</sup> For Ozone, significant means either 40 tons per year or more of nitrogen oxide emissions, or 40 tons per year or more of VOC emissions.

\*<sup>3</sup> For greenhouse gases, "significant " means a rate of emissions for total greenhouse gases, on a carbon dioxide equivalent (CO<sub>2e</sub>) basis, that (1) is subject to regulation at that source or modification, and (2) would equal or exceed the significance level established by EPA.

- (81) "Smoke" means the visible aerosol, resulting from incomplete combustion, which contains fly ash and/or other combustion contaminants, excluding condensed water vapor.
- (82) "Stack" means any chimney, flue, conduit, or duct arranged to conduct emissions to the ambient air.
- (83) "Standard Conditions" means a temperature of 20°C (68°F) and a pressure of 760 mm (29.92 inches) of Hg.
- (84) "Stationary Source" means any structure, building, facility, equipment, installation, or operation (or combination thereof) which emits or may emit any air contaminant, which

is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or by persons under common control).

- (85) "Subject To Regulation" means subject to regulation as defined by EPA at 40 C.F.R. §51.166(48)(b) and any references therein to "major stationary source" shall be interpreted as defined in 40 C.F.R. § 51.166(b)(1)(i) rather than as defined in this section 5-101 of these regulations.
- (86) "Submerged Fill" means the method of filling a gasoline tank truck or storage tank in which gasoline enters within six inches of the bottom of the tank. Bottom filling of gasoline tank trucks and storage tanks is included in this definition.
- (87) "Total Suspended Particulate (TSP)" means particulate matter as measured by the reference method specified in Title 40 CFR Part 50, Appendix B.
- (88) "True Vapor Pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, "Evaporative Loss From Floating Roof Tanks", 1962.
- (89) "Vapor Balance System" means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading tank and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded, or an equivalent system that has been approved by the Air Pollution Control Officer and EPA.
- (90) "Vapor Collection System" means all piping, seals, hoses, connections, pressure vacuum vents and other equipment between the gasoline tank truck and the vapor processing unit and/or the storage tanks and vapor holder.
- (91) "Vapor Control System" means a system that limits or prevents release to the atmosphere of organic compounds in the vapors displaced from a tank during the transfer of gasoline.
- (92) "Vapor Recovery System" means a vapor gathering system capable of collecting volatile organic compound vapors and gases emitted during the operation of any transfer, storage or process equipment.
- (93) "Vapor-Tight" means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the lower explosive limit (LEL) when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch (2.4 cm) from the source.
- (94) "Vapor-Tight Gasoline Tank Truck" means a gasoline tank truck with a product delivery tank that sustains a pressure change of not more than 3.0 inches (75 mm) of water within 5 minutes after it is pressurized to 18 inches (450 mm) of water; or when evacuated to 5.9

inches (150 mm) of water, the same tank will sustain a pressure change of not more than 3.0 inches (75 mm) of water within 5 minutes. This capacity shall be demonstrated by annual testing using the procedures specified in Method 27 of 40 CFR Part 60, Appendix A.

- (95) "Visibility Impairment" means any humanly perceptible change in visual range, contrast, or coloration from that which would have existed under natural visibility conditions.
- (96) "Volatile Organic Compound (VOC)" means any organic compound (i.e., chemical compound of carbon) that participates in atmospheric photochemical reactions. This includes any organic compound other than those determined by the Administrator of the U.S. Environmental Protection Agency to have no or negligible photochemical reactivity.
- (97) "Wood Fuel" for the purposes of these regulations means natural wood, as well as, sawdust or other wood waste generated by wood processing operations.