

**I. DEFINITIONS, STATEMENT OF INTENT, AND GENERAL PROVISIONS APPLICABLE TO ALL EMISSION CONTROL REGULATIONS ADOPTED BY THE COLORADO AIR QUALITY CONTROL COMMISSION**

**I.A. Applicability**

Emission control regulations adopted by the Air Quality Control Commission apply throughout Colorado unless otherwise stipulated. The Statement of Intent, Definitions, and General Provisions of this regulation apply to all emission control regulations adopted by the Commission unless otherwise stipulated.

Pursuant to Colorado Revised Statutes Section 24-4-103(12.5), copies of materials incorporated by reference are available for public inspection during regular business hours, or copies may be obtained at a reasonable cost from the Technical Secretary of the Air Quality Control Commission (the Commission), located at 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530, or may be examined at the State Publications Depository and Distribution Center. Materials incorporated by reference are those editions in existence as of the date of this regulation as promulgated or revised by the Commission and references do not include later amendments to or editions of the incorporated materials.

**I.B. Authority**

Colorado Revised Statutes Section 25-7-109 provides: As promptly as possible, the Commission shall adopt and promulgate, and from time to time modify or repeal emission control regulations which require the use of effective practical air pollution controls.<sup>4</sup> Colorado Revised Statutes Sections 25-7-105 through 25-7-110, Section 25-7-114 and Section 25-7-117 are the general statutory authority for adoption by the Commission of standards, regulations, and programs.

**I.C. Colorado Air Pollution Prevention and Control Act: Colorado Revised Statutes Section 25-7-102 (Legislative Declaration)**

In order to foster the health, welfare, convenience, and comfort of the inhabitants of the state of Colorado and to facilitate the enjoyment and use of the scenic and natural resources of the state, it is declared to be the policy of this state to achieve the maximum practical degree of air purity in every portion of the state, to attain and maintain the National Ambient Air Quality Standards, and to prevent the significant deterioration of air quality in those portions of the state where the air quality is better than the National Ambient Air Quality Standards. To that end, it is the purpose of this article to require the use of all available practical methods that are technologically feasible and economically reasonable so as to reduce, prevent, and control air pollution throughout the state of Colorado; to require the development of an air quality control program in which the benefits of the air pollution control measures utilized bear a reasonable relationship to the economic, environmental, and energy impacts and other costs of such measures; and to maintain a cooperative program between the state and local units of government. It is further declared that the prevention, abatement, and control of air pollution in each portion of the state are matters of statewide concern and are affected with a public interest and that the provisions of this article are enacted in the exercise of the police powers of this state for the purpose of protecting the health, peace, safety, and general welfare of the people of this state.

The General Assembly further recognizes that a current and accurate inventory of actual emissions of air pollutants from all sources is essential for the proper identification and designation of attainment and nonattainment areas, the determination of the most cost effective regulatory strategy to reduce pollution, the targeting of regulatory efforts to achieve the greatest health and environmental benefits, and the achievement of a federally approved clean air program. In order to achieve the most accurate inventory of air pollution sources possible, this article specifically provides incentives to achieve the most accurate and complete inventory possible, and to provide for the most accurate enforcement program achievable based upon that inventory.

**I.D. Intent**

To implement the legislative declaration and other sections of the Act, the Commission declares that it is the intent and purpose of these regulations is to:

- I.D.1 Achieve and maintain levels of air quality that will protect human health and safety, prevent injury to plant and animal life, prevent damage to property, prevent unreasonable interference with the public welfare, preserve visibility, and protect scenic, aesthetic and historic values of Colorado.
- I.D.2 Require the use of all available practicable methods to reduce, prevent, and control air pollution for the protection of the health, safety, and general welfare of the people of the state of Colorado. In order to achieve air purity consistent with this intent, it may be necessary, ultimately to control air pollutant emissions to such a degree of opacity so that the emissions are no longer visible;
- I.D.3 Prevent significant degradation of Colorado's air resource.
- I.D.4 Prevent odors and other air pollution problems which interfere with the comfortable enjoyment of life, and
- I.D.5 Apply the major resources of the Colorado air pollution control programs toward solving priority air pollution problems.

**I.E. Growth**

The Commission recognizes that the growth in the amount and complexity of air pollution in Colorado is brought about by, and incident to, population growth, mobility, increased affluence, industrial development and changing social values in said state.

The Commission believes that the air pollution problem is likely to be aggravated and compounded by additional population growth, mobility, affluence, industrial development, and changing social values in the future, that are likely to result in serious potential danger to the public and the environment. Therefore, the Commission intends to pursue solutions, in conjunction with other appropriate agencies and interests that have a direct interest and capability in solving a growing air pollution problem(s) in relation to the broader environmental degradation problem. It is the intent of the Commission to coordinate with industrial, commercial, agricultural, and transportation planning organizations, land use, and other environmental organizations, the public, the legislature, educational organizations, and other major interests in such a manner as to prevent air pollution in Colorado

**I.F. Abbreviations**

Abbreviations used in the Commission's regulations have the following meaning:

ASTM	American Society For Testing And Materials
APEN	Air Pollutant Emission Notice
AQCR	Air Quality Control Region
AQRV	Air Quality Related Value
BACT	Best Available Control Technology
BART	Best Available Retrofit Technology
BTU	British Thermal Unit

°C	Degree Celsius (Centigrade)
cal	Calorie
CAS	Chemical Abstract Service
CCR	Code Of Colorado Regulations
CdS	Cadmium Sulfide
Cfm	Cubic Feet Per Minute
CFR	Code Of Federal Regulations
CO	Carbon Monoxide
CO2	Carbon Dioxide
CEM	Continuous Emission Monitoring
COM	Continuous Opacity Monitoring
C.R.S.	Colorado Revised Statutes
dscm	Dry Cubic Meter(s) At Standard Conditions
dscf	Dry Cubic Feet At Standard Conditions
U S EPA	United States Environmental Protection Agency
ERC	Emission Reduction Credit
eq	Equivalence
°F	Degree Fahrenheit
FLM	Federal Land Manager
Fed Reg	Federal Register
FS	Forest Service
ft	Feet
g	Gram(s)
GACT	Generally Available Control Technology
gal	Gallon(s)
g eq	Gram Equivalent
GEP	Good Engineering Practice
gr	Grain(s)
hr	Hour(s)
HAP(s)	Hazardous Air Pollutant(s)
HC	Hydrocarbons
HCl	Hydrochloric Acid
Hg	Mercury
H2O	Water
H2S	Hydrogen Sulfide
H2SO4	Sulfuric Acid
hz	Hertz

cal	Calorie
CAS	Chemical Abstract Service
CCR	Code Of Colorado Regulations
CdS	Cadmium Sulfide
Cfm	Cubic Feet Per Minute
CFR	Code Of Federal Regulations
CO	Carbon Monoxide
CO2	Carbon Dioxide

CO2e	Carbon Dioxide Equivalent
CEM	Continuous Emission Monitoring
COM	Continuous Opacity Monitoring
C.R.S.	Colorado Revised Statutes
dscm	Dry Cubic Meter(s) At Standard Conditions
dscf	Dry Cubic Feet At Standard Conditions
U.S. EPA	United States Environmental Protection Agency
ERC	Emission Reduction Credit
eq	Equivalence
°F	Degree Fahrenheit
FLM	Federal Land Manager
Fed. Reg.	Federal Register
FS	Forest Service
ft	Feet
g	Gram(s)
GACT	Generally Available Control Technology
gal	Gallon(s)

GHG	Greenhouse Gas
g eq	Gram Equivalent
GEP	Good Engineering Practice
gr	Grain(s)
hr	Hour(s)
HAP(s)	Hazardous Air Pollutant(s)
HC	Hydrocarbons
HCl	Hydrochloric Acid
Hg	Mercury
H2O	Water
H2S	Hydrogen Sulfide
H2SO4	Sulfuric Acid
hz	Hertz
in	Inch(s)

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in	Inch(s)
J	Joule
°K	Degree Kelvin
kg	Kilogram(s)
LAER	Lowest Achievable Emission Rate
l	Liter(s)
lpm	Liter(s) Per Minute
lb	Pound(s)
ITS	Long Term Strategy For Visibility Protection
m	Meter(s)
MACT	Maximum Achievable Control Technology
meq	Milli Equivalent(s)
min	Minute(s)
mg	Milligram(s)
ml	Milliliter(s)
mm	Millimeter(s)
mol	Mole
mol. wt.	Molecular Weight
mV	Millivolt
N	Newton
NA(s)	Nonattainment Area(s)
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards For Hazardous Air Pollutants
N <sub>2</sub>	Nitrogen
Ng	Nanogram (10 <sup>-9</sup> Grams)
NPS	National Park Service
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
NRVOC(s)	Negligibly Reactive Volatile Organic Compound(s)
NSPS	New Source Performance Standards
NSR	New Source Review
Ω	Ohm
O <sub>2</sub>	Oxygen
Pa	Pascal
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter With Diameter Of 10 Microns Or Less

ppb	Parts Per Billion
ppm	Parts Per Million
PSD	Prevention Of Significant Deterioration
psia	Pounds Per Square Inch Absolute
psig	Pounds Per Square Inch Gauge
PTE	Potential To Emit
RACT	Reasonably Available Control Technology
°R	Degree Rankine
RFP	Reasonable Further Progress
Sec	Second
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>3</sub>	Sulfur Trioxide
SO <sub>x</sub>	Sulfur Oxides
STP	Standard Temperature And Pressure
TPY	Tons Per Year
TSP	Total Suspended Particulates
Mg	Microgram(s) (10 <sup>-6</sup> Gram)
USC	United States Code
VAC	Volts Alternating Current
VDC	Volts Direct Current
V	Volt
VOC	Volatile Organic Compound
W	Watt

**I.G. Definitions**

The following words and phrases shall have the following meanings unless the context in which they are used requires specific meaning within separate Commission regulations. In those instances, words and phrases shall be defined in the appropriate regulation.

**ABSOLUTE VAPOR PRESSURE**

The pressure relative to an absolute vacuum that a confined vapor exerts at a given temperature when in equilibrium with its solid or liquid state.

**ACT**

The "Colorado Air Pollution and Prevention Control Act" Colorado Revised Statutes Title 25 Article 7

**AIR POLLUTANT**

Any fume, smoke, particulate matter, vapor, gas, or any combination thereof that is emitted into or otherwise enters the atmosphere, including, but not limited to, any physical, chemical, biological, radioactive (including source material, special nuclear material, and by-product materials) substance or matter, but not including water vapor or steam condensate or any other emission exempted by the Commission consistent with the Federal Act. Such term includes any precursors to the formation of any air pollutant, to the extent the administrator of the U.S. EPA or the Commission has identified such precursor(s) for the particular purpose for which the term "air pollutant" is used.

**AIR POLLUTION**

Any concentration of one or more air pollutants in the ambient air that has caused, is causing, or if unabated, may cause injury to human, plant, or animal life, or injury to property, or which unreasonably interferes with the comfortable enjoyment of life or property or with the conduct of business.

**AIR POLLUTION CONTROL AUTHORITY**

The Division or any person or agency given authority by the Division or a local government unit duly authorized with respect to air pollution control.

**ALTERNATIVE METHOD**

Any method of sampling and analysis for an air pollutant that is not a reference or equivalent method, but has been approved by the Division.

**AMBIENT AIR**

That portion of the atmosphere, external to the source, to which the general public has access.

**AREA CLASSIFICATION**

The Commission and the U.S. EPA have designated the entire state into attainment, nonattainment or unclassifiable areas.

**ASPHALT CONCRETE PLANT**

Any facility used to manufacture asphalt concrete by heating and drying aggregate and mixing with asphalt compounds.

**ASPHALT PAVING MATERIAL**

A petroleum based asphaltic compound used in the preparation of asphalt concrete for application to roads, highways, and streets.

**ATMOSPHERE**

The surrounding or outside air i.e. external to buildings. Emissions of air pollutants from a building or structure not specifically designed to control pollutant emissions from sources within such building or structure shall constitute an emission into the ambient air or atmosphere.

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### **ATTAINMENT AREA**

Any area within Colorado designated by the Commission and approved by the U.S. EPA in which the ambient air concentrations of any designated pollutants are less than that specified in the National Ambient Air Quality Standards.

### **BULK PLANT**

A petroleum distillate storage and distribution facility that has an average daily throughput of 76,000 liters (20,000 gallons) or less which is loaded directly into delivery vehicles. (As used herein, "bulk plant" does not include service stations or a separate operation within a petroleum distribution facility that pumps only into fuel tanks fueling motor vehicles and trucks.)

### **CAPACITY FACTOR**

The ratio of average load to the capacity rating of the machine or equipment for the specified period of time.

### **CAPTURE SYSTEM**

The equipment, including hoods, ducts, fans, dampers, etc., used to capture or transport air pollutants.

### **CARBON DIOXIDE EQUIVALENT**

A metric used to compare the emissions from various GHGs based upon their global warming potential (GWP). CO<sub>2e</sub> is determined by multiplying the mass amount of emissions (tons per year), for each GHG constituent by that gas's GWP, and summing the resultant values to determine CO<sub>2e</sub> (tons per year). The applicable GSPs codified in 40 CFR Part 98, Subpart A, Table A-1 – Global Warming Potentials are hereby incorporated by reference as in effect as of October 30, 2009, but not including later amendments.

### **CLAUS SULFUR RECOVERY PLANT**

A process unit that recovers sulfur from hydrogen sulfide by a vapor-phase catalytic reaction involving sulfur dioxide and hydrogen sulfide.

### **COAL**

All solid fossil fuels classified as anthracite, bituminous, sub-bituminous, or lignite by the appropriate American Society for Testing and Materials method.

### **COAL PREPARATION PLANT**

Any facility (excluding underground mining operations), which prepares coal by one or more of the following processes: breaking, wet or dry cleaning, crushing, screening, and thermal drying.

### **COAL PROCESSING AND CONVEYING EQUIPMENT**

Any machinery used to reduce the size of coal or to separate coal from refuse; the equipment used to convey coal or to remove coal from refuse; the equipment used to convey coal or to remove coal and refuse from the machinery including, but not limited to, breakers, crushers, screens, and conveyor belts.

### **COAL REFUSE**

Waste products of coal mining, cleaning, and preparation.

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**COAL STORAGE SYSTEM**

Any facility used to store coal except for open storage areas.

**COMMISSION**

The Air Quality Control Commission created by Colorado Revised Statutes Section 25-7-104.

**CONDENSATE**

Hydrocarbon liquids that remain liquid at standard conditions (68 degrees Fahrenheit and 29.92 inches Mercury) and are formed by condensation from, or produced with, natural gas, and which have an American Petroleum Institute gravity ("API gravity") of 40 degrees or greater.

**CONSTRUCTION**

Except as listed below or unless defined differently for a specific regulation, construction means the fabrication, erection, installation, or modification of an air pollution source. For Prevention of Significant Deterioration and New Source Review purposes, construction means any physical change or change in the method of operation (including, but not limited to, fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change in actual emissions.

**CONTINUOUS MONITORING SYSTEM**

A comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.

**CONTROL DEVICE (STATIONARY)**

The air pollution control equipment used to remove air pollutants generated by a stationary source.

**CONTROL DEVICE (MOBILE)**

Air pollution control equipment used to remove air pollutants generated by mobile sources.

**CRUDE OIL**

Raw petroleum as it comes from the well, as pyrolyzed from kerogen, processed from tires, or recovered from other processes.

**CYCLONIC FLOW**

Spiraling movements of exhaust gases within a duct or stack.

**DAY**

A single twenty-four hour period from midnight to midnight or other twenty-four hour period as approved by the Division on a case-by-case basis.

**DEPARTMENT**

The Colorado Department of Public Health and Environment.

**DEPARTMENT OF REVENUE**

The Colorado Department of Revenue.

## DIVISION

The Air Pollution Control Division of the Colorado Department of Public Health and Environment except where specifically designated as the Division of Administration of the Colorado Department of Public Health and Environment

## DUST HANDLING EQUIPMENT

Any equipment used to transport, convey, or otherwise handle particulate matter that has been collected by an air pollution control device.

## EMERGENCY POWER GENERATOR

A generator whose sole function is to provide back-up power when electric power is interrupted. Periodic testing of these generators and associated control and switching systems to insure that they are properly functioning will not prevent such a generator from being designated an emergency power generator.

## EMISSION

The discharge or release into the atmosphere (ambient air) of one or more air pollutants.

## EMISSION CONTROL REGULATION

Any standard promulgated by regulation that is applicable to all air pollutant sources within a specified area and that prohibits or establishes permissible limits for specific types of emissions in such areas. Also any regulation that by its terms is applicable to a specified type of facility, process, or activity for the purpose of controlling the extent, degree, or nature of pollutants emitted from such type of facility, process, or activity, any regulation adopted for the purpose of minimizing or preventing the emission of any air pollutant in potentially dangerous quantities, and also any regulation that adopts any design, equipment, work practice, or operational standard. Emission control regulations shall not include standards which describe maximum ambient air concentrations of specifically identified pollutants or which describe varying degrees of pollution of ambient air. Emission control regulations pertaining to hazardous air pollutants shall be consistent with the emission standards promulgated under Section 112 of the Federal Act or Colorado Revised Statutes Section 25-7-109.3 of the Colorado Act in preventing or reducing emissions of hazardous air pollutants, and may include application of measures, processes, methods, systems, or techniques, including, but not limited to, measures that:

- a Reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials, or other modifications.
- b Enclose systems or processes to eliminate emissions.
- c Collect, capture, or treat such pollutants when released from a process, stack, storage, or fugitive emissions point.
- d Are design, equipment, or work practice standards (including requirements for operator training or certification), or
- e A combination of a through d, above.

## EMISSION STANDARD

See Standard of Performance

**EMISSIONS UNIT**

Any part or activity of a stationary source that emits or has the potential to emit any air pollutant regulated under the state or Federal Acts. This term is not meant to alter or affect the definition of the term "unit" for purposes of Title IV (acid deposition control) of the federal act, or of the term "source" for purposes of the Air Pollutant Emission Notice requirements of Regulation Number 3 Part A Section II B 3

**ENFORCEABLE**

Means all requirements contained in any permit issued in accordance with Regulation Number 3 and all regulatory requirements promulgated by the Commission, the state Act, consent decrees, and any requirements that are federally enforceable.

**EQUIVALENT METHOD OF SAMPLING AND ANALYSIS**

Any method of sampling and analysis of an air pollutant that has been demonstrated to the Division's satisfaction as having a consistent and quantitatively known relationship to a reference test method

**EXCAVATION**

The removal of surface material, that may or may not be replaced, for the purpose of constructing or installing a structure or piece of equipment

**EXCESS EMISSION**

Emissions of an air pollutant in excess of a performance standard promulgated by the Commission

**FEDERAL ACT**

The Federal "Clean Air Act", 42 U.S.C. Section 7401 et seq

**FEDERALLY ENFORCEABLE**

Means all limitations and conditions which are enforceable by the U.S. EPA Administrator, including, but not limited to (1) those requirements developed pursuant to Code of Federal Regulations Title 40, Parts 60, 61, 63, and 72; (2) requirements within any U.S. EPA-approved State Implementation Plan, (3) requirements in operating permits issued under an U.S. EPA-approved program, and (4) any requirements in permits for new or modified sources which are issued pursuant to the Code of Federal Regulations Title 40, Section 52.21 or under regulations approved by the U.S. EPA pursuant to the Code of Federal Regulations Title 40, Part 51, Subpart I, except those permit requirements specifically identified as state-only enforceable requirements, or specifically incorporating Colorado regulatory requirements (other than the incorporation of federal requirements) not in the State Implementation Plan. Limitations and conditions voluntarily sought or accepted and included in operating permits or permits governing new or modified sources which are issued under regulations approved by the U.S. EPA, for the purpose of avoiding classification as a major source or major modification or of enabling a source to take advantage of the early reduction program under Section 112 of the Federal Act, are also federally enforceable

**FIXED CAPITAL COST**

The capital needed to provide all the depreciable components

**FOSSIL FUEL**

Natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials.

**FOSSIL FUEL AND/OR WOOD RESIDUE FIRED STEAM GENERATING UNIT**

A furnace or boiler burning a fossil fuel and/or wood residue and producing steam by heat transfer.

**FOUNDRY**

A facility engaged in the melting or casting of metals or alloys.

**FUEL BURNING EQUIPMENT**

Any furnace, boiler, or other equipment and appurtenances thereto, burning fuel solely for the purpose of producing heat, but not including: (1) internal combustion engines, or (2) combustion sources that are a part of a manufacturing process where the emissions are intermixed with the process emissions.

**FUGITIVE EMISSIONS**

Emissions that could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening.

**GRADING**

The movement of soil for the purpose of establishing grade and drainage.

**GREENHOUSE GAS**

Means the aggregate group of the following six greenhouse gases: carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). These gases are treated in aggregate based on the total carbon dioxide equivalent (CO<sub>2</sub>e) of each gas as the pollutant GHG. See definition for carbon dioxide equivalent (CO<sub>2</sub>e).

**HAUL ROADS**

Roads that are used for commercial, industrial or governmental hauling of materials and which the general public does not have a right to use.

**HAZARDOUS AIR POLLUTANT (HAP)**

An air pollutant that presents through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances that are known to be, or may reasonably be anticipated to be carcinogenic, mutagenic, teratogenic, neurotoxic, that cause reproductive dysfunction, or that are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise and that has been listed pursuant to Section 112 of the Federal Act, or Section 25-7-109.3 of the state Act.

**HIGHLY VOLATILE ORGANIC COMPOUND**

A volatile organic compound or mixture of such compounds with a vapor pressure in excess of 570 torr (11 pounds per square inch absolute (psia)) at 20 degrees Celsius or 68 degrees Fahrenheit.

**HIGH TERRAIN**

Any area having an elevation of nine hundred feet or more above the base of the stack of the source.

**HOURLY PERIOD**

Any sixty-minute period.

**HYDROCARBON (HC)**

An organic compound consisting only of carbon and hydrogen.

**INCINERATOR**

Any equipment, device, or contrivance used for the destruction of solids, liquids or gaseous wastes by burning. Excludes devices commonly called wigwam waste burners used exclusively to burn wood wastes and incinerating toilet waste. Excludes devices commonly called Air Curtain Destructors used exclusively to burn 100% wood waste, clean lumber, or yard waste generated as a result of projects to reduce the risk of wildfire and is not operated at a commercial or industrial facility. Any Air Curtain Destructor subject to 40 CFR Part 60 incinerator requirements is considered an incinerator.

**INDIAN GOVERNING BODY**

The governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

**INDIAN RESERVATION**

Any federally recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.

**INTERMITTENT SOURCES**

Those stationary sources of air pollution that do not operate on a continuous basis for a period of time sufficient to allow for opacity observations in accordance with U. S. EPA Method 9.

**ISOKINETIC SAMPLING**

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.

**LEAD (PB)**

Elemental lead, lead containing alloys and compounds of lead.

**LOW TERRAIN**

Any area other than high terrain.

**MACHINE SHOP**

A facility performing cutting, grinding, turning, honing, milling, debarring, lapping, electro-chemical machining, etching, or other similar operations.

**MALFUNCTION**

Any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

## **MANUFACTURING PROCESS OR PROCESS EQUIPMENT**

An action, operation, or treatment involving chemical, industrial, or manufacturing factors, such as heat treating furnaces, or fuel-burning devices that are a part of a manufacturing process where emissions are intermixed with the process emissions, heating and reheating furnaces, sintering trains, electric furnaces, kilns, dryers, roasters, painting ovens, direct fired drying ovens, crushers, and all other methods and forms of manufacturing or processing that emit, or affect the emission of air pollutants, but not including fuel-burning equipment.

## **MONITORING SYSTEM**

The complete set of equipment required under Regulation Number 3 that is used to measure and record, if so required, those parameters specified.

## **MOTOR VEHICLE**

Any self-propelled vehicle that is designed primarily for travel on the public highways and that is generally and commonly used to transport persons and property and for which registration in Colorado is required for operation on public roads and highways as defined in Colorado Revised Statute Section 42-1-102(58).

## **MOTOR VEHICLE EXHAUST GAS ANALYZER**

Any instrument adopted by the Commission that is used to measure the concentrations or mass of hydrocarbons, carbon monoxide, nitrogen oxides, oxygen and carbon dioxide in motor vehicle exhaust.

## **NEGLIGIBLY REACTIVE VOLATILE ORGANIC COMPOUNDS (NRVOCs)**

The U.S. EPA definition of volatile organic compounds located in the Code of Federal Regulations Title 40, Section 51.100 (s), referred to within these regulations as Negligibly Reactive Volatile Organic Compounds is hereby incorporated by reference by the Commission and made a part of the Colorado Air Quality Control Commission Regulations. Materials incorporated by reference are those in existence as of the date of this regulation and do not include later amendments. The material incorporated by reference is available for public inspection during regular business hours at the Office of the Commission, located at 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530, or may be examined at any state publications depository library. Parties wishing to inspect these materials should contact the Technical Secretary of the Commission, located at the Office of the Commission.

The list of Negligibly Reactive Volatile Organic Compounds is included for easier reference:

Methyl Acetate  
Acetone  
Methane  
Ethane  
Methylene Chloride (Dichloromethane)  
1,1,1-Trichloroethane (Methylchloroform)  
1,1,2-Trichloro-1,2,2-Trifluoroethane (CFC-113)  
Trichlorofluoromethane (CFC-11)  
Dichlorodifluoromethane (CFC-12)  
Chlorodifluoromethane (HCFC-22)  
Trifluoromethane (HFC-23)  
1,2-Dichloro-1,1,2,2-Tetrafluoroethane (CFC-114)  
Chloropentafluoroethane (CFC-115)

1,1,1-Trifluoro-2,2-Dichloroethane (HCFC-123)  
 1,1,1,2-Tetrafluoroethane (HCFC-134A)  
 1,1-Dichloro-1-Fluoroethane (HCFC-141B)  
 1-Chloro-1,1-Difluoroethane (HCFC-142B)  
 2-Chloro-1,1,1,2-Tetrafluoroethane (HCFC-124)  
 Pentafluoroethane (HFC-125)  
 1,1,2,2-Tetrafluoroethane (HFC-134)  
 1,1,1-Trifluoroethane (HFC-143A)  
 1,1-Difluoroethane (HFC-152A)  
 Parachlorobenzotrifluoride (PCBTF)  
 Cyclic, Branched, or linear completely methylated siloxanes  
 Perchloroethylene (Tetrachloroethylene)  
 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)  
 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)  
 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee)  
 Difluoromethane (HFC-32)  
 Ethylfluoride (HFC-161)  
 1,1,1,3,3,3-hexafluoropropane (HFC-236fa)  
 1,1,2,2,3-pentafluoropropane (HFC-245ca)  
 1,1,2,3,3-pentafluoropropane (HFC-245ea)  
 1,1,1,2,3-pentafluoropropane (HFC-245eb)  
 1,1,1,3,3-pentafluoropropane (HFC-245fa)  
 1,1,1,2,3,3-hexafluoropropane (HFC-236ea)  
 1,1,1,3,3-pentafluorobutane (HFC-365mfc)  
 Chlorofluoromethane (HCFC-31)  
 1-chloro-1-fluoroethane (HCFC-151a)  
 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)  
 1,1,1,2,2,3,3,4,4-nonfluoro-4-methoxy-butane (C4F9OCH3)  
 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2CFCF2OCH3)  
 1-ethoxy-1,1,2,2,3,3,4,4,4-nonfluorobutane (C4F9OC2H5)  
 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2CFCF2OC2H5)  
 1,1,1,2,2,3,3,3-heptafluoro-3-methoxy-propane (n-C<sub>3</sub>F<sub>7</sub>OCH<sub>3</sub>, HFE-7000)  
 3-ethoxy-1,1,1,2,3,4,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)hexane (HFE-7500)  
 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea)  
 Methyl formate (HCOOCH<sub>3</sub>)  
 Tertiary Butyl Acetate (2-Butanone)  
 (1)1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300)  
 Propylene carbonate  
 Dimethyl carbonate  
 Perfluorocarbon Compounds which fall into these classes  
 --Cyclic, Branched or Linear, Completely Fluorinated Alkanes  
 --Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations  
 --Cyclic, Branched, or Linear, Completely Fluorinated Tertiary amines with no unsaturations  
 --Sulfur containing Perfluorocarbons with no Unsaturations and with Sulfur Bonds only to Carbon and Fluorine

#### NONATTAINMENT AREA

An area within Colorado designated by the Commission and approved by the U.S. EPA under the Code of Federal Regulations Title 40, Section 81.306, in which ambient air concentrations of any designated pollutant exceed the National Ambient Air Quality Standards for that pollutant.

### OPACITY

The degree to which an air pollutant obscures the view of an observer, expressed in percentage of obscuration or the degree (expressed in percent) to which transmittance of light is reduced by the air pollutant

### OVERLOT GRADING

Earth moving used in land development prior to the construction of structures, utilities, streets, highways or other prepared surfaces

### OWNER OR OPERATOR

Any person, who owns, leases, operates, controls, or supervises a stationary source

### OZONE DEPLETING COMPOUND

Any substance on the list of Class I and Class II ozone depleting compounds as defined by the Administrator of the U.S. EPA in the Code of Federal Regulations, Part 82 (2001) and as referenced in Section 602 of the Federal Clean Air Act (1990).

### PARTICULATE MATTER

Any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than one hundred micrometers

### PARTICULATE MATTER EMISSIONS

All finely divided solid or liquid material emissions, other than uncombined water, emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method specified by the U.S. EPA, or by a test method specified in an approved State Implementation Plan.

### PERSON

Any individual, public or private corporation, partnership, association, firm, trust estate, the state or any department, institution or agency thereof, any municipal corporation, county, city and county, or other political subdivision of the state, or any other legal entity whatsoever that is recognized by law as the subject of rights and duties

### PETROLEUM

The crude oil removed from the earth and the oils derived from tar sands, shale, and coal

### PETROLEUM DISTILLATE

A volatile organic compound or a mixture including volatile organic compounds obtained from petroleum by a process of vaporization and condensation

### PETROLEUM REFINERY

Any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants or other products through distillation, cracking, or reforming of unfinished petroleum derivatives

**PILOT PLANT**

A small-scale facility first used for experimental purposes to study the feasibility of an operation prior to constructing a full-scale plant.

**PM<sub>10</sub>**

Particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers ( $\mu\text{m}$ ) as measured by an U.S. EPA approved reference method.

**PM<sub>10</sub> EMISSIONS**

Finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal ten micrometers ( $\mu\text{m}$ ) emitted to the ambient air as measured by applicable referenced methods, or an equivalent or alternative method specified by the U.S. EPA, or by a test method specified in an approved State Implementation Plan.

**POTENTIAL TO EMIT**

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 if the limitation or the effect it would have on emissions is state enforceable and federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

**PROCESS UNIT**

A single process or piece of process equipment.

**PROCESS WEIGHT**

The total weight of all materials introduced into a source operation, which source causes any discharge of air pollutants into the atmosphere. Solid fuels introduced into any specific source will be considered as part of the process weight, but liquid and gaseous fuels and combustion air, including required excess air, will not.

**PROCESS WEIGHT RATE**

A rate established as follows:

- a For continuous source operations, 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, or
- b For cyclical or batch unit operations or unit processes, the total process weight for a period that covers a complete operation or an integral number of such cycles divided by the hours of actual process operation, or
- c For operations not specified above, the process weight that results in a minimum value for allowable emissions.

### PUBLIC ACCESS

A site to which the general public has access because entry onto such site is allowed or not prevented by natural or man-made barriers. A site shall be deemed to not be accessible to the public if entry onto the property (a) is prevented by natural barriers (e.g., wide rivers, cliffs, vast roadless areas), or (b) has man-made barriers (e.g., fences, frequent patrolling, watch dogs), or (c) has other measures or combinations of measures that effectively prevent entry onto the property by members of the general public. Posting of "no trespassing" signs alone shall not be deemed as preventing public access. Determination of public accessibility shall be made on a site-by-site basis.

### REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)

Technology that will achieve the maximum degree of emission control that a particular source is capable of meeting and that is reasonably available considering technological and economic feasibility. It may require technology that has been applied to similar, but not necessarily identical, source categories. It is not intended that extensive research and development be conducted before a given control technology can be applied to the source. This does not preclude requiring a short-term evaluation program to permit the application of a given technology to a particular type of source.

### REASONABLE FURTHER PROGRESS

Annual incremental reductions in emissions of the applicable air pollutant (including substantial reductions in the early years following approval or promulgation of plan provisions under the Federal Act, Section 110(a)(2)(I) and regular reductions thereafter) that are sufficient in the judgment of the Commission and the U.S. EPA to provide for attainment of the applicable National Ambient Air Quality Standards by the date required in Section 172(a) of the Federal Act.

### RECONSTRUCTION

Will be presumed to have taken place where the fixed capital cost of the new components exceeds fifty percent of the fixed capital cost of an entirely new stationary source. Any final decision as to whether reconstruction has occurred shall be made in accordance with the provisions in Regulation Number 6. In determining lowest achievable emission rate for a reconstructed stationary source, the provisions of Regulation Number 6 shall be taken into account in assessing whether a new source performance standard is applicable to such stationary source.

### REFERENCE TEST METHOD

A method for the sampling and analysis of an air pollutant emission as designated by the U.S. EPA in the most recent edition of the Code of Federal Regulations Title 40, Part 60, Chapter 1, Appendix A, and the Code of Federal Regulations Title 40, Parts 51, 52, 61, and 63, for specific source categories and published in the Federal Register or any alternate or equivalent method approved and/or specified by the Commission or the Division and approved by the U.S. EPA.

### REFINERY PROCESS UNIT

A segment of the petroleum refinery in which a specific processing operation is conducted.

### REFINERY PROCESS UNIT TURNAROUND

Scheduled shutdown of a refinery process unit for the purpose of inspection or maintenance.

**REID VAPOR PRESSURE (RVP)**

The absolute vapor pressure of volatile crude oil and volatile non-viscous petroleum liquids except liquefied petroleum gases as determined by the appropriate American Society for Testing and Materials method

**RESIDENTIAL STRUCTURES**

All buildings or other structures used primarily as a place of residence, and including both single and multi-family residential dwellings.

**ROADWAYS**

Roads, other than haul roads, used for motorized vehicular traffic

**RUN**

The net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous.

**SHUTDOWN**

The cessation of operation of an air pollutant source for any purpose

**SOLID WASTE**

Any waste classified as Type "zero" through Type "six" as specified by the Incinerator Institute of America

**SOURCE DEFINITIONS:****AIR POLLUTION SOURCE**

Any source whatsoever at, from, or by reason of which there is emitted or discharged into the atmosphere any air pollutant

**INDIRECT SOURCE**

A facility, building, structure, or installation, or any combination thereof, excluding dwellings that can reasonably be expected to cause or induce substantial mobile source activity that results in emissions of air pollutants that might reasonably be expected to interfere with the attainment and maintenance of national ambient air quality standards

**MOBILE SOURCE**

Motor vehicles and other sources of air pollution that emit pollutants while moving and that are capable of moving, and that commonly do not remain at one site (one or more contiguous or adjacent properties owned or operated by the same person or by persons under common control)

**STATIONARY SOURCE**

Any building, structure, facility, equipment, or installation, or any combination thereof belonging to the same industrial grouping that emit or may emit any air pollutant subject to regulation under the Federal Act that is located on one or more contiguous or adjacent properties and that is owned or operated by the same person or by persons under common control. Those emissions resulting directly

from an internal combustion engine for transportation purposes or from a non-road engine as defined in Section 1 B 40 of this regulation shall not be considered a stationary source. Buildings, structures, facilities, equipment, and installations shall be considered to belong to the same industrial grouping if they belong to the same major groups, i.e., have the same two-digit codes, as described in the Standard Industrial Classification Manual, 1987, but not later amendments. See National Technical Information Service Order No. PB 87-100012. The manual is available for examination at the office of the Director of the Air Pollution Control Division, Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, Colorado, 80246-1530.

### **STACK**

A flue, conduit, or duct arranged to conduct an air pollutant to the ambient air. For the purposes of stack height requirements, flares will be excluded from the definition of stack.

### **STANDARD CONDITIONS**

A gas temperature of 20 degrees Celsius or 68 degrees Fahrenheit and a gas pressure of one atmosphere (760 torr)

### **STANDARD OF PERFORMANCE**

A regulation that limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements that limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

### **STARTUP**

Any setting in operation of an air pollutant source for any purpose.

### **STEEL PRODUCTION CYCLE**

The operation of a basic oxygen process furnace required to produce each batch of steel and includes the following major functions: scrap charging, preheating (when used), hot metal charging, primary oxygen blowing, additional oxygen blowing (when used), and tapping.

### **SUBMERGED FILL PIPE**

Any gasoline or petroleum distillate tank fill pipe the discharge that is entirely submerged when the liquid level is six inches above the bottom of the tank. "Submerged fill pipe" when applied to a tank that is filled from the side is defined as any fill pipe the discharge opening that is entirely submerged when the liquid level is eighteen inches above the bottom of the tank.

### **TERMINALS**

A petroleum distillate storage and distribution facility that has an average daily throughput of more than 76,000 liters (20,000 gallons) that is loaded directly into transport vehicles.

### **THERMAL DRYER**

A process in which the moisture content of a processed material is reduced by contact with a heated stream of air or other gases that are exhausted to the ambient air.

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**TOTAL SUSPENDED PARTICULATE (TSP)**

Particulate matter as measured by the method described in the Code of Federal Regulations, Title 40 Part 50, Appendix B (Hi-Volume Sampler)

**TRANSFER AND LOADING SYSTEM**

Any equipment or processes used to transfer or load materials for storage or shipment

**UNCLASSIFIED AREA**

An area within Colorado that cannot, based on available information, be classified as attainment or nonattainment

**VAPOR BALANCE SYSTEM**

The connecting together of the vapor spaces of two vessels such that when liquid is dispensed from the first vessel into the second vessel, the vapor in the second vessel is displaced by the incoming liquid and forced through the connection into the first vessel. This vapor then occupies the space in the first vessel that is vacated by the dispensed liquid.

**VAPOR RECOVERY SYSTEM**

A vapor collection system capable of collecting substantially all the volatile vapors and gases discharged from the storage vessel and a vapor disposal system capable of processing such vapors and gases to prevent any substantial emission to the ambient air

**VOLATILE ORGANIC COMPOUND (VOC) (see also Highly Volatile Organic Compound)**

Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions, except those listed in the definition of negligibly reactive volatile organic compounds included in this regulation as having negligible photochemical reactivity. Volatile organic compounds may be measured by test methods specified in Colorado's EPA-approved State Implementation Plan, a Title V Permit, a reference method, an equivalent method, an alternative method or by procedures specified under the Code of Federal Regulations Title 40, Part 60, Title 40 Part 51, Subpart I or Appendix S, or Title 40, Part 52. Prior approval from the U.S. EPA is required in order to use an equivalent or alternative method. A reference method, an equivalent method or an alternative method, however, may also measure nonreactive organic compounds. In such cases, an owner or operator may exclude the compounds listed in the definition of net emission increase when determining compliance with a standard if the amount of such compound is accurately quantified and the Division approves such exclusion. As a precondition to excluding such compounds as volatile organic compounds, or at any time thereafter, the Division may require an owner or operator to provide monitoring or testing methods and results demonstrating, to the satisfaction of the Division, the amount of negligibly reactive compounds in the source's emissions. For the purposes of photochemical dispersion modeling, the non-criteria reportable NRVOC tertiary butyl acetate (also 2-butanone) shall be treated as a VOC.

**WELFARE**

As used in these regulations, effects on public welfare include, but are not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, 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.

**WOOD RESIDUE**

Bark, sawdust, slabs, chips, shavings, mill trim, and other wood products derived from wood processing and forest management operations

**II. GENERAL**

**II.A. To Control Emissions Leaving Colorado**

When emissions generated from sources in Colorado cross the state boundary line, such emissions shall not cause the air quality standards of the receiving state to be exceeded, provided reciprocal action is taken by the receiving state.

**II.B. Emission Monitoring Requirements**

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

**II.C. Performance Testing**

II.C.1 The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

II.C.2 Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division

II.C.2.a. Specifies or approves, in specific cases, the use of a test method with minor changes in methodology.

II.C.2.b. Approves the use of an equivalent method.

II.C.2.c. Approves the use of an alternative method, the results of which the Division has determined to be adequate for indicating where a specific source is in compliance, or

II.C.2.d. Waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility complies with the standard. Nothing in this paragraph shall be construed to abrogate the Commission or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

II.C.3 Compliance test(s) shall be conducted under such conditions, as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

II.C.4 The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty-day notice requirement if arrangements satisfactory to the Division are made for earlier testing.