

13.0 DEFINITIONS

- 13.1 The following terms shall, unless the context clearly indicates otherwise, have the following meanings:

"Air Contaminant" shall mean particulate matter, dust, fumes, gas, mist, smoke, vapor, or odor; or any combination thereof.

"Air Contaminant Source" shall mean any and all sources of emission of air contaminants, whether privately or publicly owned or operated. Without limiting the generality of the foregoing, this term includes all types of business, commercial and industrial plants, works, shops, and stores, and heating and power plants and stations, building and other structures of all types, including multiple family residences, apartment houses, office buildings, hotels, restaurants, schools, hospitals, churches, and other institutional buildings, automobiles, trucks, tractors, buses and other motor vehicles, garages and vending and service locations and stations, railroad locomotives, ships, boats, and other waterborne craft, portable fuel-burning equipment, incinerators of all types, indoor and outdoor, refuse dumps and piles, and all stack and other chimney outlets from any of the foregoing; provided, however, that neither automobiles, trucks, tractors, buses, or other motor vehicles powered by any fuel other than diesel oil and which were manufactured prior to September 1, 1967, automobiles, trucks, tractors, buses or other motor vehicles powered by diesel oil and manufactured prior to January 1, 1970, nor automobiles, trucks, tractors, buses, or other motor vehicles which are equipped to comply and do comply with the Federal "Motor Vehicle Air Pollution Control Act" shall be considered or determined to be an "air contaminant source."

"Air Curtain Destructor or Air Curtain Incinerator" shall mean a portable or stationary combustion device that directs a plane of high velocity forced draft air through a manifold head into a burn chamber with vertical walls in such a manner as to maintain a curtain of air over the surface of the burn chamber and a recirculating motion of air under the curtain.

"Air Pollution" shall mean the presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities and of such characteristics and duration as to be injurious, or tend to be injurious to human health and welfare, plant or animal life, or to property, or which unreasonably interferes with the enjoyment of life and property or the conduct of business.

"Alternative Method" shall mean any method of sampling and analyzing for an air pollutant which is not a reference method or an equivalent method, but which has been demonstrated to the Director's satisfaction to produce, in specific cases, results adequate for its determination of compliance, or any method so designated by these regulations.

"**Ambient Air**" shall mean that portion of the atmosphere external to buildings.

"**Best Available Control Technology**" means an emission limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under these rules which would be emitted from any proposed new or modified air contaminant source which the Director, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under Knox County Air Quality Management Regulations. If the Director determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an emissions standard infeasible, a design, equipment, work practice or operational standard, or combination thereof, may be prescribed instead to require the application of best available control technology. Such standard shall, to the degree possible, set forth the emission reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

"**Board**" shall mean the Air Pollution Control Board of Knox County unless the context clearly indicates otherwise.

"**Calendar quarter**" shall mean the period of time beginning at the first minute of the first date and ending at midnight of the date of each of the following intervals: January 1 to March 31, April 1 to June 30, July 1 to September 30, or October 1 to December 31.

"**Commenced**" shall mean that an owner or operator has begun, or caused to begin a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or entered into a binding obligation, which cannot be canceled or modified without substantial loss to the owner or operator.

"**Construction**" shall mean fabrication, erection, installation, or modification of an emissions unit.

"**Continuous Emission Monitor**" shall mean an instrument capable of measuring and recording emissions of various pollutants and meeting the performance specifications stated by Section 26.5-A.

"**Continuous Monitoring**" shall mean the sampling and analysis of air contaminants in a continuous or timed sequence, using techniques which will adequately reflect actual

emission levels or ambient concentrations on a continuous basis.

"Department" shall mean the Department of Air Quality Management of Knox County.

"Director" shall mean the Director of the Department of Air Quality Management of Knox County.

"Dust" shall mean solid particulate matter released into or carried into the air by natural forces, by any fuel-burning, combustion, process equipment or device, construction work, mechanical, or industrial processes.

"Emission" shall mean the release of material to the ambient air.

"Equivalent Method" shall mean any method of monitoring, sampling, and analyzing for an air contaminant which can be demonstrated to the Director's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specific conditions, or any method so designated by these regulations. VOC emission limits equivalency calculations will be performed on a solids applied basis.

"Existing Source" shall mean:

- A. Any source which was in being during any portion of the time period from October 1, 1969, up to and including July 1, 1972.
- B. Any source constructed and operated under the regulation which became effective October 1, 1969, may be defined as an existing source only until June 30, 1975.
- C. Any air contaminant source which is not a new source with respect to any rule or regulation.

"Excess Emissions" shall mean an emission rate which exceeds any applicable emission limitation prescribed by subsequent sections of these regulations. The averaging time and test procedures for determining such excess emissions shall be specified as part of the applicable emission limitation.

"Facility" shall mean any building, structure, installation, activity, or combination thereof which contains one or more stationary sources of air contaminants.

"Fuel-Burning Equipment" shall mean any equipment, device, or contrivance and all appurtenances thereto; in which fuel is burned for the primary purpose of producing thermal or mechanical energy and in which the material being heated is not contacted by, and adds no substance to, the products of combustion.

"Fuel Burning Installation" shall consist of one or more units of fuel-burning equipment where the products of combustion are discharged through a single stack or where the products of combustion are discharged through more than one stack the

plumes from which tend to merge into a single plume.

"**Fugitive Dust**" shall mean any visible emission, other than water droplets, issuing from any source other than through a stack.

"**Garbage**" shall mean putrescible animal or vegetable waste.

"**Hand-Fired, Fuel-Burning Equipment**" shall mean fuel-burning equipment in which fossil fuel is manually introduced into the combustion chamber or onto the fire.

"**Hazardous Air Contaminant**" shall mean any air contaminant which may cause or contribute to an increase in mortality or an increase in serious irreversible, or incapacitating, reversible illness and has been so designated by the Director.

"**Incinerator**" shall mean any equipment, device, or contrivance used for disposal of waste or refuse by burning, including air curtain destructors and air curtain incinerators.

"**Isokinetic Sampling**" shall mean sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sampling point.

"**Legally Enforceable**" shall mean all limitations and conditions which are enforceable by the Knox County Department of Air Quality Management and any permit requirements established pursuant to the Knox County Air Quality Management Regulations.

"**Lowest Achievable Emission Rate**" (also denoted as LAER) shall mean, for a source, that rate of emissions which reflects:

- A. The most stringent emission limitation which is achieved in practice by such class or category of sources.
- B. In no event shall a new or modified source emit any pollutant in excess of the amount allowable under applicable rules of Regulation 40.0.

This limit will be determined by the Director at the time of the permit application.

"**Major Stationary Source**" shall mean a stationary source which has the potential to emit 100 tons/year or more of any pollutant regulated under the Clean Air Act.

"**Malfunction**" shall mean any sudden and unavoidable failure of air pollution control equipment or process equipment, or for a process to operate in an abnormal and unusual manner. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

"Mechanical Fuel burning Equipment" shall mean fuel-burning equipment incorporating means by which fuel is mechanically introduced into the combustion chamber.

"Modification" shall mean any physical change in, or change in the method of operation of an air contaminant source, which increases the amount of any air contaminant (to which an emission standard applies) emitted by such source or which results in the emission of any air contaminant (to which an emission standard applies) not previously emitted except that:

- A. Routine maintenance, repair, and replacement shall not be considered physical changes, and
- B. The following shall not be considered a change in the method of operation:
 - 1. An increase in the production rate, if such increase does not exceed the operating design capacity nor the stated production rate on the permit of the affected source;
 - 2. An increase in hours of operation if such increase does not exceed the operating hours stipulated as a permit condition of the source;
 - 3. The use of an alternative fuel if the source is designed to accommodate such alternative fuel;
 - 4. Required alterations to equipment for the use of an alternative fuel or raw material by reason of an order under Section 2(a) and (b) of the energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act.
- C. The burden of proof establishing that a change is excepted under paragraphs A, B, E and F is on the owner or operator. The Director shall rule on whether or not a reported change is excepted in timely fashion. Further expansions or restrictions of the definition may be listed in specific chapters or rules.
- D. "Major Modification" is defined in Section 45.0 and shall be overriding for the purposes of that section.
- E. Any physical change in an air contaminant source (or change in the method of operation of an air contaminant source) subject to a major source operating permit, which does not meet the definition of "Title I Modification" but which qualifies as an operational flexibility change, as a minor permit modification, or for group

processing of minor permit modifications, shall not require a construction permit. The terms used herein are identified in detail in Section 25.70.

- F. 1. With the Director's approval, any physical change in an air contaminant source (or change in the method of operation of an air contaminant source) meeting all of the following 3 provisions shall not require a construction permit:
- The change is not subject to requirements of Section 25.70, Section 41.0, or Section 45.0;
 - The change does not result in emissions exceeding the emissions allowable under the existing operating permit;
 - The change does not result in the emission of any air contaminant (to which an emission standard applies) not previously emitted.
2. The air contaminant source, to make changes pursuant to this part, shall provide the Director with written notification of at least 7 days in advance of the proposed change. The written notification shall contain a brief description of the change, the date on which the change will occur, pollutants emitted, declaration of any change in emissions, and any applicable requirements that would apply as a result of the change. The written notice shall also contain a statement that the change does not result in emissions exceeding the emissions allowable under the existing operating permit. The Director and the air contaminant source shall keep each such notice on file with a copy of the relevant permit.

"Multiple Chamber Incinerator" shall mean an incinerator consisting of three or more refractory lined combustion furnaces in a 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.

"National Emission Standards for Hazardous Air Pollutants (NESHAPs)" shall mean the standards for the emission of hazardous air pollutants promulgated by the Administrator of the Environmental Protection Agency and published in the *Federal Register*.

"New Source" shall mean any source which results from equipment that is constructed or modified after the effective date of these regulations.

"New Source Performance Standard" shall mean a standard for the emission of an air contaminant promulgated by the Administrator of the Environmental Protection Agency and published in the Federal Register.

“Nonattainment Area” shall mean either as follows:

- A. A geographical area designated by the US Environmental Protection Agency or the Board as nonattainment for an air contaminant (pollutant) for which there is a national ambient air quality standard; or
- B. For any other air contaminant for which there is an ambient air quality standard in Section 14.0, a geographical area designated by the Board as not attaining that standard.

"Non-Process Emissions" shall mean all emissions that are not defined as “Process Emissions”.

"Opacity" shall mean the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

"Odor" shall mean that property of material that affects the sense of smell.

"Open Burning" shall mean the burning of any matter under such conditions that products of combustion are emitted directly into the open atmosphere without passing directly through a stack.

"Owner or Operator" shall mean any person who owns, leases, controls, operates, or supervises a facility, existing source, new source, or control device.

"Particulate Matter" shall mean any material except uncombined water that exists in a finely divided form as a liquid or a solid.

“Particulate Matter Emissions” shall mean 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 the regulations, or by a test method specified in these regulations.

“Part Per Billion (ppb)” shall mean a term describing parts of an air contaminant per billion parts of gas by volume (1 ppb equals 0.0000001 percent by volume).

“Parts Per Million (ppm)” shall mean a term describing parts of an air contaminant per million parts of gas by volume (1 ppm equals 0.0001 percent by volume).

"Person" shall mean any individual, owner, operator, firm, partnership, co-partnership, company, corporation, association, joint stock company, trust, state, political subdivision, or any other legal entity, or their legal representative, agent, or assigns.

"**PM10**" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (not including uncombined water) as measured by a reference method based on Appendix J, Federal Register, July 1, 1987, Volume 52, No. 126, pp 24664-24669, and designated in accordance with 40 CFR 53, as amended on July 1, 1987, Federal Register, Vol. 52, No. 126, pp 24727-24735, or by an equivalent method designated in accordance with 40 CFR 53.

"**PM10 Emissions**" shall mean finely divided solid or liquid material (excluding uncombined water), with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method, specified in the regulations, or by a test method specified in these regulations.

"**Point Source**" shall have the same meaning as defined in Part 51 of Title 40 of the Code of Federal Regulations.

"**Political Subdivision**" shall mean any municipality, city, incorporated town, county, district or authority, or any portion or combination of two or more thereof.

"**Portland Cement Plant**" shall mean any air contaminant source manufacturing portland cement by either the wet or dry process.

"**Potential to Emit**" shall mean 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 the effect it would have on emissions is legally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

"**Process Emissions**" shall mean any emission of an air contaminant to the ambient air other than that from fuel burning equipment, incinerator, wigwam burners or open burning.

"**Process Emission Source**" shall mean one or more units of processing equipment which may be operated independently of other parts of the operations at any given manufacturing or processing facility; also, where it is common practice to group more than one unit of like or similar processing equipment together and to apply a single or combined unit of air pollution control equipment to the emissions of the entire group, such group of units shall be construed as a process emission source.

"**Process Weight**" shall mean the total weight of all materials introduced into any specific process that may cause any emission of particulate matter. Solid fuels charged are

considered as part of the process weight, but liquid and gaseous fuels and combustion-air are not.

"Process Weight Rate" shall mean a rate established as follows:

- A. For continuous or long-run, steady-state operations, it is the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period portion thereof.
- B. For cyclical or batch source operations, it is the total process weight for a period which covers a complete or integral number of cycles, divided by the hours of actual process operation during such period.
- C. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, that interpretation which results in the minimum value for allowable emissions shall apply.

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

"Reasonably Available Control Technology (RACT)" shall mean the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

"Reference Method" shall mean a method of monitoring, sampling, and analyzing for air contaminants as described in these regulations.

"Refuse" shall mean the inclusive term for solid waste products which are composed wholly or partly of such materials as garbage, sweepings, cleanings, trash, rubbish, litter; industrial solid or domestic solid waste; trees or shrub trimmings; grass clippings; brick, plaster, or other waste resulting from the demolition, alteration, or construction of buildings, or structures; accumulated waste material, cans, containers, tires, junk, or other such substances.

"Ringelmann Chart" shall mean the chart published and described in the U.S. Bureau of Mines Information Circular No. 8333.

"Salvage Operation" shall mean any business, trade, or industry engaged in whole or in part in reclaiming one or more items of value.

"Shutdown" shall mean the cessation of operation of an air contaminant source for any purpose.

"**Smoke**" shall mean gasborne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon and other combustible material. It does not include water vapor or water droplets.

"**Source**" shall mean any property, real or personal, which emits or may emit air contaminants into the outdoor atmosphere.

"**Stack**" shall mean any chimney, flue, duct, conduit, exhaust, vent, or opening of any kind whatsoever capable of, or used for, the emission of air contaminants.

"**Standard**" shall mean a standard of performance promulgated under these regulations.

"**Standard Condition**" unless otherwise specified shall mean a dry gas temperature of 70°F and a gas pressure of 14.7 pounds per square inch absolute.

"**Standby Unit**" shall mean any equipment permitted for use when the primary equipment is inoperative due to malfunction.

"**Startup**" shall mean the setting in to operation of an air contaminant source for the production of product for sale or use as raw materials or steam or heat.

"**Stationary Source**" shall mean any building, structure, facility, or installation which emits or may emit any air contaminant.

"**Suspended Particulates**" shall mean particulate matter which will remain suspended in air for an appreciable period of time.

"**Total Suspended Particulate**" means particulate matter as measured by the method described in Appendix B, 40 CFR 50.

"**Volatile Organic Compounds (VOC)**" shall mean any compound as defined by 40 CFR Part 51, Subpart F.

"**Wigwam Burner**" shall mean a type of burner commonly known as tepee, truncated cone, conical burner, or silo burner.

13.2 The following abbreviations shall, unless the context clearly indicates otherwise, have the following meanings:

A. ASTM - American Society for Testing and Materials

B. B.T.U. - British Thermal Unit

- C. °C - degrees centigrade
- D. cal - calorie
- E. CO - carbon monoxide
- F. CO₂ - carbon dioxide
- G. dscf - dry cubic foot at standard conditions
- H. dscm - dry cubic meter at standard conditions
- I. °F - degrees Fahrenheit
- J. g - gram
- K. gr - Grain
- L. H₂S - hydrogen sulfide
- M. H₂SO₄ - sulfuric acid
- N. Hg - mercury
- O. hr - hour
- P. kg - kilogram
- Q. lb - pound
- R. mg - milligram
- S. mm - millimeter
- T. MW - megawatt
- U. NO - nitric oxide
- V. NO₂ - nitrogen dioxide
- W. NO_x - nitrogen oxides
- X. ppb - parts per billion

- Y. ppm - parts per million
- Z. psia - pounds per square inch absolute
- AA. sec - second
- BB. SO₂ - sulfur dioxide
- CC. μg - microgram