

1.11.0(1) The following are the only requirements in these procedural rules which are part of the State Implementation Plan:

The Commission shall have at least a majority of members who represent the public interest and do not derive a significant portion of their income from persons subject to permits or enforcement orders under this article or under the federal act. The members of the Commission shall disclose any potential conflicts of interest which arise during their terms of membership to the other Commissioners in a public meeting of the Commission.

1.11.0(2) All other requirements of those procedural rules, found in all sections except this Section 1.11.0 are reserved to the authority of the State and are not part of the State Implementation Plan.

**Footnote:**

The State's procedural rules consist of twelve sections. The State requested that EPA only approve section 1.11.0 for inclusion into the SIP. This stand alone section of the Colorado SIP replaces the procedural rule section previously found in Colorado's Common Provisions.

## DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

### Air Quality Control Commission

#### COMMON PROVISIONS REGULATION

##### 5 CCR 1001-2

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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#### **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.' 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
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
H <sub>2</sub> O	Water
H <sub>2</sub> S	Hydrogen Sulfide
H <sub>2</sub> SO <sub>4</sub>	Sulfuric Acid
hz	Hertz
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)
LTS	Long Term Strategy For Visibility Protection
m	Meter(s)
MACT	Maximum Achievable Control Technology

m eq	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
O	Ohm
O <sub>2</sub>	Oxygen
Pa	Pascal
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter With Diameter Of 10 Microns Or Less
PM <sub>2.5</sub>	Particulate Matter With Diameter Of 2.5 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.

**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>2</sub>e 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>2</sub>e (tons per year). The applicable GWPs codified in 40 CFR Part 98, Subpart A, Table A-1 – Global Warming Potentials are hereby incorporated by reference as in effect as of November 19, 2013, 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.

**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.

**DESIGNATED REPRESENTATIVE** A responsible natural person authorized by the owners and operators of an affected source and of all affected units at the source, as evidenced by a certificate of representation submitted in accordance with Subpart B of Code of Federal Regulations, Title 40, Part 72, to represent and legally bind each owner and operator, as a matter of law, in matters pertaining to the acid rain program. Whenever the term responsible official is used, it shall be deemed to refer to the designated representative with regard to all matters under the acid rain program.

**DIRECT PM2.5 EMISSIONS** Solid particles emitted directly from an air emissions source or activity, or gaseous emissions or liquid droplets from an air emissions source or activity which condense to form particulate matter at ambient temperatures. Direct PM2.5 emissions include elemental carbon, directly emitted organic carbon, directly emitted sulfate, directly emitted nitrate, and other inorganic particles (including but not limited to crustal material, metals, and sea salt).

**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.

**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).

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

**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)2CF2OC2H5)
1-ethoxy-1,1,2,2,3,3,4,4,4-nonfluorobutane (C4F9OC2H5)
2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF3)2CF2OC2H5)
1,1,1,2,2,3,3,-heptafluoro-3-methoxy-propane (n-C <sub>3</sub> F <sub>7</sub> OCH <sub>3</sub> , HFE-7000)
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-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
(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 Unsaturation and with Sulfur Bonds only to Carbon and Fluorine

2-amino-2-methyl-1-propanol (also known as AMP; CAS number 124-68-5)

2, 3, 3, 3-tetrafluoropropene (also known as HFO-1234yf)

trans 1-chloro-3, 3, 3-trifluoroprop-1-ene (also known as Solstice™ 1233zd(E))

HCF<sub>2</sub>OCF<sub>2</sub>H (also known as HFE-134)

HCF<sub>2</sub>OCF<sub>2</sub> OCF<sub>2</sub>H (also known as HFE-236cal2)

HCF<sub>2</sub>OCF<sub>2</sub> CF<sub>2</sub> OCF<sub>2</sub>H (also known as HFE-338pcc13)

HCF<sub>2</sub>OCF<sub>2</sub> OCF<sub>2</sub> CF<sub>2</sub> OCF<sub>2</sub>H (also known as H-Galden 1040X or H-Galden ZT 130)

trans-1, 3, 3, 3-tetrafluoropropene (also known as HFO-1234ze)

**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.

**PM10** 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.

**PM10 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 weights 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.

**RESPONSIBLE OFFICIAL** One of the following:

- a. For a corporation: a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either: (i) The facilities employ more than two hundred and fifty persons or have gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars); or (ii) The delegation of authority to such representative is approved in advance by the Division;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, state, federal, or other public agency; either a principal executive officer, or ranking elected official. For the purposes of this section, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or

- d. For affected sources: (i) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Federal Act or the regulations, found at Code of Federal Regulations Title 40, Part 72, promulgated there under are concerned; and (ii) The designated representative under Title IV of the Federal Act or the Code of Federal Regulations Title 40, Part 72 for any other purposes under the Code of Federal Regulations Title 40, Part 70.

**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**

- a. Air Pollution Source

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

- b. 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.

- c. 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).

- d. 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 I.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.

**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.
- II.C.5. The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
  - II.C.5.a. Sampling ports adequate for test methods applicable to such facility;
  - II.C.5.b. Safe sampling platform(s);
  - II.C.5.c. Safe access to sampling platform(s); and
  - II.C.5.d. Utilities for sampling and testing equipment.
- II.C.6. Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.
- II.C.7. Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.
- II.D. Ambient Air Monitoring Requirements (Reserved)

#### II.F. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission that would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

#### II.G. Conflicts

Nothing in these regulations is intended to permit any practice that is a violation of any statute, ordinance or regulation.

#### II.H. Severability Clause

If any regulation, section, clause, phrase, or standard contained in these regulations shall for any reason be held to be inoperative, unconstitutional, void, or invalid, the validity of the remaining portions thereof shall not be affected thereby and the Commission does hereby declare that it severally passed and adopted the provisions contained therein separately and apart from the other provisions thereof.

#### II.I. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is demonstrated by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

III. RESERVED

IV. RESERVED

V. STATEMENTS OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE

V.A. Adopted December 14, 1978 - Definitions

**Rationale and Justification for Revisions to the Common Provisions Regulation**

The principal reason for revising the Common Provisions Regulation is the need for the addition of certain definitions required by the revisions of the other regulations. Opportunity was taken at the same time to revise some definitions in an effort to add clarity. Few changes were made in Section I, even though some questions were raised regarding I.D. - Intent.

Consideration was given to the suggestions of the Division and the Parties to the hearing with respect to the definitions. In some instances, the original definitions were retained; in others, they were modified. For example: (1) the original definition of "air contaminant" was retained; the Union Oil suggestion was far less precise; (2) the Public Service Company definition of "air contaminant source - new source," replaces the original version; (3) for "steel production cycle," the CF&I version was adopted. Generally, the Commission worked through the original definitions and the various suggestions for change and finally adopted those versions they concluded were best in terms of clarity and intent.

Considerable attention was paid to the definition of "modification" and a version selected which would encourage existing sources within the state to install new pollution control equipment even though a slight increase in emissions of sulfur dioxide would result if these increases (a) occurred in a sulfur dioxide attainment area, and (b) if the existing source sulfur dioxide standard would be met.

The notification period prior to performance testing was shortened to 30 days with the provision the Division could waive this interval if it so decided. The CF&I request for exemption of sources emitting less than 100 tons per year from performance testing was rejected in that no means would exist to detect violations of the emission standard without such testing.

**Rationale and Justification Addition to Common Provisions Conflict of Interest**

The purpose of this regulatory addition is to set forth standards of conduct as it relates to conflict of interest in the course of operation of both the Colorado Air Pollution Control Commission and the Colorado Air Pollution Variance Board. This regulation essentially establishes in written form that which has been the practice of the Commission and the Variance Board during the course of hearings conducted by the respective bodies.

This regulation will also bring Colorado into compliance with Section 128 of the Clean Air Act, which requires that "any potential conflicts of interest by members of such board or body or the head of an executive agency with similar powers be adequately disclosed." The Clean Air Act also provides that a state may adopt requirements respecting conflicts of interest for such boards or bodies, which are more restrictive than the requirements of the Act.

The Commission believes this regulation satisfies both the requirements of the Federal Act and the State Administrative Procedures Act as well as setting forth expected standards of conduct.

V.B. Adopted June 5, 1980 — Abbreviations and Definitions

### **Rationale and Justification for the Repeal And Repromulgation of Regulation Number 3 and Common Provisions Regulation as Related to Regulation Number 3**

On December 14, 1978, the Air Quality Control Commission revised Regulation Number 3 (concerning requirements for filing air pollution emission notices, obtaining emission permits, and payment of fees with respect to both) for the primary purpose of bringing Colorado's air pollutant emission permit program into conformity with the requirements of the Federal Clean Air Act Amendments of 1977 to the extent authorized by the then effective state statutory authority: "The Air Pollution Control Act of 1970," C.R.S. 1973, 25-7-101 *et seq.* The regulation as revised in 1978 and which became effective January 30, 1979, was submitted to the U.S. EPA as a revision to the State Implementation Plan ("SIP") pursuant to Subsection 129(c) of the Federal Clean Air Act Amendments of 1977.

Since that submittal, the Colorado General Assembly has repealed and reenacted the state's basic air pollution control statute: Article 7 of Title 25, Colorado Revised Statutes, 1973, The new article, known as the "Colorado Air Quality Control Act" (designated House Bill 1109 in the 1979 Legislative session), became effective June 20, 1979, and largely brought the state statute into conformity with the Federal legislation, mandating the Commission to develop a comprehensive air pollution control program meeting the requirements of the Federal Clean Air Act.

The primary purpose of this current revision of Regulation Number 3 is to implement the new provisions of HB 1109 and to further bring the permit aspects of the Colorado air pollution control program into compliance with the requirements of the Federal Clean Air Act.

Revisions also respond to the requirements set forth in the October 5, 1979 Federal Register notice which conditionally approved portions of the Colorado SIP and set forth certain requirements for securing their unconditional approval. E.g., see Section IV.D.2.a.(iv) of revised Regulation Number 3 which incorporates the requirements of Section 172(b)(11)(A) of the Clean Air Act. 44 Fed. Reg. 57401, 57408 (1979).

The Commission has made an effort to formulate a permit program meeting the requirement of and paralleling of the provisions of EPA policies and rules to the extent authorized by House Bill 1109 and to the extent deemed appropriate by the Commission for Colorado's particular circumstances. This has been done in order to meet certain specific requirements expressly set forth in the Federal Clean Air Act, to meet certain specific requirements EPA has determined are required for compliance with the Federal Act, and to avoid subjecting sources of air pollution in Colorado to differing State and Federal requirements. The Commission considered the assurance of reasonable further progress toward attainment of National Ambient Air Quality Standards as the primary underlying criterion in developing permit requirements for sources located in or near nonattainment areas.



Consideration has also been given to the opinion of the United States Court of Appeals for the District of Columbia in the case of Alabama Power Company v. Costle \_\_\_ F.2d \_\_\_ D.C. Cir., (1979).

### APENs

In order to reduce the administrative burden on both the Air Pollution Control Division (“the Division”) and owners and operators of air pollution sources, the filing of revised air pollution emission notices for the purpose of reporting significant changes in emissions will be required only on an annual basis, rather than whenever a significant change in emissions occurs. In making this revision, the Commission relied on the representations of the Division that annual reporting would be sufficient for purposes of keeping the emissions inventory current.

### Street Sanding

With the exception of street sanding (and indirect sources), the exemptions provided in the revised regulation from the APEN-filing and emission permit requirements are for minor or insignificant sources of emissions.

Although not finding that particulate emissions resulting from the application and reentrainment of “sand” applied to snow or ice covered roadways as a traffic safety measure are insignificant, the Commission has exempted sanding from the APEN-filing and permit requirements out of administrative necessity.

Little benefit can be obtained from the filing of APENs in light of the fact that the amount of emissions cannot be predicted with any reasonable accuracy due to varying factors such as weather. APENs would therefore serve little purpose as notices of expected emissions.

It is the judgment of the Commission that protection of persons and property by sanding snow and ice covered roadways is an overriding consideration and that the costs of not taking such safety measures would far outweigh any air quality benefits resulting from requiring permits for sanding. Sanding should not therefore be prohibited — even without a permit. The only reason for imposing a permit requirement would be to facilitate enforcement of control measures to limit emissions which the Commission believes may be accomplished without a permit requirement through emission control regulations and provisions in local elements of the State Implementation Plan.

### Major Sources, Major Modifications, and the “Bubble” Concept

The Commission has retained requirements that new “major sources” locating in nonattainment areas and “major modifications” to existing sources in nonattainment areas meet special requirements (Offsets, LAER, etc.) designed to allow the continued development in such areas without interfering with reasonable further progress toward attainment of National Ambient Air Quality Standards. The criteria for determining when a new source or modification to an existing source is “major” however, have been extensively revised.

Prior to the U.S. Court of Appeals Decision in Alabama Power Company v. Costle, EPA had defined “potential to emit” — a key phrase in the definition of “major emitting facility” — in terms of uncontrolled emissions. The court however, interpreted the phrase “potential to emit” as used in the definition of “major emitting facility” in Section 169(1) of the Clean Air Act as taking “into account the anticipated functioning of the air pollution control equipment designed into the facility,” thereby drastically reducing the number of sources qualifying as major. In response to this decision, on September 5, 1979, EPA proposed amendments to its regulations concerning requirements for SIPs including those pertaining to Prevention of Significant Deterioration of air quality (“PSD”) and new source review in nonattainment areas, as well as EPA’s Emission Offset Interpretative Ruling. 44 Fed. Reg. 51924 (1979). The Commission in reviewing Regulation Number 3 and the Common Provisions Regulation has incorporated many of the amendments adopted by EPA in its regulations including classifications of sources as major or minor based on controlled emissions.

The court in Alabama Power Company struck down the EPA regulation definition of "major modification" which definition required the imposition of the special nonattainment area requirements (Offsets, LAER, etc.) on sources when modifications resulted in an increase in emissions of criteria pollutants of 100 tons per year or more (for certain listed categories of sources; 250 tons or more for sources not listed). The court held that the special nonattainment requirements applied to all modifications of major emitting facilities except those resulting in only - "de minimus" increases in emissions. The court stated, however, that it would be permissible to look at the net increase in potential emissions from a major source in determining whether Offsets, LAER, etc., will be required.

In its proposed rules, EPA has adopted the "net increase" or "bubble" approach which generally allows a major source undergoing modification to avoid permit review as a major modification by allowing emission reductions elsewhere at the source to offset any increases resulting from the proposed modification. The Commission has adopted the "bubble" concept and many of EPA's specific regulatory provisions with respect to the concept as applied to modifications.

The court in Alabama Power Company also held that fugitive emissions could be included in determining whether a source is "major" only to the extent such emissions were expressly determined to be included by rule of the EPA administrator. In response, EPA has proposed a regulatory definition of "potential to emit" by which fugitive emissions from twenty-seven (27) listed sources would be included in determinations of which new sources and modifications are major. 44 Fed. Reg. 51956, 51958 (1979). In recognition of the fact that such emissions would be included in a determination of whether a source or modification was major if they were emitted through a stack (as opposed to being "fugitive"), recognizing that generally emissions from the twenty-seven (27) listed source categories contribute to hazards to public health and welfare, and to be consistent with the Federal scheme, the Commission has also decided to consider fugitive emissions from the twenty-seven source categories in major source/major modification determinations to the extent they are quantifiable. An owner or operator may avoid the inclusion of fugitive emissions of particulate matter by demonstrating that such emissions are of a size and substance, which do not adversely affect public health or welfare.

### Banking

C.R.S. 1973, 25-7-304 requires the attainment program to provide that emission reduction offsets exceeding those required for the granting of a permit "may be preserved for sale or use in the future." Section V. of Regulation Number 3 establishes an administrative framework and the basic requirements for such a procedure consistent with the "banking" provisions established by EPA in its Emission Offset interpretative ruling, 44 Fed Reg. 3274, 3280, 3285 (January 16, 1979) (to be codified as Appendix S to 40 C.R.S. Part 51).

### Extended "Debugging" Period

Pursuant to C.R.S. 1973, 25-7-114(4)(j), the Division may grant the owner or operator of a new source up to six months after commencement of operation in which to demonstrate compliance with all terms and conditions of its emission permit. The Commission determined, however, that under certain circumstances it would be appropriate to allow a source employing innovative control technology additional time in which to bring the operation of the source into full compliance. Therefore, pursuant to its authority under C.R.S. 1973, 25-7-109(5), the Commission has provided in paragraph IV.H.6. of Regulation Number 3 for such temporary relief from controls under specified limited circumstances. The provision is intended for very limited application.

### PSD

Regulation Number 3 does not address the subject of special permits for major sources locating in attainment areas to insure Prevention of Significant Deterioration of air quality. The Commission decided to wait until EPA's PSD regulations have been finalized before attempting to promulgate State regulations to establish a fully State-operated program. State emission permits are nonetheless still required for sources locating in attainment areas.

## Common Provisions Regulation

In connection with the revision of Regulation Number 3, the Commission concurrently made limited, related revisions in its Common Provisions Regulation. Sections I.B. and I.C. of that regulation have been changed to reflect the renumbering of the sections in the State statute authorizing the Commission to promulgate regulations and to reflect the amended language in the declaration of legislative intent.

Section I.F. of the regulation was amended to add new abbreviations used in revised Regulation Number 3 and Section I.G. (definitions) was amended to delete, revise, and add terms and their definitions to reflect changes in the terminology used in Regulation Number 3.

V.C. Adopted May 13, 1982 - Public Comment

### **Statement of Basis and Purpose Concerning May 13, 1982 Amendment to Section IV.C. (Public Comment) for Small Sources Locating in Nonattainment Areas**

The rationale for this proposed revision is based on the underlying purpose of public comment: to obtain public input on proposed sources that the Air Pollution Control Division (APCD) can use in considering whether a permit should be granted.

Under the previous regulation, all sources locating in nonattainment areas were subject to the public comment requirement unless the APCD exercised its discretion under Section IV.C.3. (sources of less than 6 month's duration) to exempt them. APCD experience has shown that there are four categories of small sources that frequently locate in nonattainment areas, but which did not stimulate comment from the public. These categories are: (1) service stations; (2) restaurants; (3) land development (houses and commercial); and (4) other small sources (such as concrete batch plants). Basically, all the effort put into preparation of public comment packages for these sources can now be used more efficiently and the associated expense to industry saved.

The limit of 5 Tons Per Year (TPY) of controlled annual emissions is based on calculations that show most of the sources in these four categories emit less than 5 TPY of any one pollutant. Service stations, for example, generally emit 1 to 2 TPY. In many cases, less than 1 TPY is emitted.

Under the revised regulation, sources less than 5 TPY can still be subject to public comment if the Division determines it appropriate based on criteria set forth in the regulation. The difference is that the APCD would have discretion to decide instead of being required to provide public notice. Controversial sources such as gravel pits, odor sources and landfill operations are subjected to public comment by the APCD regardless of the level of emissions. This practice will continue in effect.

V.D. Adopted March 10, 1983 - Prevention of Significant Deterioration

### **Statement of Basis and Purpose for the Prevention of Significant Deterioration Program Regulations**

This Statement of Basis and Purpose for the Prevention of Significant Deterioration (PSD) Program Regulations complies with the State Administrative Procedure Act, CRS 1973, 24-4-103(4). The statutory authority for the PSD regulations are in the Air Quality Control Act at CRS 1973, 25-7-102, 25-7-105, 25-7-106, 25-7-108, 25-7-109, 25-7-114, 25-7-116, 25-7-201 et seq. The general purpose of these regulations is to prevent the significant deterioration of air quality in those sections of the state, which has attained the national ambient air quality standards. The parties to this rulemaking include:

Colorado Association of Commerce and Industry; Rocky Mountain Oil and Gas Association, Inc.; Chevron Shale Oil Company; Union Oil Company of California; Colorado Ute Electric Association, Inc.; The Colorado Mountain Club; COAL; Public Service Company of Colorado; City of Colorado

Springs; CF&I Steel; Environmental Defense Fund, Inc.; United States Department of the Interior; and United States Department of Agriculture.

The Air Pollution Control Division acted as staff for and advised the Commission during the proceeding. See CRS 1973, 25-7-111(2)(g).

The PSD regulations adopted by the Commission are in many respects identical to the U.S. EPA PSD regulations. See 40 CFR 51.24 et seq.; 40 CFR 52.21 et seq. The primary reason for this is that the State Act requires that the State PSD program be in accordance with the federal Clean Air Act PSD provisions. See CRS 1973, 25-7-203. Thus, federal PSD requirements are generally a minimum for the State PSD Program. For these reasons, to the extent that the federal PSD rules are identical or substantially identical to the state regulations, the Commission incorporates herein the EPA statements of basis and purpose for the federal PSD rules at 43 Fed. Reg. 26380 et seq. (June 19, 1978) and 45 Fed. Reg. 52676 et seq. (August 7, 1980).

The Commission has additional authorities to prevent significant deterioration of air quality. In several important areas the Commission has tailored these regulations to meet the concerns of Colorado citizens. These areas include the requirement for an impact analysis on water to determine acid deposition effects, the authority to make independent determinations on adverse impact to visibility in Class I areas if the federal land manager fails to fulfill his responsibility to do so, the requirement to establish baselines for, and to monitor air quality related values in, Class I areas to determine the effects of emissions on such values, and the application of Class I sulfur dioxide increments to several Class II primitive areas and national monuments.

The proposed PSD regulations included several provisions reflecting the terms of a settlement agreement in the matter of Chemical Manufacturer's Association, et al. v. EPA in which EPA has agreed to propose amendments to its PSD rules. The Commission has rejected the adoption of such provisions for several reasons. They are arguably less stringent than current EPA rules in that they would appear to permit more air pollution. Because they may be less stringent, their adoption appeared likely on the basis of EPA testimony to impede the approval of the state PSD program by EPA at this time. Finally, EPA's schedule for consideration of such provisions is unknown. Subsequent to EPA action on the provisions of the settlement agreement, the Commission will reconsider those provisions.

The PSD regulations will generally not become applicable to major sources or major modifications in Colorado until EPA has approved them. See CRS 1973, 25-7-210. However, the regulations pertaining to attainment area designations and the enforcement of Class I sulfur dioxide increments in those areas listed in CRS 1973, 25-7-209 will be applicable upon the effective date of these regulations. These regulations will be effective twenty (20) days from publication in the Colorado Register.

#### DEFINITION OF "ACTUAL EMISSIONS"

The definition adopted is essentially identical to the EPA definition.

One party proposed that reference should be made to consideration of control efficiency. The Commission did not adopt this proposal because the definition inferentially considers control equipment efficiency and the reference requested would create confusion, when actual test data were available, as to whether a separate "efficiency" factor was to be applied.

Another party, in commenting on the definition of "baseline concentration," expressed concern that the determination of "actual emissions" could take place, for example, during a low-demand period for a power plant. Such determination would result in an emission rate considerably less than the full-capacity allowable emission rate, resulting in a low baseline concentration. The power plant, operating the next year at full capacity, could consume all or most of the available increment, prohibiting growth in the area. The Commission recognizes that, for certain sources such as power plants (i.e., fossil fuel-fired steam generators), the source must respond to constantly changing demands with significant changes in

emissions from year to year. Therefore, for fossil fuel-fired steam generators, “allowable emissions” should generally be considered “representative of normal unit operation” rather than actual emissions in determinations of “actual emissions” for determining baseline concentration and increment consumption, unless it is clearly demonstrated that a lower level of emissions will never be exceeded.

#### DEFINITION OF “BASELINE AREA” AND “BASELINE DATE”

“Baseline area” is not specifically defined in the State Act but is simply referred to as “an area subject to this article” in the definition of baseline concentration. CRS 1973, 25-7-202. The Federal Clean Air Act definition of “baseline concentration,” Section 169(4), is identical to the states, and EPA has interpreted “an area subject to this article” to mean the attainment and unclassifiable areas designated pursuant to Section 107(d)(1)(D) or (E) of the Federal Clean Air Act. Such an interpretation is also reasonable under the Colorado Air Quality Control Act which states that the Commission shall adopt measures “to prevent significant deterioration of ambient air quality in each region, or portion thereof, of the state identified pursuant to Section 107(d)(1)(D) or (E) of the Federal Act.” The result of EPA’s definition is that the entire state is the baseline area for SO<sub>2</sub>, and air quality control regions for particulate matter.

Several parties proposed alternative approaches to the definition of baseline area. These approaches ranged from a modeled 1 µg/m<sup>3</sup> impact area (based on 7.5 minute quadrangles, the county-township-range-section system, or a metric grid) to the entire state.

The Commission adopted the EPA definition for the following reasons:

- (1) The EPA approach has been in effect for several years and has proven workable. EPA has well-developed procedures for performing source impact analyses in large baseline areas which the state can use. Changing the definition of baseline area would result in use of an approach that has not been proven and that would cause a discontinuity for the regulated industries when the PSD program is delegated to the state.
- (2) The use of areas larger than the source impact area means that baseline concentrations will be determined at an earlier date, and increments will be consumed from an earlier date, thus minimizing air quality deterioration. This fulfills the primary purpose of the State Act. See CRS 1973, 25-7-102.

Certain parties were concerned that baseline areas larger than the impact area might unnecessarily inhibit economic growth in the unaffected portion of the baseline area, but should that occur, and there are no specific examples in the record of where that would occur, the Commission could consider subdividing baseline areas to allow for a new baseline date and concentration.

Testimony from Pitkin County and members of the general public indicated concern that with small baseline areas, minor source emission increases would continue to raise the background ambient air concentrations, especially for particulate matter, before a major source would locate in an area to begin the counting of increment consumption. The baseline areas selected by the Commission for particulate matter represent a balance between a recognition that particulate matter emissions are often a more localized problem than are gaseous emissions (hence the use of AQCRs for particulate matter instead of the entire state, as is the approach for SO<sub>2</sub>) and the need to begin counting increment consumption expeditiously (hence, the use of AQCRs for particulate matter rather than the smaller impact area). Only two AQCRs in Colorado have been triggered during the six years PSD has been in effect. Since triggered baseline areas can in the future be subdivided into triggered and untriggered areas, the Commission considers the use of baseline areas the size of AQCRs sufficiently flexible for purposes of reasonable application, economic growth, and prevention of air quality deterioration.

- (3) Use of a baseline area equivalent to the  $1 \mu\text{g}/\text{m}^3$  impact area could result in a situation where impacts on a Class I area individually were each less than  $1 \mu\text{g}/\text{m}^3$ , with the result that the Class I area would not be a part of a baseline area. Yet the cumulative impact of these sources could be greater than the  $1 \mu\text{g}/\text{m}^3$  increment for particulate matter for Class I areas, so that deterioration of air quality greater than that allowed by the regulation could legally occur.
- (4) The use of the entire state as an  $\text{SO}_2$  baseline area provides maximum protection for all Class I areas in the state. This is of particular concern to the Commission, since the general flow of air from west to east and the long-range transport of gaseous pollutants can result in effects on nearly all of Colorado's Class I areas by  $\text{SO}_2$  sources on the West Slope. The effects and extent of acid deposition, to which  $\text{SO}_2$  is a major contributor, was a topic of extensive testimony at the hearings; the definition of the entire state as a baseline area for  $\text{SO}_2$  affords maximum protection of the environment while the problem of acid deposition receives additional study.

#### DEFINITION OF "BASELINE CONCENTRATION"

Two parties proposed changes to this definition, both suggesting the substitution of "allowable" for "actual" emissions in portions of the definition. The concern regarding power plant actual versus allowable emissions is discussed under "Actual Emissions," above.

The other concern arises from the possibility of a large difference between actual and allowable emissions in the calculation of increment consumption or in establishing baseline concentrations. This is discussed extensively in the EPA preamble to the August 7, 1980 PSD regulations (Division Exhibit B, pp. 74-76) concerning increment consumption. EPA's rationale is that actual emissions more reasonably represent actual air quality than allowable emissions and that because actual emissions are based on at least two years of operation, future emissions could be reasonably expected to remain at the same level. EPA therefore uses actual emissions to avoid "paper consumption" of increment (or modeled baseline concentrations which would exceed monitored levels) The Commission concurs with the EPA rationale and has adopted the EPA approach of using actual emissions to track increment consumption and determine baseline concentrations.

#### DEFINITION OF "COMPLETE"

The Environmental Defense Fund (EDF) proposed a list of specific elements of a PSD permit application, for aid in determining whether an application is "complete," which was generally incorporated in the final rule. The proposed list of items would add some certainty and clarification for the applicant and the Division of the specific items required to demonstrate completeness of an application. Regarding items (i) and (iii)-(iv), opposition to the list by several parties was primarily that it was redundant with other requirements of the rules. York, Nov. 10 Tr. at 18 et seq. and 60 et seq. Item (ii) was retained because, for many or most applications, such information would be necessary to verify the applicant's modeling.

#### DEFINITION OF "NET EMISSIONS INCREASE"

Several parties proposed crediting increases or decreases in emissions that occur up to five years after a modification becomes operational. The Commission did not adopt this recommendation because EPA specifically prohibits states from crediting decreases, which would occur after the change occurs. 40 CFR 51.24(b)(3). In addition, it would prove difficult to exact an enforceable agreement for a source to close down or otherwise decrease emissions at some future date.

Several parties proposed in paragraph f(ii) to shift "enforceable" from time of construction to time of operation. This change would not be consistent with the state statutory requirements, which prohibit construction or operation of a non-permitted new source or modification. The suggested change would also needlessly complicate the correlation of permits to enforceable decreases in emissions.

In response to a party comment that 90 days to report a reduction in emissions is too short, the Commission agreed and has allowed such reports to be made within a year of the decrease unless an extension is granted. A longer time would make the reduction difficult to verify.

#### DEFINITION OF "SECONDARY EMISSIONS"

The final definition incorporates a recent amendment by EPA, 47 Fed. Reg. 27554 (June 25, 1982) and is consistent with CRS 1973, 25-7-202(6.5).

#### DEFINITION OF "ALLOWABLE EMISSIONS"

In several sections of EPA's PSD rules, including its definition of "allowable emissions," EPA grants credit for permit conditions only if they are "federally enforceable." In each of such sections, the Commission has deleted the qualification of "federally" and has in the Common Provisions Regulation defined "enforceable" so that it is consistent with EPA's definition of "federally enforceable."

#### DEFINITION OF "SIGNIFICANT"

Several parties commented that the proposed definition, which defined both "significant" and "significantly" and included a listing of "significant concentrations," was confusing and unnecessary. The proposed definition also gave the Division the discretion to (1) determine that certain sources were not significant even if the source met the definition, and (2) to determine significance levels for non-listed pollutants. In addition, it limited the definition for sources affecting Class I areas to those sources producing a "significant" impact. There were several sections in the proposed regulations that used the "significant" definition of ambient concentrations to allow impacts to Class I areas not allowed under EPA rules. EPA and the National Park Service commented that these changes resulted in a less stringent definition. The Commission agreed with these comments. The final definition is essentially identical to EPA's and uses only emission rates to define "significant," and the use of "significant" to qualify impacts to Class I areas in other sections of the rules has been deleted.

#### DEFINITION OF "MODIFICATION"

One party proposed that an existing exception for increases in SO<sub>2</sub> emissions caused by adding new emission control equipment (e.g., replacing scrubbers with fabric filters) be retained. The Commission acknowledges that this exemption was intended to avoid penalizing a source willing to improve particulate matter collection by converting from scrubbers to baghouses or electrostatic precipitators. Since scrubbers collect gaseous pollutants, but baghouses and precipitators do not, the amount of SO<sub>2</sub> emitted would increase, hence the exemption. Since there are a number of nonattainment areas for particulate matter, but none for SO<sub>2</sub>, the Commission will continue to encourage additional control of particulate matter by including this exemption in the definition of "modification."

It should, however, be noted that this exemption is not included in the definition of "major modification," so a significant increase in SO<sub>2</sub> emissions from a major source will result in PSD applicability. The effect of this is to provide the exemption only for minor sources and minor modifications.

#### DEFINITION OF "STATIONARY SOURCE"

The proposed definition was revised to include language essentially identical to that of EPA at 40 CFR 51.24(b)(5) and (b)(6). The final rule allows more discretion to define stationary source on a case-by-case basis. The definition clarifies that a source in a nonattainment area may also be "an identifiable piece of process equipment" which makes it consistent with a recent federal case. See *Natural Resources Defense Council et al. v. Gorsuch, et al.*, 685 F.2d 718 (D.C. Cir. 1982).

#### DEFINITION OF "FUGITIVE DUST"

The State Act exempts “fugitive dust” from regulation under the PSD program, including exemption from determinations of whether a source or modification is major and of increment consumption. C.R.S. 1973, 25-7-202(4), -202(5), -204(1)(b), and -204(2)(c). “Fugitive Dust” is defined as:

Soil or other airborne particulate matter (excluding particulates produced directly during combustion) resulting from natural forces or from surface use or disturbance, including, but not limited to, all dust from wind erosion of exposed surfaces or storage piles and from agriculture, construction, forestry, unpaved roads, mining, exploration, or similar activities in which earth is either moved, stored, transported, or redistributed; except that fugitive dust shall not include any fraction of such soil or other airborne particulate matter which is of a size or substance to adversely affect public health or welfare.

C.R.S. 1973, 25-7-202(3). Under such definition, fugitive particulates are regulated in the PSD program if they are “of a size or substance to adversely affect public health or welfare.”

The exemption of “fugitive dust” is an issue because EPA counts total suspended particulates (“TSP”) in determining increment consumption, maintenance of primary and secondary NAAQS, and source applicability. Therefore, to the extent that the state excludes some sizes of particulate matter in these determinations, its regulations are arguably less stringent than EPA’s, although as explained below, because of depositional effects, there is generally an insignificant difference between the counting of TSP and the counting of smaller particulates.

The basis for setting the primary NAAQS is health effects; the basis for setting the secondary NAAQS is welfare effects. These are also the bases under the State Act for counting fugitive particulates in the PSD program. Because the bases for the State’s inclusion of fugitive particulates and for EPA’s promulgation of particulate matter NAAQS are essentially identical, it is appropriate to consider whether the NAAQS should be the standard for determining which particulates are “of a size or substance to adversely affect public health or welfare.” However, EPA’s current primary and secondary NAAQS for particulates are based on the “Air Quality Criteria for Particulate Matter” (1969), Div. Ex. R., which has generally been superseded by more recent research and analysis. For that reason, EPA in the CMA v. EPA Settlement Agreement has agreed in the near future to promulgate new primary, and perhaps secondary, NAAQS for particulates which would exclude particulates above a size posing no health or welfare risks.

EPA’s staff review, in anticipation of revisions to the particulate matter definition and NAAQS, of the effects of particulate matter on health concludes that the size counted should be less than 10 um, which includes those particles capable of penetrating the thoracic regions. “Review of the National Ambient Air Quality Standards for Particulate Matter: Assessment of Scientific and Technical Information,” EPA 450/5-82-001 (January 1982).

EPA staff review of welfare impacts indicates that visibility impacts are generally caused by fine particulates of less than 2.5 um. Id. at 122. However, such review recognizes that “the full size range of particles including dustfall can contribute to soiling, become a nuisance and result in increased cost and decreased enjoyment of the environment.” Id. at 140. Further, the EPA “staff recommends consideration of the economic and other effects associated with soiling and nuisance when determining whether a secondary standard for TP or for TSP or other large particle indicator is desirable,” id. at 141, and that “the basis for selecting a particular level for a secondary TP or TSP standard is a matter of judgment.” (emphasis added) Id. at 147. The EPA staff review indicates that EPA will probably propose a fine particulate secondary standard but is undecided as to whether to establish a TSP or large particulate secondary standard, and that there is a basis for concluding that welfare impacts are being caused by all sizes of particulates. Additionally, there was public and party testimony on welfare effects from fugitive particulates, some of which can be assumed to be large particles. See Markey, November 10 Tr. at 2 et seq.

One of the apparent concerns of parties and persons opposing the use by the Commission of TSP as a welfare standard is that the increment would be consumed and that no further development could occur. Division Exhibit W, which compares the modeled ambient impacts of TSP using a deposition model with



particulates of 10 um or less using the same model, shows that the larger particles deposit quickly and that the ambient impact is relatively the same at a distance of 1000 meters or greater. The implication of this is that for many sources the modeling of increment consumption would have the same general results whether TSP is counted or whether only particles 10 um or less are counted (assuming the boundary of the source is 1000 meters or farther from the emissions point). Another implication is that welfare impacts from large particulates can only result within relatively short distances of a source.

Another concern was that the legislative intent was not to count TSP, although there was not clear evidence of legislative intent presented to the Commission. In any event, statutory language leaves the determination to the Commission to decide what particulates are of a size or substance to adversely affect health or welfare.

Given the foregoing considerations and the Commission's general interest in interpreting health and welfare effects of particulates consistent with EPA, but also given the uncertainty surrounding the revision of the particulate NAAQS by EPA, the Commission determines that in applying the definition of "fugitive dust", the adverse effects on health or welfare of fugitive particulate emissions should be determined individually for each source. Adverse welfare effects of nuisance and soiling will be presumed to occur if the source would have offsite, ambient, particulate impacts unless the permit applicant rebuts such presumption with clear and convincing evidence. The result of this presumption will be that in most cases, large particulates will be counted and there will be no difference between EPA's treatment of particulates and the state's. Other health and welfare effects shall generally be evaluated based on EPA's most recent research and analysis, but the permit applicant shall have the burden of proof of demonstrating with clear and convincing evidence that, if any, sizes or substances of fugitive particulates do not adversely affect health or welfare. This presumption of health and welfare effects has been incorporated in the definitions of "major stationary source" and "major modification," Section XI.A.4 on Exclusions from Increment Consumption, and Section V.D.3.c.(i)(B).

Upon EPA's adoption of revised NAAQS for particulates, the Commission may consider whether to revise this Statement of Basis and Purpose or the definition of "fugitive dust" to reflect such revisions. Should EPA decide not to have a secondary NAAQS incorporating nuisance and soiling (welfare) impacts of large particulates, the Commission will consider whether the welfare effects of large particulates are significant enough to be included, or whether they are relatively insignificant and, thus, should not be counted in the state PSD Program.

#### DEFINITION OF "MAJOR SOURCE" AND "MAJOR MODIFICATION"

The State Act permits the counting of fugitive emissions in determining whether a source or modification is major "only if the Commission adopts regulations to include fugitive emissions for that source category." CRS 1973, 25-7-202(4) and (5). The Federal Clean Air Act has a similar requirement at Sec. 302(j). EPA has interpreted the rulemaking requirement to mean simply a consideration in rulemaking of whether fugitive emissions should be counted and a requirement that affected industries be allowed to present policy or factual reasons why fugitive emissions should not be counted. 45 Fed. Reg. 52676 (August 7, 1980). Based on this rationale, EPA's rules currently list 26 categories of sources for which fugitive emissions are counted. A similar interpretation of the State Act is reasonable and has been adopted by the Commission.

One party recommended the addition of uranium mills and coalmines to the list of sources for which fugitive emissions would be counted. However, those sources could not be considered in this proceeding due to inadequate public notice. The Commission intends to consider those sources for listing as soon as practicable.

In the CMA v. EPA Settlement Agreement, the EPA has agreed to remove these 26 listed sources on the basis of industry's argument that the rulemaking requirement means that EPA must identify reasonable methods for measuring and modeling fugitive emissions from a category of sources. Although not agreeing that this is legally required under state or Federal law, the Commission has determined that

Division Exhibit F, primarily, makes that demonstration for the ten categories located or expected to locate in Colorado.

It should be noted that measurement methods are not only available, but have been in use for a number of years and have provided test results that are the basis for the fugitive emission factors used by EPA and other control agencies, including the Colorado Air Pollution Control Division.

The following important parallels between stack emission factors and fugitive emission factors support the conclusion that fugitive emission factors are relatively as reliable and as reasonably available as stack emission factors:

- Both are based on numerous test data at different locations on different equipment or operations.
- Both are influenced by many variables (e.g., for a stack, flow rate, temperature, process variations; for a fugitive plume, wind speed, moisture content of the material, size distribution of the material).
- Neither is intended to represent actual emissions from a specific source. Actual acceptable test data for a specific or similar source would always be used in lieu of an emission factor.
- Both are intended as air management tools to allow pre-construction assessment of a source impact or as a representative value to average total emissions from a number of similar sources (e.g., all waste incinerators, commercial boilers, or coal storage piles) for such air quality management purposes as determining "reasonable further progress" in nonattainment areas.

Stack and fugitive emission factors are both estimates; such factors are nevertheless widely used by control agencies and applicants alike. However, control agencies generally have no objection to, and would prefer, actual test data in lieu of factors whenever such information is submitted. (See Testimony of McCutchen, October 28, 1982; Egley, November 18, 1982, pp. 72-75 and p. 99; Bertolin, October 29, (am), p.39.)

One party's concern involved whether the emission factors for a facility can be extrapolated to a larger facility, specifically, from a 7000 ton per day oil shale processing facility to a 50,000 ton per day facility. Scale-up is a widely used and accepted approach throughout industry for estimating the feasibility of larger-scale facilities from results at smaller-scale facilities. There are a number of well-known precautions that should always be considered when extrapolating, and a control agency should be at least as cautious in extrapolating emission levels as the applicant is in extrapolating process data. Of course, if different equipment, such as a retort, is to be used at a proposed facility, an emission estimate would be based on mining and handling practices and on different processing equipment emission factors (e.g., refinery emission factors) which are similar to oil shale processing activities where such would be more accurate than extrapolation. Therefore, either through extrapolation or through the application of other more applicable and available emissions factors, relatively accurate emissions levels from all types of oil shale facilities can be calculated.

The same modeling techniques used to model stack emissions can be and are used to model fugitive emissions. Division Appendix F. One modeling parameter, deposition, is more critical in modeling fugitive particulate emissions and should be carefully evaluated. Fugitive particulate emissions usually contain more large particles than do controlled stack emissions. These large particles generally settle out rapidly, so that the impact at a plant boundary is usually much less than would be anticipated by the quantity of emissions at the source. See "Fugitive Dust." However, acceptable models exist which incorporate deposition and thereby provide a reasonably accurate assessment of fugitive particulate emission impact.

Models without deposition can be used for gaseous and fine particulate fugitive emissions. Models have recognized limitations, but they are as accurate for fugitive emissions as for stack emissions.

The following information, which is primarily from Division Exhibit F, concerns the major policy and factual reasons for counting fugitive emissions from each of ten source categories:

Coal Cleaning. A typical plant would process 10,000 tons per year (TPY) of coal and emit approximately 280 TPY of particulate matter, 96% of which would be fugitive emissions. Over 100 TPY of the fugitive emissions are less than 15 microns in diameter and are considered inhalable particulate (IP).

Portland Cement. The typical plant produces 500,000 TPY of cement and emits approximately 370 TPY of particulate matter, 60% of which would be fugitive emissions.

Iron and Steel Mills (Including Coke Ovens). A typical plant would produce several million tons of steel per year and emit approximately 3,600 TPY of particulate matter, 64% of which would be fugitive emissions. The coke plant would produce over half a million tons of coke per year and emit approximately 700 TPY of particulate matter, 10% of which would be fugitive emissions, and 1,500 TPY of uncontrolled fugitive hydrocarbon emissions.

Petroleum Refineries. A typical plant would process 25,000 barrels of oil per day and emit approximately 1,100 TPY of hydrocarbons, 57% of which would be fugitive emissions.

Lime Plants. A typical plant would produce 300,000 TPY of lime and emit approximately 1,800 TPY of particulate matter, 33% of which would be fugitive emissions.

Fuel Conversion. A typical shale oil plant would produce 50,000 barrels per day of oil and emit 4,800 TPY of particulate matter, 12% (500 TPY) of which would be fugitive emissions, and 8,611 TPY of hydrocarbons, 12% (1,080 TPY) of which would be fugitive emissions.

Sintering Plants. A typical plant would emit approximately 400 TPY of particulate matter, 20% (80 TPY) of which would be fugitive emissions.

Power Plants and Boilers. A typical, but well-controlled, new 500 MW power plant burns 2.1 million TPY of coal and emits approximately 620 TPY of particulate matter, 18% (110 TPY) of which would be fugitive emissions. These fugitive emissions are from coal handling and storage, among the most visible and complaint-related of all fugitive emission sources.

Petroleum Transfer and Storage. A typical plant has a capacity of 476,000 barrels and an annual throughput of 7,123,000 barrels per year and emits 267 TPY of hydrocarbons, 72% of which are fugitive emissions.

In conclusion, the Commission has determined that fugitive emissions from the above sources should be included in determining whether the source or modification is major for the following general reasons:

- (a) Fugitive emissions consist of the same pollutants that are emitted through stacks and regulated as stack emissions;
- (b) The quantity of fugitive emissions, both in absolute and in relative terms, is significant; and
- (c) Although this finding is not legally required, there are methods reasonably available for measuring and modeling fugitive emissions.

## PUBLIC COMMENT AND HEARING REQUIREMENTS

The Commission has adopted a regulation designed to offer maximum opportunity for any interested person to learn about, and become involved in, the PSD permit review process. Adopted in the final rule are proposals by one party that (a) the public notice be printed not only in a newspaper of local distribution, but also in one of state-wide distribution to increase the number of potential interested persons reached by the notice, (b) that the public hearing be held at least 60 days after the Federal Land Manager (FLM) has received the notice and permit application, to allow the FLM adequate response time, and (c) that any interested person receive notice of public hearing. In addition, the Commission agrees with the Division proposal to implement and maintain an "interested party" mailing list as described in Division Exhibit M.

The proposed rule contained a requirement that the Division notify the county Commissioners in affected counties when a proposed source would consume 50 percent or more of the remaining PSD increment. Two parties proposed that this requirement be deleted as allowing local land use decision-makers to unduly influence air permit decisions. The intent of this requirement, which has been modified to notify county Commissioners of any PSD permit applications, is not to provide opportunity for counties to comment to the Division on land use; rather, it is to provide information to the counties on proposed sources so that the counties can more adequately assess their priorities and needs. PSD permit approval or denial is to be based solely on the criteria specified in this regulation; land use decisions are, and will remain, the responsibility of local governments.

Regarding the issue of land use decisions, one party commented that Section IV.C.4.e(iii) of this final rule, which solicits comments from interested parties on alternatives to a proposed PSD source or modification, constitutes the inclusion of land use factors in permit approval determinations. The Commission did not remove this section because it is required by the State Act, CRS 1973, 25-7-114(4)(f)(1)(B). Furthermore, the intent of soliciting such alternatives is for the assessment of alternatives with respect to control technology and source impact, not land use.

#### CONTROL TECHNOLOGY REVIEW

One party proposed that the last sentence in Section IV.D.3.a.(i)(C), which requires the owner or operator of a phased project to demonstrate the adequacy of a previous best available control technology (BACT) determination, be deleted. The Commission did not delete this sentence because (1) an EPA regulation requires such a condition and deletion of this requirement could be considered less stringent, and (2) the requirement is intended to provide for the possibility of a different BACT determination if new technology has developed between the time of permit review and the next phase of a project for which construction has not yet commenced, a time period which can easily exceed five years on large projects.

#### POST-CONSTRUCTION MONITORING

Five parties proposed that post-construction monitoring requirements be limited to a maximum of one year. The Commission recognizes the concern of lessening the burdens on owners or operators, particularly if the information being gathered is unnecessary. However, in many cases, there can be a very real need for monitoring for periods of time greater than a year to obtain reliable data. Accordingly, the final rule requires post-construction ambient monitoring for a period up to one year; additional ambient monitoring can be required only if it is necessary to determine the effect of emissions from the source on air quality. This necessitates an evaluation by the Division regarding the adequacy of the data, and a showing by the Division that additional monitoring is needed, before more than a year of monitoring could be required.

#### OPERATION OF MONITORING STATIONS

Three parties proposed that the rule be written to allow the latest changes in EPA-approved methods to be used without first having to amend the rule. The Commission agrees with the need to use the most up-to-date approved methods. Accordingly, the final rule specifies that "EPA accepted procedures....as approved by the Division" can be used.

## ADDITIONAL IMPACT ANALYSIS

Section IV.D.3.a.(vi) of the final rule requires an owner or operator of a proposed PSD source to provide an analysis of the impairment to water that would occur as a result of emissions associated with the source.

This analysis is not required by the EPA rules. The inclusion of water in the additional impact analysis reflects a strong concern by the Commission based in the record regarding acid deposition. At this time, there is neither the information nor the evidence of damage to justify regulating acid deposition in Colorado. However, the vulnerability of high altitude lakes to acid deposition and the potential increases in acid-forming pollutants such as SO<sub>2</sub> and NO<sub>x</sub> on the Western Slope from sources subject to the PSD program, particularly oil shale processing and large power plants, clearly demonstrate a need for a program to gather data, track and analyze this potential environmental problem. The inclusion of water in the additional impact analysis is intended to gather information on the problem; this analysis is not intended to affect permit approval or denial or control technology review decisions except for determinations of adverse impact to AQRVs in Class I areas. The issues that have been raised concerning water impact analysis are discussed in detail below.

### a. Legal Authority to Require an Impact Analysis of Acid Deposition

The State Air Quality Control Act requires a PSD permit hearing to consider "air quality impacts of the source... and other appropriate considerations." C.R.S. 1973, 25-7-114(4)(f). Acid deposition can be construed as an indirect but potentially significant air quality impact which should be analyzed, especially in light of one of the stated purposes of the PSD Program "to protect public health and welfare from any actual or potential adverse effect which....may reasonably be anticipated to occur from air pollution or from exposures to pollutants in other media, which pollutants originate as emissions to the ambient air (emphasis added)." Section 160(1) of the Clean Air Act. Acid deposition in water is those pollutants in other media originating as emissions to the ambient air.

The Federal Land Manager (FLM) of a Class 1 area is responsible for determining whether a source has an adverse impact on air quality related values which are generally defined as follows:

Any value of an area, which may be affected by a change in air quality. Examples include flora, fauna, soil, water, visibility, culture, and odors. Forest Service Comments, October 7, 1982, p.1.

Acid deposition may adversely affect such values, and thus an analysis of its effects should be required for review by the federal land managers of affected Class I areas.

### b. Major Issues

The major issues discussed during the hearings are summarized below:

#### 1. Are Colorado's watersheds sensitive to acid deposition?

John Turk of the USGS is involved in acid deposition research in Colorado and stated that 370 lakes in the Flattops Wilderness area comprising 157 hectares would be sensitive to potentially harmful degrees of acidification if precipitation attains an average pH of 4.0. (Exhibit 3, Nov. 10 Tr. at 153)

Ben Parkhurst maintains that there is talk of Colorado's lakes being sensitive (Oct. 29 Tr. at 146), but states that sensitivity must be considered together with acid inputs. Thus, if acid input to the water system is not sufficiently large the sensitivity question is not important.

Dr. William Lewis stated that Colorado's lakes are sensitive to acid deposition as demonstrated by the measured loss in buffering capacity he found in his studies. (Nov. 18 Tr. at 136-138)

In conclusion, it can be inferred that some Colorado lakes are poorly buffered and if sufficient levels of acidity are introduced into the lakes, these poorly buffered "sensitive" lakes could develop acidification problems.

2. Has acidification occurred in any Colorado lakes?

John Turk of the USGS states that there has not been any large degree of acidification taking place in the lakes or streams he has studied in the Flattops. (Nov. 10 Tr. at 172)

Ben Parkhurst also states that there is no evidence to show that any acidification has taken place in Colorado Lakes. (Oct. 29 Tr. at 144 and 150-152)

Dr. William Lewis states that he has noted pH changes in lakes he has studied (Nov. 18 Tr. at 140), but he does not consider that to be the major point in regard to the acidification question. Lewis considers the loss of buffering capacity to be the best indicator of acidification effects on lakes and he has found statistically valid evidence to show that this has occurred. (Nov. 18 Tr. at 136-138)

In summary, there is some evidence that pH has dropped slightly in some of the lakes Lewis has studied, however, it does not appear that acidification (drop in pH) has occurred to any large degree in Colorado, however, in the prediction of future impacts, buffering capacity should be examined and this has dropped in the lakes examined by Lewis.

3. Is there a potential for acidification in the future?

Paul Ferraro has done some research on estimating potential acid deposition impacts on Colorado and has determined that under different energy development scenarios, there is a potential for acidification in sensitive lakes. (Nov. 10 Tr. at 158-159)

Parkhurst states that he would not expect acidification to be a problem in the future, unless the acid deposition reaches levels similar to those found in the Northeast. (Oct. 29 Tr. at 154-156) Parkhurst states that Ferraro's study is conservative and a pH drop to 5.8 would not affect fish.

Oppenheimer (EDF Exhibit 32 p. 6) states that if a  $1 \mu\text{g}/\text{m}^3$  increase in  $\text{SO}_2$  (annual average) occurs, acid deposition levels could result which would be damaging to sensitive lakes.

In summary, it can be inferred that there is a potential for energy development activities to cause increased levels of acids to be deposited in the watershed, and effects on pH may occur depending on the buffering capacity of the water. The degree of the effect will depend on the amount of acid, thus the amount of emissions.

4. Are there adequate methods of modeling for acid deposition effects on watersheds?

Paul Ferraro has utilized what he refers to as a "first cut" approach in estimating impacts due to acid deposition. The approach utilizes methods employed by John Turk for determining sensitivity of waters and methods for estimating deposition rates developed by Systems Applications, Inc. (Nov. 10 Tr. at 154-176)

Oppenheimer (EDF Exhibit 32 p. 12-13) states that acid deposition modeling could be conducted using presently available plume models (approved by EPA), which incorporate a plume depletion function to account for deposition. Results from this model could then be compared to deposition standards.

In summary, there appear to be only screening techniques available at this time for estimating the impacts of acid deposition.

5. What level of acidification is dangerous to aquatic ecosystems?

Parkhurst stated that fish could survive in pH's as low as 4.1. (Oct. 29 Tr. 143)

Lewis states that he feels that trout would be adversely impacted if pH dropped significantly below six as an average. He would not expect trout populations to be able to reproduce and grow at a pH below six. (Nov. 18 Tr. at 152,153)

Parkhurst also states that a permanent pH decrease from 6.0 to 5.0 is not a natural variation that many species would probably be eliminated, and species numbers and diversities reduced. (Nov. 10 Tr. at 110)

Parkhurst also testified that there is not any evidence to show that trout are capable of both reproducing and maturing in an environment, which is consistently of a pH of 4.5 or less. (Nov. 10 Tr. at 114)

In conclusion, the record does not clearly identify the point at which damage to fish will occur. However, testimony indicates that below a pH of 4.5, and maybe below 6, fish populations would not be able to reproduce and mature.

## Summary

Few definitive conclusions could be drawn from the evidence and testimony. The main point of agreement was that at the present time there has not been any adverse acidification identified in any of Colorado's watersheds. The buffering capacity of lakes appears to be the important factor to consider in determining sensitivity of lakes. Testimony was given that buffering capacity has diminished in certain mountain lakes; however, the cause of this loss has not been identified. No agreement was reached on what level of pH could be tolerated by aquatic ecosystems without causing adverse impact. It could be agreed by all parties that more research must be conducted on acid deposition so that its effects may be better understood and predicted by appropriate models.

Although more information is needed, studies in the Northeastern United States, Canada, and Europe show that acid deposition can be a serious problem (Oct. 29 Tr. at 144-145 and EDF Exhibit 32 p.3). Colorado contains many lakes, which are sensitive, exhibiting low buffering capacities. If energy development occurs on the Western Slope emissions of acid precursors will grow substantially, which will result in increased acid deposition levels. The nature of energy industry in Colorado may result in rapid growth in a short period of time, which will occur before all information on acid deposition is understood. If a large industry develops and new information shows that ambient air standards and increments do not protect the state from acidification problems, a valuable resource may be damaged. For these reasons, the Commission intends to remain vigilant in monitoring this problem, and as analytical capabilities is developed or a problem develops, to re-address this issue for possible regulatory and/or legislative solutions. A subcommittee should be formed, if resources permit, to develop specific guidelines for acid deposition analyses based on recent modeling innovations. In the interim, proposed PSD sources emitting acid or acid precursors will be required to analyze the impact of these emissions on water, utilizing the most up-to-date techniques available.

## AREA CLASSIFICATIONS

Several parties objected to the application of Class I sulfur dioxide increments to those areas of Colorado listed in Section VIII.B. which are otherwise Class II areas. The sulfur dioxide Class I increments are required to be enforced in these areas by CRS 1973, 25-7-209. However, pursuant to CRS 1973, Section 25-7-105(8) (Supp. 1982), this Section VIII.B. may not be made a part of the State Implementation Plan (SIP) until these areas are redesignated as Class I under the procedures of Section IX. Until they are redesignated, they may only be enforced under state law and regulations. However, unlike Class I areas, the increment in these areas may be protected now. See CRS 1973, 25-7-210.

The Commission has also determined that the variances from increment consumption allowed by Sections XIV.C., XIV.D., XIV.E., and XIV.F. for Class I areas should also apply to the areas listed in Section VIII.B. It is a reasonable interpretation of CRS 1973, 25-7-209 that if the Class I (sulfur dioxide) increments are to apply to such areas; the variances from the increments should also apply. There is nothing in the State Act to indicate that the areas listed in CRS 1973, 25-7-209, are to be given better air quality protection than Class I areas, which would be the result if the variances did not apply.

### REDESIGNATION

Several parties objected to what were considered burdensome requirements for redesignating areas to Class I. The adopted rule incorporates only the minimal requirements for redesignation from state and federal law. See CRS 1973, 25-7-208; Sec. 164 of the Federal Clean Air Act; 40 CFR 51.24(g). However, the Commission did lessen the burden imposed by the proposed rule on those persons requesting a redesignation by allowing such requests to be made without providing all of the information necessary for a redesignation. Who would provide such information is not specified so that it could be any combination of federal, state and private entities.

### TECHNICAL MODELING & MONITORING REQUIREMENTS

Several parties proposed the inclusion of future EPA amendments or guidelines in this section of the regulation, which specifies the air quality model, monitoring and stack height requirements to be used. In response, the Commission adopted the use of "EPA approved" terminology instead of references to specific documents.

Two parties proposed language making EPA or the state responsible for any needed meteorological data. The Commission did not adopt this proposal because it is the applicant's responsibility to demonstrate that it will not cause exceedance of an NAAQS or increment, and meteorological data are nearly always needed to make such determinations. If the Division has such data, it has an obligation to make that data available to the applicant.

### INNOVATIVE CONTROL TECHNOLOGY

Several parties proposed that the phrase "greater than or" be deleted from Section XIII.B.2. which specifies that the innovative system achieve emission reductions "greater than or equivalent to" BACT. The EPA regulation uses the phrase "equivalent to" and the parties considered the proposed state rule more stringent. The Commission does not consider the phrase "greater than or equivalent to" (emphasis added) to be more stringent, but instead to be a clarification that an acceptable innovation can result in either equivalent or lesser emissions from the source, but not a higher level of emissions. The preamble to the EPA PSD regulation (Div. Exhibit B, p. 84) clearly specifies that the "...final emission limitation must at least represent the BACT level that would have been initially defined..."

### FEDERAL CLASS I AREAS

#### 1. (Section XIV.A.) The State's Independent Determination of Adverse Impact to Visibility

Section XIV.A. allows the Division or the Board (if applicable) to determine independently if there is an adverse impact to visibility in Class I areas if the federal land manager (FLM) fails to make such determination or such determination is in error. This authority is intended to allow the state to fulfill the FLM's responsibility for protection of visibility if for whatever reason, including political, the FLM fails to do so. The Commission recognizes that scenic vistas are an important resource of the State of Colorado. (Colorado Mountain Club Exhibit #1) A subcommittee may be formed to further develop visibility protection for the State of Colorado.

Several parties suggested problems with the state's independent authority to make such visibility determinations. These consisted of (1) measuring or predicting visibility impairment, (2) quantifying man-



induced, as opposed to naturally-occurring, visibility impairment, (3) the subjectiveness of visibility impairment, (4) the lack of correlation of current particulate standards to visibility impairment, and (5) the lack of guidance in the regulation regarding determinations of significant and adverse visibility impacts.

The Commission's response to these concerns is as follows:

- (1) Although it is true that there are not federal reference methods for measuring visibility at this time, there are reliable means to accurately measure and predict visibility impairment. Scientific instruments such as the telephotometer, nephelometer, and the fine particulate monitor are recognized as being capable of obtaining objective information on visibility-related parameters. Photographs are also useful in visibility assessment.

Visibility theory involving scattering and absorption of light is well documented and has been incorporated into the models described in the Workbook for Estimating Visibility Impairment (EPA-450/4-8-031). The preface to the Workbook for Estimating Visibility Impairment states: "EPA believes these techniques are at a point where the results should now be employed to assist decision-makers in their assessments." "These techniques" include the Plu-Vu Model. Div. Ex. J at iii. Thus, these models are appropriate for use at this time.

- (2) It is possible to determine if a source of visibility impairment is natural or anthropogenic through various chemical/physical analysis techniques. Improvements in air sampling and analytical techniques have made available, for the first time, detailed information on the chemical and physical nature of the ambient aerosol and of source emissions. Using these chemical "fingerprints," particle morphology and the natural variability of air shed sources, recent developments in receptor models have provided new techniques of assigning source contributions.
- (3) Perception of visibility impairment is subjective and involves individual variability; however, norms do exist around which an assessment can be made. As noted above, EPA supports the use of its Workbook for Estimating Visibility Impairment as a guide to decision makers.
- (4) Particulate standards do not address visibility-related effects. It is also true that the major anthropogenic visibility impairing pollutant is fine particulate matter. Since the Class I increment for particulate is in terms of total mass concentration, rather than fine particulates, visibility impairment could occur without the increment being violated. Furthermore, the particulate increment is a maximum allowable ground level concentration; consequently, it will not protect visibility impaired by plumes at elevations above ground level. These facts form the basis for the Clean Air Act requirement that visibility should be assessed and regulated in a separate analysis. Div. Ex. S.
- (5) The primary guidance for determinations of adverse impact to visibility would be the Workbook for Estimating Visibility Impairment, which has very specific guidelines.

## 2. (Section XIV.B.) Pre-Application and Operational Monitoring of Air Quality Related Values (AQRVs)

Section XIV.B. of the regulation allows the Division to require a source, which will have or is likely to have an impact on any Class 1 area to conduct monitoring to establish the baseline status of and impacts on AQRVs in such Class 1 areas. EPA has not imposed this requirement on applicants, although under EPA rules and the Commission rule, Section IV.D.3.(a)(vi), an Additional Impact Analysis is required which would include an analysis of impacts on AQRVs based on available data, for example, through literature searches. The data gathered from such monitoring are important and necessary in aiding the federal land manager of a Class 1 area in determining whether or not a source will cause an adverse impact on AQRVs and the state in deciding on concurrence with such determination. The data also aid the public

information function of the Additional Impacts Analysis. The authority to require submission of such information includes, but is not limited to, CRS 1973, 25-7-206(2), 25-7-106(5) and (6), and 25-7-114(4).

A. National Park Service and Forest Service Testimony and Positions

The National Park Service ("NPS") and the Forest Service ("FS") supported the rule as a supplement to their current monitoring activities on the basis that the data is necessary to determining adverse impacts on AQRVs, including visibility. See Mitchell, Nov. 18 Tr. at 122 et seq., 161 et seq.; Haddow, Oct. 28 (p.m.) Tr. at 22 et seq., Nov. 10 Tr at 68 et seq.; Region 2-USDA Forest Service Comments on Proposed PSD Rule; Comments on the May 19, 1982 Proposed Colorado PSD Regulation by National Park Service Air Quality Division.

The NPS stated its willingness to provide a list of sensitive receptors of AQRVs to applicants for monitoring. Mitchell, Nov. 18 Tr. at 162.

The Forest Service recognized severe technical difficulties and high costs of monitoring some pollutants and visibility in wilderness areas. Haddow, Oct. 28 (p.m.) Tr. at 22 et seq. However, lichen monitoring could be done without great difficulty and special use permits are available for some complex monitoring. Haddow, Nov. 10 (p.m.) Tr. at 112., The FS intends to identify sensitive indicators of AQRVs for each Class 1 area, e.g. 2 or 3 species of lichen and 2 or 3 scenic views, and proposes that the state require the monitoring of such indicators Id. at 82-83.

B. Environmental Defense Fund's (EDF) and Friends of the Earth's (FOE) Position

EDF's and FOE's general contentions in support of the proposed monitoring requirements were:

1. the technology for monitoring of AQRV's exist;
2. the Forest Service has identified AQRV's for wilderness areas;
3. although some monitoring is being done, most areas are not being monitored and will not be without the participation of industry;
4. decisions on adverse impacts to AQRVs cannot be made rationally without reliable scientific evidence; and
5. the state is required to have a visibility monitoring program by EPA rules, 40 CFR 51.305.

"EDF and FOE Final Recommendations; Summaries of the Record and Legal and Policy Analyses," Section IV.

C. Trade Association Parties' Position

The Trade Association Parties' general contentions in opposition to the monitoring requirements were:

1. The Clean Air Act places the responsibility on the federal land manager to determine adverse impacts on AQRVs and, thus, the responsibility to obtain the data necessary to make such determination;
2. There is insufficient information available at this time to develop an AQRV monitoring program in that sensitive receptors for each Class 1 area have not been identified, there is no monitoring reference method available and no validated models to project impacts of particular emissions levels;

3. In some Class 1 areas monitoring is either physically impossible or inordinately expensive; and
4. The Division's discretion in specifying sensitive receptors is too vague and broad.

Trade Association Parties' Closing Argument at 31-34.

D. Commission Analysis and Decision

The above-cited testimony and evidence and other portions of the record support the conclusion that monitoring of AQRVs or sensitive receptors of AQRVs would be helpful, and in many cases necessary, to determine whether adverse impacts on AQRVs would occur. It is also evident that baseline data are not available and may never be developed by federal land managers for some AQRVs and sensitive receptors and for some Class 1 areas. Thus, the primary issue is where to place the responsibility for obtaining background data on AQRVs - the federal land manager, the state and/or the applicant.

As the Forest Service suggested, it is traditional permitting practice to require a permit applicant to obtain the data upon which the agency decides. Haddow, Nov. 10 (p.m.) Tr. at 89. This practice is consistent with the economic philosophy that companies should internalize their environmental costs. Furthermore, the Clean Air Act does not change such practice; it places the "affirmative responsibility" on federal land managers to protect AQRVs and to consider whether there will be an adverse impact on AQRVs but does not expressly state whose responsibility it is to provide necessary data upon which to exercise their responsibility.

The Commission has determined that there is available research and test methods for obtaining background data and impact data on many AQRVs that will be critical in making adverse impact determinations, even though there are not generally adopted reference methods or modeling techniques. For example, to perform a reasonably accurate visibility impairment analysis, background data is needed. Div. Ex. J. Although there are no generally accepted reference methods for estimating visibility impacts, methods for estimating visibility impairment have been developed and are relatively sophisticated. See Div. Ex. J.; Geier, Oct. 28 (a.m.) Tr. at 62-71. The rule recognizes this potential limitation on monitoring AQRVs by only allowing monitoring if "monitoring methods are reasonably available and research and development of monitoring methods are unnecessary."

In response to the objection that the Division's discretion in selecting AQRVs for monitoring is too vague and broad, the rule provides:

1. A definition of AQRVs (in the Common Provisions Regulation);
2. That the Division will consult with the federal land manager in the selection of AQRVs; and
3. That the AQRVs selected must be important to the affected Class I area and there must be cause to believe that monitoring of the AQRVs will provide a basis for evaluating effects to the AQRVs.

In response to the objection that the monitoring of AQRVs may not be economically reasonable, the rule provides that:

1. no duplication of monitoring may be required;
2. not more than 3 AQRVs may be required to be monitored;

3. monitoring methods must be reasonably available;
4. monitoring may only be required if the source is a major contributor to the expected effects on the AQRV; and
5. it is economically reasonable as compared to other monitoring and analysis expenses required of a PSD permit applicant.

### SULFUR DIOXIDE AMBIENT AIR STANDARDS FOR THE STATE OF COLORADO

The proposed rule would have revised the Colorado ambient air quality standard for sulfur dioxide to be consistent with the federal standard. Because the Colorado standard is not enforceable in the permitting process, see CRS 1973, 25-7-114(4)(g), the Commission ordered on November 10, 1982 that revisions of the state ambient air quality standard for SO<sub>2</sub> be removed as a subject of this rulemaking.

The Commission agreed to reconsider the state standard if and when it becomes enforceable.

### PUBLIC ACCESS TO CONFIDENTIAL INFORMATION

One party raised the issue of whether Section VII of Regulation NO. 3 improperly restricts access to confidential information, which would be available under the Federal Clean Air Act. Section VII may not be considered for amendment in this rulemaking due to lack of public notice.

V.E. Adopted December 21, 1995 - Negligibly Reactive Volatile Organic Compounds

### **December 21, 1995 (Definitions for Negligibly Reactive VOC and Net emission increase *h.*)**

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Section 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

#### Basis

Regulations 3, 7 and the Common Provisions establish lists of Negligibly Reactive Volatile Organic Compounds (NRVOCs). The revisions adopted consolidate the list of NRVOCs into the Common Provisions, assuring that the same list of NRVOCs apply to all the Colorado Regulations. This provides more consistency in those chemicals regulated as VOCs.

#### Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act provides the authority for the Colorado Air Quality Control Commission to adopt and modify Regulations pertaining to organic solvents and photochemical substances. Sections 25-7-109(2)(f) and 25-7-109(2)(g), C.R.S., grant the Commission the authority to promulgate regulations pertaining to Organic solvents and photochemical substances. The Commission's action is taken pursuant to authority granted and procedures set forth in Sections 25-7-105, 25-7-109, and 25-7-110, C.R.S.

#### Purpose

These revisions to Regulations Number 3, 7, and the Common Provisions are intended to clarify substances that are negligibly reactive VOCs, which are reflected in the EPA list of non-photochemically reactive VOCs. By consolidating the list (which consists of the EPA list of non-photochemically VOCs), and adopting the EPA definition by reference, a single list of negligibly reactive VOCs will apply uniformly to all Colorado Air Quality Control Commission Regulations.

This revision will also include EPA's recent addition of acetone to the negligibly reactive VOC list. The addition of acetone to the list of negligibly reactive VOC's provides additional flexibility to sources looking for an alternative to more photochemically reactive VOCs. Because the EPA has added acetone to their list of non-photochemically reactive VOCs many industries, which make and supply products to Colorado industries, are planning to substitute acetone for VOCs that are more reactive. This change in the content of products purchased by industry for use in Colorado would adversely affect industries in Colorado if acetone remains a regulated VOC in Colorado. By adopting acetone as a negligibly reactive VOC, industries will be able to take advantage of and benefit from this possible shift in product contents.

Previously written statements of the basis and purpose of this regulation and revisions have been prepared and adopted by the Commission. These written statements have been incorporated in this regulation by reference and in accord with C.R.S. 1973, 24-4-103 as amended.

V.F. Adopted November 21, 1996 - Negligibly Reactive Volatile Organic Compounds

### **Revisions to Regulation Numbers 3, 7, 8 and Common Provisions**

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Section 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

#### **Basis**

Regulations 3, 7 and the Common Provisions establish lists of Negligibly Reactive Volatile Organic Compounds (NRVOCs). The revisions adopted update the list of NRVOCs so that the state list remains consistent with the federal list. Additionally because perchloroethylene will no longer be listed as a VOC in Regulation Number 7, Section XII, *Control of VOC Emissions from Dry Cleaning Facilities using Perchloroethylene as a Solvent*, is being deleted.

Regulation Number 8 and 3 list the federal Hazardous Air Pollutants (HAPs). In the June 8, 1996 Federal Register the EPA removed Caprolactam (CAS 105-60-2) from the federal list of Hazardous Air Pollutants. The conforming changes in Regulation Number 3 Appendices B, C and D have been made to keep the list of federal HAPs in Regulation Number 3 consistent with the federal list. The list of HAPs in Regulation Number 8 has been removed and a reference to the list in Regulation Number 3 has been added.

#### **Specific Statutory Authority**

The Colorado Air Pollution Prevention and Control Act provides the authority for the Colorado Air Quality Control Commission to adopt and modify Regulations pertaining to organic solvents and photochemical substances. Section 25-7-109(2)(f) and 25-7-109(2)(g), C.R.S., grant the Commission the authority to promulgate regulations pertaining to organic solvents and photochemical substances. Sections 25-7-105(1)(l)(b) and 25-7-109(2)(h) provide authority to adopt emission control regulations and emission control regulations relating to HAPs respectively. The Commission's action is taken pursuant to authority granted and procedures set forth in Sections 25-7-105, 25-7-109, and 25-7-110, C.R.S.

#### **Purpose**

These revisions to Regulations Number 3, 7, 8 and the Common Provisions are intended to update the state lists of NRVOCs, the Ozone SIP, and HAPs for consistency with the federal lists.

V.G. Adopted April 19, 2001 - Any Credible Evidence and NRVOCs (methyl acetate)

### **(Incorporation by Reference of Federal Definition of Negligibly Reactive Volatile Organic Compounds (NRVOCs and Credible Evidence Provisions)**

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Sections 24-4-103(4) and (12.5), C.R.S. and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

### Basis

The Reason for this revision to the Common Provisions Regulation is to correct an inadequacy in the Colorado State Implementation Plan and Section 110(a)(2)(A) and the (C) of the Clean Air Act. The Credible Evidence revisions need to be incorporated into the Colorado SIP to allow for the use of any credible evidence (ACE) for the purpose of submitting Title V compliance certifications or establishing whether a source has violated or is in violation of any emission standard contained in any regulation that has been submitted to the U.S. EPA. Failure to correct this SIP revision will result in promulgation of a Federal Implementation Plan (FIP) to correct the deficiency.

In a separate action of the above-described rulemaking, the definition of Negligibly Reactive Volatile Organic Compounds (NRVOCs) included in the Common Provisions Regulation is being changed to incorporate by reference the federal Volatile Organic Compound definition at 40 CFR Section 51.100(s)(1). This incorporation adds methyl acetate to the list of compounds included in the Common Provisions Regulation considered as NRVOCs and thereby exempts methyl acetate from the definition of volatile organic compounds for regulatory purposes.

### Background

The credible evidence revisions are based on Section 113(a) of the federal Clean Air Act. This section authorizes the EPA to bring administrative, civil or criminal enforcement action “on the basis of any information available....” Although the Clean Air Act sets no inherent limits on the EPA's authority to use any type of information to prove a violation, some of EPA's regulations provide for specific test methods for determining compliance and have been read by some to constrain EPA's enforcement authority. In the district court case, United States v. Kaiser Steel Corp., No. CV-82-2623 IH (C.D. Cal. January 17, 1984), the court construed the language of a New Source Performance Standard, at 40 CFR Section 60.11, as limiting the admissible evidence of violations of opacity standards to observations utilizing Method 9, the opacity reference method. When the EPA attempted to use expert testimony pertaining to opacity to prove the existence of violations only on those days without Method 9 test data, the court rejected the evidence and held that EPA could prove violations only on those days where the Method 9 test data was conducted. In contrast, the court in National Lime Association v. EPA, 627 F.2d 416, 446, n. 103 (D.C. Cir. 1980) specifically rejected the assertion that standards can only be supported by reference test data.

In the 1990 Clean Air Act Amendments, Congress included an enforcement title, Title VII, to enhance compliance and enforcement authorities. The amended Section 113(e)(1) provides that “in determining the amount of any penalty to be assessed,” the agency shall take into consideration “the duration of a violation as established by any credible evidence (including evidence other than the applicable test method).” Legislative history for this amendment shows that Congress meant to clarify that in an enforcement action, courts are not restricted to reference test method data, but may consider any evidence of violation or compliance admissible under relevant evidentiary rules (see S. Rep. No. 228, 101<sup>st</sup> Congress, 1<sup>st</sup> Session 1, 358 (1989), reprinted in 1990 U.S. Code Cong. & Admin. News 3385, 3741.<sup>1</sup> Section 113(e)(1), along with Section 113(a), described above, clarify that compliance and noncompliance can be determined on the basis of any credible evidence. Subsequent to the 1990 Clean Air Act Amendments, two court cases have upheld the use of credible evidence other than the reference test method specified in the regulation. See Sierra Club v. Public Service Company, 894 F. Supp. 1455 (D.C. Colo. 1995), and Unitek Environmental Services v. Hawaiian Cement, Civ. No. 95-00723 (D. Hawaii 1996).

<sup>1</sup>The Senate Report stated that Section 113(e)(1) makes clear that the agency may rely upon any credible evidence of violations in pursuing alleged violations. Further, the Report explained that the amendment clarifies that courts may consider any evidence of violation or compliance admissible under the federal Rules of Evidence, and that they are not limited to consideration of evidence that is based solely on the applicable test method in the State Implementation Plan or regulation. Thus, this amendment overrules

the ruling in United States v. Kaiser Steel Corp. (citation omitted) to the extent the court in that case excluded the consideration of such evidence. (Senate Report at 358, Reprint at 3741.)

The federal credible evidence revisions, codified in 40 CFR Sections 51.212(c) and 52.33(a), require that State Implementation Plans must provide for enforceable test methods for each emission limit specified in the plan and the plan “must not preclude the use, including the exclusive use, of any credible evidence or information,” for the purposes of submitting compliance certifications or establishing whether a person has violated or is in violation of any standard in the plan. The revisions provide that where information, such as non-reference emissions data, parametric data or engineering analysis is equivalent to information generated by reference test methods, it may be used to establish compliance or noncompliance.

The federal credible evidence revisions received substantial public comment from state and local air pollution control agencies, large and small industries, trade associations and environmental organizations. A summary of the public comments received the EPA's response to the comments and the final rule is contained in 62 Federal Register 8314 (Feb. 24, 1997).

Shortly after the rule became final, several trade associations brought a court action for judicial review (see Clean Air Act Implementation Project, et al., v. Environmental Protection Agency, et al.), in the United States Court of Appeals for the District of Columbia. The Colorado Air Pollution Control Division held workgroup meetings with affected and interested parties to discuss incorporating the federal credible evidence revisions into the State Implementation Plan.

At the request of affected industry, the discussions were withheld until after the final court decision on appeal. The Court of Appeals issued its final decision on August 14, 1998, dismissing the petition for review and upholding the credible evidence revisions. The Court held that “there are too many imponderables.” Whether credible evidence can be used to determine compliance or noncompliance must be decided on a case-by-case basis, given the universe of all possible evidence that might be considered “credible” and that application of evidence other than a specified reference test result may potentially affect some standards, but not others.

The Colorado Utilities Coalition and the Colorado Association of Commerce and Industry have requested that the Commission review and determine whether emissions standards in Colorado regulations were established in reliance on specific reference test methods and whether incorporating the credible evidence revisions into the Common Provisions Regulation will alter the stringency of any of Colorado's regulations. These are some of the same questions put before the Court of Appeals for the District of Columbia in the Clean Air Act Implementation Project case described above, and that the court refused to answer because of the many imponderables presented.

There are over 130-reference test methods described in the federal and Colorado regulations. Reliance on credible evidence other than a reference test may potentially affect some standards, but not others. Added to this is the fact that “credible evidence” is not a finite evidentiary set - the Commission cannot conceive of all possible evidence that might be considered credible. There are some emissions standards included in State Implementation Plans, such as the grain loading particulate matter standards contained in Colorado Regulation Number 1, that were established without consideration of the “back half” or condensable portion of the particulate matter emissions. In this situation, reliance on evidence showing noncompliance with particulate matter standards through test methods, AP-42 factors, or other engineering analysis that considers the condensable portion of the particulate matter emissions will render compliance with Regulation Number 1 emission limitations more stringent.

On the other hand, it is not possible to conceive of all the evidence that may be credible in determining whether a source is in compliance with the “front half” particulate matter emission standards in Regulation Number 1, other than the through the use of reference Test Method 5. In all cases, the proponent of evidence other than the reference test method, whether for purposes of demonstrating compliance or noncompliance in an enforcement action or challenging a permit concerning demonstrations of ongoing compliance for compliance certifications, bears the burden of demonstrating that the evidence is credible

and consistent with compliance demonstrations through use of the relevant performance or reference test method. The Colorado Rules of Evidence will guide the Commission's determinations of whether evidence is credible, i.e., technically relevant and legally admissible in an adjudicatory matter before the Commission.

With respect to the methyl acetate incorporation by reference, in April 1998, the EPA modified 40 CFR Section 51.100(s)(1) to add methyl acetate to the list of compounds having negligible photochemical reactivity and exempting it from the definition of volatile organic compounds (63 Federal Register 17331, April 9, 1998). The EPA found that methyl acetate had photochemical reactivity comparable to or less than that of ethane, both on a per gram and per mole basis.

Ethane has been on the list of compounds having negligible photochemical reactivity since 1977. By incorporating the federal list of compounds included in 63 Federal Register 17331 (April 9, 1998) into 40 CFR Section 51.100(s)(1), Colorado's Negligibly reactive VOCs definition conforms to the federal list.

### Authority

The Colorado Air Pollution Prevention and Control Act, Section 25-7-105(a)(I), provides that the Colorado State Implementation Plan meet all requirements of the federal Clean Air Act. The authority to promulgate rules and regulations to assure conformity with federal Clean Air Act requirements is given to the Colorado Air Quality Control Commission under Section 25-7-105. Section 25-7-105(IV)(12), in particular, provides the authority for the Commission to adopt rules consistent with the federal Clean Air Act Title V minimum elements of a permit program.

### Purpose

The specific purpose of incorporating the ACE revisions into the Common Provisions is to make the Colorado SIP consistent with the federal Clean Air Act requirements and avoid promulgation of a FIP. The incorporation by reference of the current federal definition of compounds having negligible photochemical reactivity also makes the Colorado SIP consistent with the federal Clean Air Act requirements.

### Federal Requirements

The rule revisions are required by Section 110(k)(5) of the federal Clean Air Act, 42 U.S.C. §7410(k)(5) that finds the SIP inadequate to comply with Sections 110(a)(2)(A) and (C) of the Clean Air Act, 42 U.S.C. §§7410(a)(2)(A) and (C), because the Colorado SIP may be interpreted to limit the types of credible evidence or information that may be used for determining compliance and establishing violations. Neither the rule nor the incorporation by reference exceed or differ from federal requirements.

V.H. Adopted August 16, 2001 - Affirmative Defense

### **Revisions to Common Provisions Regulation**

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Sections 24-4-103(4) and (12.5), C.R.S. for and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

### Statutory Authority

The Colorado Air Pollution Prevention and Control Act, Section 25-7-109, C.R.S., provides the Commission the authority to adopt and revise rules and regulations that are consistent with state policy regarding air pollution and with federal recommendations and requirements. Section 25-7-105(1), C.R.S., grants the Commission the authority to promulgate rules necessary to implement and administer the Colorado Air Pollution Prevention and Control Act. Section 25-7-106(1), C.R.S., grants the Commission



maximum flexibility in developing an effective air quality control program. Section 25-7-105(1), C.R.S., provides the authority for the Commission to make state implementation plan revisions.

### Basis

The reason for this revision to the Common Provisions regulation is to provide appropriate relief, in terms of an affirmative defense to civil penalties, for sources that experience excess emissions during startup, and shutdown events, despite their best efforts to comply with applicable emission standards. In general, startup and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the planning, design and implementation of operating procedures for the process and control equipment. Accordingly, it is reasonable to expect that careful and prudent planning, design and operation will eliminate violations of emission limitations during such periods. For some source categories, given the types of control technologies available, there may exist short periods of emissions during startup and shutdown when, despite best efforts regarding planning, design and operating procedures, the otherwise applicable emission limitation cannot be met. The Affirmative Defense for Excess Emissions During Startup and Shutdown revisions to the Common Provisions regulation recognize this fact. Although all excess emissions arising during startup and shutdown must be treated as violations under this rule, an affirmative defense may be available to a source that will shield it from civil penalty liability if the owner/operator meets the requirements of the rule. In making affirmative defense determinations, it is the intent of the Air Quality Control Commission to allow the use of all sources of information, including any credible evidence, the affirmative defense criteria, physical inspection of the facility and review of documentation pertaining to maintenance and operation of process and air pollution control equipment to determine whether the owner/operator proved the relevant factors under this rule. The affirmative defense provision is not available for claims for injunctive relief.

The Commission established several requirements that an owner/operator must prove in order to avail itself of an affirmative defense to civil penalties. These requirements must be evaluated on a case-by-case basis according to the type of source as well as the nature of the cause of any excess emissions. For example, paragraph D requires that an owner/operator demonstrate that it minimized the frequency and duration of operation in startup and shutdown periods to the maximum extent practicable. In general, emission standards applicable to a source category are based on the type of operation, so excess emissions must be evaluated in light of the cause and its relation to the standard. On the other hand, sources naturally have differences in the frequency and duration of shutdown and startup cycles and this fact must be included in any affirmative defense evaluation.

This revision specifically refers in factor E. to minimizing the impact on ambient air quality. The Commission believes that every effort should be made to avoid adverse air quality impacts, even though the ambient air may be better than established minimum standards. Whether some step is possible should take into account the relative cost of the step and the time to implement it in relation to the amount or duration of excess emissions that would be avoided.

The Commission initially proposed including off-line maintenance periods between shutdown and startup in this affirmative defense provision. The Commission chose not to provide an affirmative defense for off-line maintenance periods, but to rely on the enforcement discretion of the Air Pollution Control Division to address excess emissions during these periods. The Commission recognizes that during off-line maintenance at coal-fired electric utility boilers, infrequent, short-term periods of excess opacity readings may occur despite the use of good air pollution control practices. Other types of sources may experience similar occurrences. The Commission anticipates that, in evaluating its enforcement options and penalty determinations regarding excess emissions during off-line maintenance periods, the Division will consider factors similar to those in this rule for shutdown and startup periods. In particular, factors B., E. and H. will be important in determining the appropriate response to a source's excess emissions. The Division should also consider whether the owner/operator used available scheduling options to minimize the impact of potential excess emissions on ambient air quality.

The Commission decided to allow use of an affirmative defense only for violations of performance standards or emission limitations with an averaging time of twenty-four hours or less. Sources subject to

standards or limitations with longer averaging times should be able to meet those requirements in spite of excess emissions during periods of startup or shutdown. Restricting the affirmative defense rule in this way should help to assure that excess emissions from a single source or small group of sources do not cause an exceedance of ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

### Purpose

The specific purpose of incorporating the Affirmative Defense revisions into the Common Provisions is to make the Colorado SIP consistent with the federal EPA's Policy Regarding Excess Emissions During Malfunction, Startup and Shutdown dated September 20, 1999.

### Federal Requirements

The rule revisions are not required by the federal Clean Air Act but, to the extent states wish to obtain EPA approval of a state implementation plan revision to provide relief for excess emissions that occur during startup and shutdown events, the rule revisions must be consistent with EPA's policy dated September 20, 1999.

V.I. Adopted July 18, 2002 - General Cleanup and Clarifying Changes

### **Revisions to Common Provisions Regulation**

This Statement of Basis, Specific Statutory Authority and Purpose comply with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103(4) and (12.5), C.R.S., for new and revised regulations.

### Basis

The Common Provisions Regulation is designed to assist in the implementation of more substantive regulatory programs authorized under the Colorado Air Pollution Prevention and Control Act ("Act") including provisions of the State Implementation Plan addressed in Section, 25-7-105(1)(a), C.R.S., emission control regulations addressed in Section, 25-7-105(1)(b), C.R.S., and prevention of significant deterioration requirements addressed in Section, 25-7-105(1)(c), C.R.S., as well as other authorized programs under the Act. The current revisions have been promulgated in order to facilitate this goal. The majority of the revisions were proposed by the Air Pollution Control Division based on their internal review of the regulation and extensive discussions with interested parties regarding shortcomings of the regulation. The Division's initial proposals were addressed at length during a subcommittee process involving the Commission, the Division, stakeholders and other interested parties. During this process, participants commented on the initial proposal and offered additional suggestions. The proposal presented to the Commission is a collaborative effort of the Division and interested stakeholders.

### Specific Statutory Authority

The specific statutory authority for these revisions is set forth in Section, 25-7-105(1), C.R.S., which gives the Air Quality Control Commission authority to promulgate rules and regulations necessary for the proper implementation of the Air Pollution Prevention and Control Plan. Additional authority for these revisions is set forth in Section, 25-7-106, C.R.S.

### Purpose

A review of the Common Provisions Regulation revealed numerous grammatical, stylistic and formatting errors, language ambiguities and obsolete or duplicative provisions. These revisions are intended to cleanup, clarify and streamline the Commission's Common Provisions Regulation. The revisions are not

intended to add additional requirements, delete requirements or substantively change existing requirements.

The changes reflected in the revisions to the Common Provisions Regulation fall into three categories: 1) deletion of obsolete or duplicative provisions; 2) stylistic, grammatical and formatting changes designed to improve readability of the regulation; and 3) language changes to address ambiguities and avoid unintended regulatory results.

#### 1) Elimination of Obsolete and Duplicative Provisions

Over the years, the Common Provisions Regulation has expanded to include new definitions and other provisions intended to assist in implementing the substantive requirements set forth in other regulations. In reviewing the regulation it was determined that many of the definitions and a few of the other requirements were either obsolete or duplicated in other regulations. For example, Section III, regarding Smoking Gasoline Powered Motor Vehicle and Section X, addressing Conflict of Interest by Commission Members were deleted from the regulation because they are duplicated in other regulations. Provisions included in Section III can be found in Commission Regulation Number 11 and Section X of the Commission's Procedural Rules. Similarly, a number of definitions set forth in the Common Provisions are also contained in Regulation Number 3.

Because Regulation Number 3 underwent contemporaneous review, the primary focus was to eliminate duplications between the Common Provisions and Regulation Number 3. Duplicative provisions that were only applicable to Regulation Number 3 were deleted from the Common Provisions Regulation. Provisions applicable to multiple regulations remain in the Common Provisions and were deleted from Regulation Number 3. Certain duplicative definitions not related to Regulation Number 3 were also addressed. A full review of all the Commission's regulations was not undertaken during this rulemaking process. The duplicative provisions that remain in the Common Provisions Regulation will be addressed when other regulations are opened for revision.

#### 2) Stylistic, Grammatical and Formatting Revisions

The revisions include grammatical, formatting and stylistic changes designed to make the regulation more readable. For example, reference to the "Air Quality Control Commission" in Section I.A. was changed to "Commission" and a number of parenthetical acronyms were eliminated. These changes are not designed to change applicable requirements, but rather to streamline the language of the regulation and to make the regulation stylistically consistent with other Commission regulations.

The regulation contains numerous references to the Colorado Air Quality Control Act. In 1992, the legislature changed the name of the Act to the Air Pollution Prevention and Control Act. References in the Common Provisions were revised to reflect this change. Additionally, date references to the Act and other enactments were eliminated to clarify that the references are to the current enactments and not to some outdated version. The date reference in the definition of ozone depleting compound was retained to reflect that future changes to the federal ozone depleting compound lists will need to be incorporated by reference during subsequent rulemakings.

#### 3) Clarifying Changes

The revisions address a number of concerns that the Division and other interested parties raised during the subcommittee process regarding ambiguous provisions. For example, pursuant to Regulation Number 1, different equations exist for calculating emission limits for manufacturing process equipment and fuel burning equipment. There has been some confusion regarding which standard applied when fuel-burning equipment was used as part of a manufacturing process. The revisions to the Common Provisions Regulation change the definition of fuel burning and add a definition for manufacturing process equipment to clarify that fuel burning emissions are counted as manufacturing process emissions when they are

vented through a common stack with other emissions from the manufacturing process. When fuel-burning emissions are vented separately, they are subject to the fuel burning equation.

The definition of construction was changed to clarify that while the statutory definition will govern in most instances, there are certain programs such as PSD, NSR/NAA, and NSPS, that may utilize different definitions of construction.

Revisions to the definition of federally enforceable clarify the provisions that can be considered federally enforceable. The previous definition appeared unduly restrictive. This issue is important with respect to the PSD and NSR/nonattainment area (NAA) programs since a source may avoid program requirements by taking federally enforceable conditions that reduce the level of emission below the major source threshold. The new definition clarifies that state only requirements, whether specifically denoted as such in a permit or in the regulations, but not in the state implementation plan, are not federally enforceable. The definition further clarifies that all requirements contained in an operating, PSD or NSR/NAA permit are federally enforceable.

Similarly, the definition of enforceable was revised to more accurately reflect that enforceable encompasses both federal and state enforceable requirements regardless of where the requirement appears.

In the prior version of the regulation, the definitions for coal and Reid Vapor Pressure contained references to a specific test method. These provisions were changed to refer more generally to "appropriate" test methods. These changes reflect that test methods can be updated and changed depending on the circumstances. What is considered appropriate in a given case will depend on the factual circumstance under which the test would be applied.

The definition of air pollution source, as well as several other definitions, was modified to eliminate inconsistencies with the statutory definition. Despite these inconsistencies, the Commission believes that the prior definitions were intended to have the same practical meaning as the statutory definition.

The Commission decided not to adopt changes to the definition of upset conditions or to the upset conditions and breakdown provision in the Common Provisions Regulation. The Division proposed revisions to the upset provision to address concerns expressed by the Environmental Protection Agency, then engaged in extensive discussions with interested stakeholders and the Environmental Protection Agency. In view of the terms included in the existing regulation, and the Commission's and Division's interpretation of the upset provision, the Commission concluded that no change is necessary at this time.

#### 4) Other Issues

During the subcommittee process a question was raised as to why the definition of air pollutant differed in the Common Provisions and Regulation Number 3. These differences reflect the fact that the term is defined differently in the State and Federal Act. The Common Provisions definition reflects that State Act. The Commission is not aware of any practical implications arising from these differences.

#### V.J. Adopted March 10, 2004 - Definition of condensate.

The definition of the term condensate was adopted in conjunction with the Ozone Action Plan and contemporaneous revisions to Regulation Number 7 to control emissions of volatile organic compounds from condensate operations, as described in the statement of basis, specific statutory authority, and purpose for the March 10, 2004 revisions to Regulation Number 7.

The statutory authority for the definition is set out in Sections 25-7-105(1)(a) and (1)(b); 25-7-106(1)(c) and (5); and 25-7-109(1)(a) and (2), C.R.S.

#### V.K. Adopted March 12, 2004 - Regulation Number 9

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Section 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act, Sections 25-7-110 and 25-7-110.5.

### Basis

The rule revisions adopted address the use of air curtain destructors for burning materials generated as a result of projects conducted to reduce the risk of wildfire. Regulation 9 deals with open burning activities and Regulation 3 contains emission notice requirements. The Common Provisions Regulation contains a definition related to these devices.

### Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, Section 25-7-109(2)(e), C.R.S., provides the authority for the Commission to adopt and modify emissions control regulations pertaining to open burning activities. These regulatory changes implement the provisions of the Colorado Air Pollution Prevention and Control Act, 25-7-101, et. seq., that prohibit anyone from operating an air pollution source such as an air curtain destructor without first obtaining a permit.

The Commission's action is taken pursuant to procedures set forth in Sections 25-7-105, 25-7-110 and 25-7-110.5, C.R.S. The Commission took into consideration the appropriate items enumerated in Section 25-7-109(1)(b), C.R.S.

### Purpose

In 2002, the Commission adopted regulations to implement the requirements of Senate Bill 99-145 and Senate Bill 01-214 relating to open burning activities by public and private land managers and other significant users of fire for range and forest management. Since that action, the public and both state and federal agencies have focused on the risks associated with wildfires, particularly in the forest/urban interface throughout Colorado. The Commission views reduction of the risks associated with wildfires and their potential for serious public health consequences as a result of the emissions from the fires as an important component in protecting public health and the environment. The Commission also views the use of methods to reduce risk that also reduce air pollution emissions compared to other methods as an additional important factor. In this rule adoption, the Commission acted to enlarge the options available to dispose of materials generated by projects conducted to reduce the risks of wildfire. It is the intention of the Commission that practical alternatives to burning be used when they exist.

The Commission reviewed the available emissions data and limited uses proposed for air curtain destructors. That information demonstrated to the satisfaction of the Commission that, with appropriate permit conditions, the destructors can safely be used to dispose of certain materials without endangering public health, causing, or contributing to a violation of the National Ambient Air Quality Standards (NAAQS) and will reduce emissions compared to traditional pile burning.

The Division performed an air dispersion modeling analysis on December 30, 2003. The analysis is based on the assumption that the air curtain destructors operate no more than 13 hours per day and no more than 110 days per year at a single site. In addition, it is assumed that no more than 20 tons of fuel will be burned per hour. At this level of operation and fuel throughput, the device would be limited to 110 days per year to meet the restriction in the proposed regulation that no more than 100 tons of any criteria pollutant be emitted per year.

Screening level air quality analyses suggest that emissions from air curtain destructors are not expected to cause violations of the carbon monoxide, sulfur dioxide, and nitrogen dioxide ambient air quality standards except in situations where the air curtain destructor is operated next to a nearby source of air pollutants that is already causing high air pollution impacts in an area that, for one reason or another, has poor existing air quality. The analyses suggest it would be prudent to require setbacks in the regulation to

prevent public exposure to potentially elevated PM10 levels near the units. The proposed setbacks of 150 feet and 300 feet for short-term versus long-term sites are reasonable except in situations where the air curtain destructor is located near another stationary source of fugitive PM10 emissions. Accordingly, the rule adopted prohibits co-location of an air curtain destructor with another air curtain destructor or any facility that is required to have an air quality permit or any commercial or industrial facility.

The rule adopted contains specific limitations to assure that the devices are operated consistently with the Commission's expectations. The rule adopted allows disposal of wood products generated by projects conducted to reduce the risks of wildfire. The information presented to the Commission did not demonstrate that air curtain destructors are appropriate for disposal of other materials including clean lumber.

V.L. Adopted July 21, 2005

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Section 24-4-103, C.R.S., and the Colorado Air Pollution Prevention and Control Act, Sections 25-7-110 and 25-7-110.5, C.R.S.

### Basis

Regulation no. 3 sets forth the Air Quality Control Commission's permitting and air pollutant emission notice programs for stationary sources. The Commission amended Regulation Number 3, Part A, Section V. to make it consistent with the repeal of the Emissions Trading Rule in Regulation Number 5 in December 2004. It was originally anticipated that Regulation Number 5 would replace Part A, Section V. in Regulation Number 3 as the Commission's trading program, essentially identical to EPA's. The text of Part A, Section V. was italicized to represent provisions that would remain effective until EPA approved the program in Regulation Number 5. EPA decided not to finalize its trading program; therefore, it would never approve Regulation Number 5 as a SIP component. The Commission deleted Section V.A.3., Part A that contained the outmoded effective date. The Commission also replaced the italicized text with normal font in all of Part A, Section V. to conform the text to these circumstances. In addition, one hazardous air pollutant (2-butoxyethanol) was deleted to conform the State's list (in appendix b) to the Federal list of hazardous air pollutants.

The Common Provisions Regulation sets forth requirements and definitions that pertain or may pertain to all of the other Commission regulations. EPA added four compounds to its list of compounds (known as non reactive volatile organic compounds) to be excluded from the definition of volatile organic compound on the basis that these compounds make a negligible contribution to tropospheric ozone formation. The Commission adopted a conforming change to the definition of non-reactive volatile organic compounds in the Common Provisions Regulation, Section I.G.

### Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act give the Commission authority to promulgate regulations necessary for the proper implementation of the act. Section 25-7-105(12), C.R.S, provides specific authority to establish emission notice, construction permit and operating permit programs. Some of the statutory parameters for these programs are set forth in Sections 25-7-114 through 25-7-114.7 of the act and these sections, in turn, provide statutory authority for the current revisions. Additional authority for these revisions is set forth in Sections 25-7-106, 25-7-119 and 25-7-132, C.R.S.

The Commission's adoption of this rule is taken pursuant to procedures set forth in Sections 25-7-105, 25-7-110 and 25-7-110.5, C.R.S.

### Purpose

The Commission took into consideration the appropriate items enumerated in Section 25-7-109(1)(b), C.R.S.

The purpose of removing the italicized text from Regulation Number 3, Part A, Section V. was to prevent any ambiguity about the applicability of those provisions. Changing the font of the text does not have any regulatory impact since the provisions were already in effect and will remain in effect. Section V.A.3. was deleted because it was an outmoded provision that was only necessary if Section V. was to be replaced by Regulation Number 5. The Commission's repeal of Regulation Number 5 made that provision unnecessary. Removing the italics from Section V. also will eliminate confusion with the italicized text in Part D of Regulation Number 3.

The purpose of the deletion of one hazardous air pollutant in appendix b of Regulation Number 3 and the addition of four non-reactive volatile organic compounds to the list in Section I.G. of the Common Provisions Regulation is to conform the Commission's rules to Federal regulations. The Federal rule changes were published on November 29, 2004. If the Commission did not make these revisions, the State rules would be more restrictive than the Federal rules because these revisions serve to exempt the compounds from emission standards, monitoring, reporting and record keeping requirements.

V.M. Adopted August 17, 2006

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Section 24-4-103, C.R.S., and the Colorado Air Pollution Prevention and Control Act, Sections 25-7-110 and 25-7-110.5, C.R.S.

#### Basis

On November 29, 2004, EPA revised the federal definition of volatile organic compounds (VOCs) to specifically treat tertiary butyl (t-butyl) acetate as a VOC only for certain purposes, including reporting and photochemical dispersion modeling. The Commission is making corresponding changes to the definition of VOCs in the Common Provisions Regulation, and is adding t-butyl acetate as a non-criteria reportable pollutant in Regulation Number 3, Part A, Appendix B. Sources of t-butyl acetate will be required to report the pollutant separately from their VOC emissions on an Air Pollutant Emission Notice, and should not count their t-butyl acetate emissions when evaluating compliance with applicable VOC emission limitations. The Division should combine VOC emissions and reported t-butyl acetate emissions when conducting dispersion modeling for sources of t-butyl acetate.

#### Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, Section 25-7-105, C.R.S., gives the Commission authority to promulgate regulations necessary for the proper implementation of the Act, including rules to assure attainment and maintenance of national Ambient Air Quality Standards and a prevention of significant deterioration program. Section 25-7-105(12), C.R.S. provides specific authority to establish emission notice, construction permit and operating permit programs. Some of the statutory parameters for these programs are set forth in Sections 25-7-114 through 25-7-114.7 of the Act and these Sections, in turn, provide statutory authority for the current revisions. Additional authority for these revisions is set forth in Sections 25-7-106, 25-7-119 and 25-7-132, C.R.S.

The Commission's adoption of this rule is taken pursuant to procedures and requirements set forth in Sections 25-7-105, 25-7-110 and 25-7-110.5, C.R.S.

#### Purpose

These revisions will provide clarity for affected sources by maintaining consistency with the federal definition of volatile organic compounds. Further, these revisions include any typographical errors within the regulation.

V.N. Adopted December 15, 2006

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103(4) and (12.5), C.R.S. for new and revised regulations.

### Basis

The Common Provisions Regulation is designed to assist the implementation of more substantive regulatory programs authorized under the Colorado Air Pollution Prevention and Control Act ("Act") including provisions of the State Implementation Plan addressed in Section, 25-7-105(1)(a), C.R.S., emission control regulations addressed in Section, 25-7-105(1)(b), C.R.S., prevention of significant deterioration requirements addressed in Section, 25-7-105(1)(c), C.R.S., as well as other authorized programs under the Act. The current revisions have been promulgated in order to facilitate this goal. The revisions were proposed by the Air Pollution Control Division based on discussions with EPA and extensive discussions with interested parties regarding the availability of an affirmative defense for upset conditions or malfunctions.

### Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. § 25-7-105(1)(a) authorizes the Commission to adopt rules necessary to implement the Act, and to adopt and revise comprehensive state implementation plans to assure attainment and maintenance of national ambient air quality standards. C.R.S. § 25-7-109 authorizes the Commission to adopt rules that are consistent with state policy regarding air pollution and with federal recommendations and requirements. C.R.S. § 25-7-109(5) requires the Commission to promulgate rules setting conditions and time limitations for periods of startup, shutdown or malfunction or other conditions which justify temporary relief from controls. Additional authority for these revisions is set forth in Section, 25-7-106 and 25-7-109, C.R.S.

### Purpose

Revisions to Section II.E., regarding upset conditions and malfunctions, were made to clarify the process by which a source must identify an upset or malfunction. The Division has changed the term upset to malfunction for consistency with EPA policy.

In addition, the provision was revised to clarify that an affirmative defense is available to claims for violation of the Commissions' regulations for civil penalties in enforcement actions regarding excess emissions arising from upset conditions and malfunctions. The Commission does not interpret this to mean that every upset should be reported by the Division to EPA as a violation. The affirmative defense is not available to a claim of violation of these regulations in the context of claims for injunctive relief. Sudden and unavoidable upset conditions and malfunctions caused by circumstances beyond the control of an owner or operator occur from time to time despite best efforts regarding planning, design and operational procedures. The upset conditions and malfunction provision recognizes this fact. An affirmative defense may be available to shield a source from civil penalty liability if the owner or operator meets the requirements of the rule. For purposes of II.E.1.J. the Commission does not intend that modeling be done to show that Upsets or malfunctions have or have not caused a violation of the NAAQS.

Section II.E.4 indicates that the affirmative defense does not apply to federally promulgated standards (such as NSPS and NESHAPS requirements). The Commission does not intend this provision to modify those federally promulgated standards or any exemptions for malfunction events that may apply under those standards.

Additionally, the Commission recognizes and intends that certain source permits may not currently adequately accommodate malfunctions as this new rule provides. The Commission intends that the



Division work with those specific sources to accommodate malfunctions into their permit limits, as appropriate.

V.O. Adopted December 17, 2009

### **Revisions to Definitions**

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103(4) and (12.5), C.R.S. for new and revised regulations.

#### Basis

The Common Provisions Regulation is designed to assist the implementation of more substantive regulatory programs authorized under the Colorado Air Pollution Prevention and Control Act ("Act") including provisions of the State Implementation Plan addressed in Section, 25-7-105(1)(a), C.R.S., emission control regulations addressed in Section, 25-7-105(1)(b), C.R.S., prevention of significant deterioration requirements addressed in Section, 25-7-105(1)(c), C.R.S., as well as other authorized programs under the Act. The current revisions have been promulgated in order to facilitate this goal.

#### Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. § 25-7-105(1)(a) authorizes Colorado's Air Quality Control Commission ("Commission") to adopt rules necessary to implement the Act, and to adopt and revise comprehensive state implementation plans to assure attainment and maintenance of national ambient air quality standards. C.R.S. § 25-7-109 authorizes the Commission to adopt rules that are consistent with state policy regarding air pollution and with federal recommendations and requirements. C.R.S. § 25-7-106(1)(a) authorizes the Commission to adopt definitions of air pollution. Additional authority for these revisions is set forth in Section, 25-7-106 and 25-7-109, C.R.S.

#### Purpose

Revisions to definitions found in Section I.G. were made to be consistent with federal definitions. Specifically, the Commission herein revises the definition of "negligibly reactive volatile organic compound," or NRVOC, and "volatile organic compound," or VOC, set forth in the Common Provisions Regulation to be consistent with the federal definitions found in the Code of Federal Regulations, Title 40, Part 51, Section 51.100(s) (July 1, 2009).

Specifically, the Commission adds the following compounds to the definition of "negligibly reactive volatile organic compounds":

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

Propylene carbonate

Dimethyl carbonate

The Commission adds clarification to the NRVOC definition by adding the common name or chemical structure of currently listed NRVOCs.

The Commission adds clarification to the VOC definition by adding the test methodology references used to determine VOC and NRVOC contents.

Additionally, any identified typographical, grammatical and formatting errors are proposed to be made.

V.P. Adopted October 21, 2010 (Sections I.A., I.F. and I.G.)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103(4) and (12.5), C.R.S. for new and revised regulations.

### Basis

The Common Provisions Regulation is designed to assist the implementation of more substantive regulatory programs authorized under the Colorado Air Pollution Prevention and Control Act ("Act") including provisions of the State Implementation Plan (SIP) addressed in C.R.S. Section 25-7-105(1)(a), emission control regulations addressed in C.R.S. Section 25-7-105(1)(b), prevention of significant deterioration requirements addressed in C.R.S. Section 25-7-105(1)(c), regulations as may be necessary and proper for the orderly and effective administration of construction permits and renewable operating permits addressed in C.R.S. Section 25-7-114.4(1), as well as other authorized programs under the Act. The current revisions have been promulgated in order to facilitate this goal. The revisions were proposed by the Air Pollution Control Division based on EPA's GHG Tailoring Rule. On June 3, 2010, EPA promulgated the "Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule". 75 Federal Register 31514 (June 3, 2010). EPA's GHG Tailoring Rule was designed to tailor the applicability criteria that determine which stationary sources and modification projects become subject to permitting requirements for greenhouse gases (GHGs) under the Prevention of Significant Deterioration (PSD) and Title V Permitting Programs of the Clean Air Act (CAA).

### Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. Section 25-7-105(1)(a) authorizes the Commission to adopt rules necessary to implement the Act, and to adopt and revise comprehensive state implementation plans to assure attainment and maintenance of national ambient air quality standards. C.R.S. Section 25-7-109 authorizes the Commission to adopt rules that are consistent with state policy regarding air pollution and with federal recommendations and requirements. C.R.S. Section 25-7-109(2) authorizes the Commission to regulate oxides of carbon, oxides of nitrogen and other chemicals, which encompasses the pollutant GHG. Additionally, Colorado is authorized to regulate the pollutant GHG under PSD and Title V in C.R.S. Sections 25-7-103(1.5), 25-7-114(3), 25-7-114.3, and 25-7-201. Additional authority for these revisions is set forth in Sections 25-7-106 and 25-7-109, and 25-7-114 C.R.S.

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103(4), C.R.S. for new and revised regulations.

In order to maintain consistency between state regulations and federally enforceable regulations contained in the SIP, the Commission intends these revisions be adopted into the SIP.

### Purpose

The Air Quality Control Commission has adopted revisions throughout the Common Provisions Regulation to address GHG regulation in Colorado.

### Common Provisions Proposed Revisions:

The revisions to the Common Provisions as approved by the Commission are summarized below:

Revise Applicability section to be consistent with the incorporation by reference section found in Regulation Number 3, Part A, Section I.A. (Section I.A.)

Add GHG and CO<sub>2</sub>e to list of acronyms (Section I.F.)

## Revise definitions of Greenhouse Gas & Carbon Dioxide Equivalent (Section I.G.)

Additionally, the Division proposes revisions to make typographical, grammatical and formatting changes, as necessary.

V.Q. Adopted November 19, 2015 (Definitions and Affirmative Defense)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103(4) and (12.5), C.R.S. for new and revised regulations

### Basis

The Air Quality Control Commission (“AQCC”) adopted these revisions to address EPA’s June 12, 2015 *State Implementation Plans [“SIPs”]: Response to Petition for Rulemaking; Restatement and Update of EPA’s Startup, Shutdown and Malfunction (“SSM”) Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction*. 80 Fed. Reg. 33840 (“SSM SIP Call”). EPA’s SSM SIP Call, relied in part on *Nat’l Res. Def. Council (“NRDC”) v. EPA*, 749 F. 3d 1055, 1062 (D.C. Cir. 2014). Additionally, several administrative revisions were made in order to ensure consistency with federal requirements and provide clarity for affected sources.

### Specific Statutory Authority

The statutory authority for these revisions is set forth in the Colorado Air Pollution Prevention and Control Act, C.R.S. § 25-7-101, et. seq. Specifically, C.R.S. § 25-7-105(1)(a) authorizes the Commission to adopt rules necessary to implement the Clean Air Act (“CAA”), and to adopt and revise comprehensive State Implementation Plans (“SIPs”) to assure attainment and maintenance of National Ambient Air Quality Standards (“NAAQS”). Additionally, C.R.S. § 25-7-109(5) requires the Commission to promulgate rules setting conditions and time limitations for periods of startup, shutdown and malfunction (“SSM”) or other conditions which justify temporary relief from controls. C.R.S. § 25-7-109 authorizes the Commission to adopt rules that are consistent with state policy regarding air pollution and with federal recommendations and requirements. Additional authority of the Commission to adopt these revisions can be found in C.R.S. §, 25-7-106, which grants the Commission maximum flexibility in developing an effective air quality control program. Lastly, C.R.S. § 25-7-115 addresses state enforcement of violations that occur during SSM events.

### Purpose

EPA’s June 12, 2015 SSM SIP Call identified a number of states with SIP-approved affirmative defenses for excess emissions during SSM events. With respect to Colorado, the SSM SIP Call found Sections II.E. and II.J. to be substantially inadequate and it established a November 22, 2016 deadline for Colorado to submit corrective SIP revisions.

EPA’s final rule differed from the February 22, 2013 proposal (78 Fed. Reg. 12460), made in response to a petition for rulemaking filed by the Sierra Club concerning the treatment of excess emissions in state rules during periods of SSM. In that proposal, EPA proposed to partially grant/deny the Sierra Club’s petition regarding the SSM provisions in SIPs. With respect to Colorado, EPA proposed that the Section II.J. was inadequate and that Section II.E. was adequate. 78 Fed. Reg. 12529.

On May 13, 2013, the Division submitted comments supporting EPA’s proposed finding of adequacy for Section II.E. and opposing EPA’s proposed finding of inadequacy for Section II.J. The Division’s opposition to this finding of inadequacy was based in part on the recognition that Sections II.E. and II.J. were agreed upon during a December 15, 2006 rulemaking that incorporated EPA’s most recent SSM

guidance and resulted in a consensus between the Division, EPA Region 8, environmental groups and industry. EPA approved Sections II.E. and II.J. for incorporation into Colorado's SIP.

Subsequent to the February 22, 2013 proposal, the United States District Court for the District of Columbia invalidated an affirmative defense provision contained in the 2010 National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, holding that EPA does not have authority under the CAA to adopt affirmative defense provisions that alter the federal courts' authority to impose penalties. See *NRDC v. EPA*, 749 F. 3d at 1055. The court reasoned the federal CAA gives the courts exclusive authority to determine and impose appropriate penalties for violations under the federal CAA, and EPA's adoption of affirmative defense provisions impermissibly intruded upon this authority. Notably, the D.C. Circuit in the *NRDC* decision clarified that it was not confronting the question of whether affirmative defense provisions in state implementation plans are appropriate.

Based on EPA's revised interpretation of the CAA stemming from the court's decision in *NRDC v. EPA*, the SSM SIP Call maintained that both Sections II.E. and II.J. interfered with the intended enforcement structure of the CAA, through which parties may seek to bring enforcement actions for violations of SIP emission limits. *80 Fed. Reg. 33970*. The SSM SIP Call afforded states broad discretion concerning how to revise inadequate SIP provisions. *80 Fed. Reg. 33844*. Additionally, the SSM SIP Call clarified that, existing inadequate SIP provisions would remain in effect until such time as EPA evaluated and acted upon a state's SIP submission. *80 Fed. Reg. 33849*.

Thus, in order to comply with the SSM SIP Call, the Commission revised Sections II.E. and II.J. by adding Sections II.E.4. and II.J.4. to clarify that the affirmative defenses are not available in federal court proceedings unless the court, in considering the penalty factors in Section 113 of the CAA and exercising its discretion to assess civil penalties, decides to recognize or consider such affirmative defense or decides to take into consideration some or all of the factors described in Sections II.E. and II.J. The Commission added this reference to CAA Section 113 to clarify that the Commission's proposed revisions complement, rather than contradict, the requirements of CAA Section 113 because a federal court can, in its discretion, consider an affirmative defense or the factors contained in Sections II.E. and II.J. in conjunction with the factors described in CAA Section 113. The Commission also added Sections II.E.6. and II.J.7. to indicate nothing in Sections II.E. and II.J. precludes the use of alternative emission limitations expressed as work-practice based limits or standards set forth in a permit that serve as a continuous limitation during periods of SSM. Lastly, the Commission included language at the beginning of Sections II.E. and II.J. to indicate that the proposed revisions do not take effect until such time as EPA approves the language for incorporation into Colorado's SIP.

In revising Sections II.E. and II.J. as described in the preceding paragraph, the Commission acknowledged that, as of November 19, 2015, several lawsuits challenging the validity of the SSM SIP Call were pending. Given the legal uncertainty surrounding the SSM SIP Call, the Commission opted to postpone submitting these revisions until November 2016 (the deadline for SIP submissions outlined in the SSM SIP Call is November 22, 2016), so that Colorado's submittal would be considered at the same time as other state SIP submittals.

The Commission determined, after considering the statutory directives of the Air Pollution Prevention and Control Act, along with the positions set forth in the stakeholder process and associated rulemaking proceeding, the revisions being proposed in Sections II.E.4. and II.J.4. are the most balanced and appropriate approach for Colorado. The proposed language accurately responds to the SSM SIP Call while being narrowly tailored so as to not make changes beyond those required by the *NRDC* court's holding.

The proposed revisions upheld many of the tenets of the December 15, 2006 consensus rulemaking that originally inserted Sections II.E. and II.J. into the Common Provisions Regulation, including the requirements that sources notify the Division of excess emissions that occur during SSM and undertake all reasonably possible steps to minimize the amount and duration of excess emissions during SSM as

well as their impacts on ambient air quality. No other rules of the Commission include these notification requirements.

In addition to the revisions to Sections II.E. and II.J., the following administrative revisions were made to Section I.G. in order to ensure consistency with federal requirements and provide clarity for affected sources: definitions were added for "Responsible Official," "Designated Representative," "PM2.5" and "Direct PM2.5 Emissions"; the incorporation date for the definition of "Carbon Dioxide Equivalent" was updated; several compounds were added to the list of Negligibly Reactive Volatile Organic Compounds ("NRVOCs") based on EPA's determination that these compounds make a negligible contribution to tropospheric ozone formation.

Further, these revisions will include any typographical, grammatical and formatting errors throughout the regulation.

## **Regulation No. 1**

EPA test methods 1, 2, 3, 4, 5, 6, 6a, 6b, 6c, 8 and method 9 (40 CFR 60.275, Appendix A, Part 60) are hereby incorporated by reference by the Air Quality Control 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, 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.

### **Definitions**

#### **ASTM**

American Society for Testing and Materials

#### **EPA**

United States Environmental Protection Agency

#### **Fugitive Emissions**

Emissions that cannot be reasonably collected and passed through a stack, chimney, vent or other equivalent opening.

#### **gr/dscf**

Grains per dry standard cubic foot

#### **Haul Roads**

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

#### **Intermittent Sources**

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

#### **PM**

Particulate Matter

#### **Roadways**

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

#### **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, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

## **I. APPLICABILITY: REFERENCED FEDERAL REGULATIONS**

I.A. The provisions of this Regulation No. 1 are applicable to both new and existing sources and without regard to whether a source has been issued an emission permit. Except where specifically made applicable to attainment, attainment/maintenance or non-attainment areas, the requirements set forth herein apply statewide. (Areas designated as unclassifiable shall be treated as attainment). The provisions of this regulation apply to a source even though it may also be subject to other regulations of the commission; and in the event the requirements of this regulation conflict or are inconsistent with the requirements of any other regulation of the commission, the more stringent emission limitations shall apply except that a specific emission limitation for a particular source shall take precedence over a general emission limitation which is inconsistent.

I.B. At several places in this regulation various federal regulations, performance standards, and procedures that have been previously published in the Federal Register and/or the Code of Federal Regulations have been incorporated by reference. This regulation provides appropriate citations to such materials and incorporates them as they are published. Amendments to such regulations, standards and procedures made after the effective date of this regulation are not incorporated herein. Copies of said materials may be obtained for a nominal copying fee from the Technical Secretary to the commission at the Air Quality Control Commission office at 4300 Cherry Creek Drive South, B-1, Denver, CO 80246. Copies are also available at the commission office for public inspection at no cost.

## **II. SMOKE AND OPACITY**

### **II.A. Stationary Sources**

II.A.1. Except as provided in paragraphs 2 through 6 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity. This standard is based on 24 consecutive opacity readings taken at 15-second intervals for six minutes. The approved reference test method for visible emissions measurement is EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)) in all subsections of Section II. A and B of this regulation.

### **II.A.2. Intermittent Sources**

Except as provided in paragraphs 3 through 6 below, no owner or operator of an intermittent source shall allow or cause the emission into the atmosphere of any pollutant that is in excess of 20% opacity. If EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)), a continuous emissions monitor, or other credible method is used and 24 consecutive opacity readings taken at 15-second intervals cannot be taken because such a source does not operate continuously for six minutes, the readings shall be taken at 15-second intervals during periods of operation until 24 readings have been made or for a period of thirty minutes, whichever is sooner, and the source shall be deemed in violation if the average opacity of such readings exceed 20%.

### **II.A.3. Pilot Plants and Experimental Operations**

No owner or operator of a process unit of a pilot plant or experimental operation shall emit or cause to be emitted into the atmosphere from any such process unit particulate matter for a period or periods aggregating more than six minutes in any sixty consecutive minutes which is in excess of 30% opacity.

Except as otherwise provided in this paragraph this emission standard for pilot plants and experimental operations shall be applicable for a period not to exceed 180-operating days cumulative total from the

date operation of such a process unit commences; thereafter the 20% opacity limitation provided in Section II.A.1 or 2 of these regulations shall apply to emissions from such a process unit of a pilot plant or experimental operation. For the purpose of this Section II.A.3 "Operating Days" shall mean any calendar day during which the process unit is operated and air pollutants are emitted (without regard to the length of period of time operated or amount of pollutants emitted). For good cause shown, the division may extend the period of relaxed operation beyond 180 operating days for the operation of a process unit, but in no event to greater than 365 operating days without the concurrence of the commission.

II.A.4. Fire Building, Cleaning of Fire Boxes, Soot Blowing, Start-up, Process Modification or Adjustment of Control Equipment Except as provided in Sections II.A.6, no owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, any process modification, or adjustment or occasional cleaning of control equipment, which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes.

#### II.A.5. Smokeless Flare or Flares for the Combustion of Waste Gases

No owner or operator of a smokeless flare or other flare for the combustion of waste gases shall allow or cause emissions into the atmosphere of any air pollutant which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes.

#### II.A.6. Exemptions

The requirements of Section II.A.1 and 2 of this regulation shall not apply to the following sources or types of emissions:

II.A.6.a. Emissions from fireplaces, fireplace inserts and stoves, provided such devices are burning only clean dry wood or wood products and are used for noncommercial or recreational purposes.

II.A.6.b. Fugitive dust: As used in this Regulation No. 1, "fugitive dust" means airborne particulate matter, which is not a direct or proximate result of man's activities.

II.A.6.c. Fugitive particulate emissions: As used in this Regulation No. 1, "fugitive particulate emissions" mean fugitive emissions of particulate matter that are the direct or proximate result of man's activities, (e.g., Materials left by man exposed to the wind or later acted upon by another force as the wind or automobile traffic, or particulate matter being thrown into the atmosphere by the operation of a bulldozer.)

#### II.B. Diesel Powered Locomotives

II.B.1. Except as provided in paragraph 2 below, no owner or operator shall emit or cause to be emitted into the atmosphere from any diesel-powered locomotive any air pollutant which is in excess of 20% opacity while being operated below 6,000 feet (mean sea level) and 30% opacity while being operated above 6,000 feet (mean sea level).

#### II.B.2. Exceptions

II.B.2.a. Emissions which exceed the opacity limits of Section II.B.1. as a result of a cold engine start-up, not to exceed thirty consecutive minutes and provided the locomotive is in a stationary position.



II.B.2.b. Emissions for nonconsecutive periods of three minutes with an aggregate of not more than ten minutes in any consecutive sixty minutes when a locomotive engine is being tested, adjusted, rebuilt, or repaired in the maintenance yards.

II.B.2.c. Emissions for periods of up to four minutes when a locomotive is accelerated after standing still.

II.B.3. The owner or operator of any diesel-powered locomotive that has been cited for violation of Section II.B.1. of this regulation, but which is not available for a compliance inspection shall submit to the division an affidavit attesting to those abatement measures which have been completed and shall state in that affidavit that the vehicles cited have achieved compliance with this regulation.

## II.C. Open Burning

II.C.1. Except as provided in paragraph 2 below, no person shall burn or allow the burning of rubbish, wastepaper, wood or other flammable material on any open premises, or on any public street, alley, or other land adjacent to such premises, unless an open burning permit is first obtained from the division. In granting or denying such permits the division shall base its decision on the location and proximity of such burning to any building or other structure, the potential contribution of such burning to air pollution in the area, climactic conditions on the day or days of such burning, and compliance by the applicant for the permit with applicable fire protection and safety requirements of the local authority. The division may consider: (A) Whether there is any practical alternative method for the disposal of the material to be burned and (B) Whether burning will be conducted so as to minimize emissions. Methods for minimizing emissions may include, but are not necessarily limited to, the use of permitted incinerators or air curtain destructors, the use of clean auxiliary fuel, drying the material prior to ignition and separating out for alternative disposal: Rubber, tires, plastic, insulated wire, insulation, and other materials which produce more smoke than clean combustible materials. Sources subject to the open burning provisions in this regulation No. 1 may also be subject to state only Regulation No. 9.

II.C.1.A. Whether there is any practical alternative method for the disposal of the material to be burned.

II.C.2. Sources Exempted from obtaining open burning permits

II.C.2.a. The non-commercial burning of private household trash in PM attainment areas unless local ordinances or rules prohibit such burning.

II.C.2.b. Fires used for non-commercial cooking of food for human beings, for instructional purposes, or recreational purposes.

II.C.2.c. Flares used to indicate some danger to the public.

II.C.2.d. Agricultural open burning – The open burning of cover vegetation for the purpose of preparing the soil for crop production, weed control, and other agricultural cultivation purposes. The open burning of animal parts or carcasses is not included in the exemption. Except that, if the State Agricultural commission declares a public health emergency or a contagious or infectious disease outbreak that imperils the livestock of the state that requires the burning of diseased animal carcasses after providing telephone notice to the division and the relevant local health department office by leaving a voice mail message. All necessary safeguards shall be utilized during such non-permitted open burning to minimize any public health or welfare impacts. In addition, the owner or operator shall take steps to ensure that all surrounding and potentially impacted residents, businesses, schools and churches are notified prior to beginning the open burn.

II.C.2.e. Noncommercial burning of trash in the unincorporated areas of counties of less than 25,000 population according to the latest federal census provided such open burning is subject to regulations of the board of county commissioners for such county adopted by resolution and such regulations include, among other things, permit provisions and prohibit any such burning that would result in the exceedance of any NAAQS.

II.C.3. Nothing herein shall be construed as relieving any person conducting open burning from meeting the requirements of any applicable federal, state or local requirements concerning disposal of waste materials.

II.D. Smoke and Obscurants for Military Training Exercises Emissions associated with the generation of smoke or obscurants on Fort Carson and Pinon Canyon maneuver site (hereafter, referred together as Fort Carson) by United States military forces, or allied forces in a combined training exercise with the United States, shall be exempt from the opacity limits specified in Regulation No. 1, sections II. and III. provided that all of the following conditions are met:

II.D.1. All participants in the training shall follow all applicable Department of Defense training manuals and guidance regarding Department of Defense-approved smokes and obscurants.

II.D.2. No off-property transport of visible emissions from any smoke or obscurants used on Fort Carson shall occur.

II.D.3. Smoke or obscurants generation shall cease immediately in the event that any such visible emissions cross or has a reasonable probability of crossing the installation property boundary.

II.D.4. The commander in charge of any training involving smoke or obscurants will ensure the following precautionary measures are implemented.

II.D.4.a. When planning and conducting training, prevailing meteorological conditions will be analyzed, both before and on the day of training, to determine if they meet established training criteria for the use of smoke or obscurants and to allow compliance with the requirements of paragraph 3 above. If the meteorological conditions do not meet those criteria, then smoke or obscurants will not be employed.

II.D.4.b. Prior to using smoke or obscurants, inspect and validate the training site and the training mission.

II.D.4.c. Upon initiation of smoke or obscurant generation, observe the initial smoke or obscurant plume to verify that it conforms to established training criteria and to allow compliance with the requirements of paragraph 3 above. If the wind direction and speed is not favorable for the exercise, then the location will be adjusted or the smoke mission will be postponed or canceled.

II.D.4.d. Post one or more trained smoke observers to provide direct observation of the smoke/obscurant plume at all times while smoke or obscurants are used during the training. Smoke observers will remain alert for visible smoke that has a reasonable probability of drifting across the installation property boundary, in which case the smoke observer shall have the authority to immediately halt smoke generation operations. The smoke observer(s) must maintain capability for immediate communication with the officer commanding the use of smoke or obscurants used in the training exercise.

II.D.4.e. Units conducting training using smoke or obscurants on Fort Carson must perform necessary checks with Fort Carson range division to assure immediate communication capability, including

capability to request or obtain meteorological updates. In the event of failure to maintain such capability, the training exercise will be halted.

II.D.5. In the event visible emissions from smoke or obscurant use drift across the installation property boundary, Fort Carson shall implement necessary response measures to minimize impacts and shall inform the state as soon as possible, but no later than 24 hours or the next business day after the event. A written notice shall follow this notification within 48 hours to the state detailing the circumstances of the occurrence and stating whether additional measures will be adopted to prevent such visible emissions from drifting across the boundary in the future.

II.D.6. Installation commander, Fort Carson, shall be responsible to ensure compliance with this section by all personnel employing smoke or obscurants at Fort Carson.

### III. PARTICULATE MATTER

#### III.A. Fuel Burning Equipment

III.A.1. No owner or operator shall cause or permit to be emitted into the atmosphere from any fuel-burning equipment, particulate matter in the flue gases which exceeds the following:

III.A.1.a. 0.5 lbs. per  $10^6$  BTU heat input for fuel burning equipment of less than or equal to  $1 \times 10^6$  BTU/hr total heat input design capacity.

III.A.1.b. For fuel burning equipment with designed heat inputs greater than  $1 \times 10^6$  BTU per hour, but less than or equal to  $500 \times 10^6$  BTU per hour, the following equation will be used to determine the allowable particulate emission limitation.

$$PE = 0.5(FI)^{-0.26}$$

Where:

PE = Particulate Emission in Pounds per million BTU heat input.

FI = Fuel Input in Million BTU per hour.

III.A.1.c. i

III.A.1.d. If two or more fuel burning units connect to any opening, the maximum allowable emission rate shall be calculated by summing the allowable emissions from the units being operated.

#### III.A.2. Performance Tests

Prior to granting of a final approval permit or amending a permit, when an emission source or control equipment is altered, or at any time when there is reason to believe that emission standards are being violated, the division may require the owner or operator of any fuel burning equipment to conduct performance tests, as measured by EPA Methods 1–4 and the front half of EPA Method 5 (40 CFR 60.275, Appendix A, Part 60), or other credible method approved by the division, to determine

compliance with this subsection of this regulation. The particulate emission standards contained in this subsection do not include condensable particulate matter, or the back half emissions of EPA Method 5.

## B. Incinerators

III.B.1. No owner or operator of an incinerator shall operate any incinerator without a permit from the division.

III.B.2. Standard of Performance for all incinerators other than biomedical waste incinerators.

III.B.2.a. In areas designated as nonattainment or attainment/maintenance for particulate matter, no owner or operator of an incinerator shall cause or permit emissions of more than 0.10 grain of particulate matter per standard cubic foot. (Dry flue gas corrected to 12 percent carbon dioxide.)

III.B.2.b. In areas designated as attainment for particulate matter, no owner or operator of an incinerator shall cause or permit emissions of more than 0.15 grain of particulate matter per standard cubic foot. (Dry Flue gas corrected to 12 percent carbon dioxide.)

## III.B.3. Performance Tests

Prior to granting a final approval permit or amending a permit, when an emission source or control equipment is altered, or at any time when there is reason to believe that emission standards are being violated, the division may require the owner or operator of an incinerator to conduct performance test(s) in accordance with 40 CFR 60 Appendix A.

## III.B.4. Standard of Performance for Biomedical Waste Incinerators.

The owner or operator of an existing incinerator used for the disposal of biomedical waste shall comply with Part B, Section V of Regulation No. 6. Standard of Performance for New Biomedical Waste Incinerators as follows:

III.B.4.a. All incinerators, existing as of the effective date of Part B, Section V of Regulation No. 6, with a design rate of four hundred pounds per hour and greater must comply with the requirements of this regulation.

III.B.4.b. All incinerators, existing as of the effective date of Part B, Section V of Regulation No. 6, with a design capacity of less than four hundred pounds per hour must comply with the requirements of this regulation as applicable; except incinerators with a design capacity of less than 200 pounds per hour shall be permitted and allowed to operate only so long as the units continue to meet the particulate and visible emission standards existing prior to the effective date of Part B, Section V of Regulation No.6, the manufacturer's design specifications and any other applicable safety standards. (The standards existing prior to the effective date of this regulation are: a) For sources existing prior to January 30, 1979: 20% opacity and 0.10 grains per dry standard cubic foot (gr/dscf) of PM for PM non-attainment areas and 0.15 gr/dscf of PM for PM attainment areas; b) 20% opacity and 0.10 gr/dscf of PM for sources constructed after January 30, 1979.)

## III.C. Manufacturing Processes

III.C.1. Except as provided in paragraphs 2 of this subsection C., no owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following.

III.C.1.a. For process equipment having design rates of 30 tons per hour or less, the allowable emission rate shall be determined by the use of the equation:

$$PE = 3.59(P)^{0.62}$$

Where:

PE = Particulate Emission in lbs. per hour

P = Process weight rate in tons per hour

III.C.1.b. For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by use of the equation:

$$PE = 17.31(P)^{0.16}$$

Where:

PE = Particulate Emission rate in lbs. per hour

P = Process weight rate in tons per hour

III.C.1.c. If two or more process units are connected to the same opening, the maximum allowable emission rate shall be computed by summing the allowable emissions for the units being operated.

### III.C.2. Exceptions

Fugitive dust and fugitive particulate emissions as defined in Section II.A.6 of this Regulation.

### III.C.3. Performance Tests

Prior to granting of a final approval permit or amending a permit, when an emission source or control equipment is altered, or at any time when there is reason to believe that emission standards are being violated, the division may require the owner or operator of any manufacturing process to conduct performance tests, as measured by EPA Methods 1–4 and the front half of EPA Method 5 (40 CFR 60.275, Appendix A, Part 60), or other credible method approved by the division, to determine compliance with this subsection of this regulation. The particulate emission standards contained in this subsection do not include condensable particulate matter, or the back half emissions of EPA Method 5 (40 CFR 60.275, Appendix A, Part 60).

### III.D. Fugitive Particulate Emissions

#### III.D.1. General Requirements

##### III.D.1.a. Existing Sources

III.D.1.a.(i). Every owner or operator of a source or activity that is subject to this Section III.D. shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere through the use of all available practical methods which are technologically feasible and economically reasonable and which reduce, prevent and control emissions so as to facilitate the achievement of the maximum practical degree of air purity in every portion of the State.

III.D.1.a.(ii). In determining what control methods are available, practical, economically reasonable and technologically feasible, the following factors shall be considered: effects on the health, welfare (as defined in Section I.G. of the Common Provisions regulation), convenience, and comfort of the inhabitants of the State of Colorado; effects on the enjoyment and use of the scenic and natural resources of the State; the impact on normal operating procedures; altitude, topography, climate, and anticipated meteorological conditions (including wind and precipitation); soil conditions; the degree to which a type of emission to be controlled is significant; the continuous, intermittent, or seasonal nature of the emission, the economic, environmental, and energy impacts and other costs of compliance; the proximity of the source or activity to populated areas; and the nature, scope and duration of the source or activity.

III.D.1.a.(iii). This Section III.D. shall be enforceable only through the procedures specified below in Section III.D.1.b. through III.D.1.e.

#### III.D.1.b. New Sources

Every owner or operator of a new source or activity that is subject to this Section III.D. and which is required to obtain an emission permit under Regulation No. 3 shall submit a fugitive particulate emission control plan meeting the requirements of this Section III.D. at such time as, and as part of, the required permit application. Such plan shall be approved or disapproved by the division in the course of acting to approve or disapprove the permit application and no emission permit shall be issued until a fugitive particulate emission control plan has been approved.

#### III.D.1.c. Emission Limitation Guidelines for Submission of Control Plan.

If the division determines that a source of activity which is subject to this Section III.D. (whether new or existing) is operating with emissions in excess of 20% opacity and such source is subject to the 20% emission limitation guideline; or if it determines that the source or activity which is subject to this Section III.D. is operating with visible emissions that are being transported off the property on which the source is located and such source is subject to the no off property transport emission limitation guideline; or if it determines that any source or activity which is subject to this Section III.D. is operating with emissions that create a nuisance; it shall require the owner or operator of that source or activity to submit a written plan to the division for the control of fugitive particulate emissions within the time period specified in Section III.D. Provided, however, that in the case of a source or activity which already has a control plan, the division shall review said control plan and if it determines the plan does not meet the requirements of this Section III.D. it shall require the submission of a revised control plan. (As used herein, "nuisance" shall mean the emission of fugitive particulates which constitutes a private or public nuisance as defined in common law, the essence of which is that such emissions are unreasonable interfering with another person's use and enjoyment of his property. Such interference must be "substantial" in its nature as measured by a standard that it would be of definite offensiveness, inconvenience, or annoyance to a normal person in the community.)

[Cross Reference: Appendices A and B]

#### III.D.1.d. Control Plans

III.D.1.d.(i). With respect to operations or activities that have more than one source of fugitive particulate emissions, submission of control plans or plan revisions pursuant to Section III.D. shall be required only with respect to those individual sources for which there does not exist a currently approvable control plan and which are not being operated in accordance with the requirements of this Section III.D., provided, however, that control plans required by Section III.D.1.b for new sources and activities shall contain provisions for control of fugitive particulate emissions from all significant sources of such emissions.

III.D.1.d.(ii). Sources required to submit control plans for revisions to the division shall do so within sixty days of the date such plan or revision is requested; provided, however, that the division, in its discretion, may where appropriate establish a different time period for submittal, taking into consideration such factors as the duration of the operation of the source or activity, the significance and nature of the emissions, and the relative complexity of the operation and applicable control methods.

III.D.1.d.(iii). Each control plan shall include all available practical methods which are technologically feasible and economically reasonable and which reduce, prevent and control fugitive particulate emissions from the source or activity into the atmosphere. For those materials, equipment, services or other resources (such as water for abatement and control purposes), which are likely to be scarce at any given time, an alternative control method must be included in the control plan. Any source required to submit a control plan may ask for a “control plan conference” with the division, and if so requested the division shall hold such a conference for the purpose of advising what types of control measures and/or operating procedures will meet the requirements of this section.

[Cross Reference: Sections III.D.2.a. through III.D.2.k.]

III.D.1.d.(iv). The division shall approve any plan submitted under this Section III.D. unless the division determines that the plan does not meet the requirements of Section III.D. If a control plan is not approvable in its entirety, the division shall approve those portions, which meet the requirements of this section and disapprove those portions, which fail to meet the requirements of this section.

#### III.D.1.e. Enforcement

III.D.1.e.(i). It shall be a violation of this regulation and the division may take enforcement action pursuant to C.R.S. 1973, 25-7-115, as amended, if the owner or operator:

III.D.1.e.(ii).(A). Fails to submit a control plan (or revision of an existing plan) within sixty days (or other time period specified by the division) after being notified by the division that such submittal is required unless operation of such source is discontinued so as to permanently eliminate the cause of fugitive particulate emissions there from; or

III.D.1.e.(ii).(B). Owns or operates a source or activity for which the division has disapproved a control plan or a revised control plan unless operation of such source is discontinued so as to permanently eliminate the cause of fugitive particulate emissions there from; or

III.D.1.e.(ii).(C). Fails to comply with the provisions of an approved control plan.

III.D.1.e.(iii). The 20% opacity, no off-property transport, and nuisance emission limitation guidelines of this Section III.D. are not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115 as amended.

#### III.D.2. Sources Subject to Section III.D.

The control measures and operating procedures listed in Sections III.D.2.a. through III.D.2.k. are generally considered appropriate for the specific types of sources under which they are listed – at least as applied individually. Whether they remain appropriate when used in combination with other measures and procedures, must be determined on a case-by-case basis.

##### III.D.2.a. Roadways

#### III.D.2.a.(i). Unpaved

##### III.D.2.a.(i).(A). Applicability – Attainment and Non-attainment Areas

##### III.D.2.a.(i).(B). General Requirement

Any owner or operator responsible for construction or maintenance of any (existing or new) unpaved roadway which has vehicle traffic exceeding 200 vehicles per day in attainment areas or 150 vehicles per day in nonattainment areas (averaged over any consecutive 3-day period) from which fugitive particulate emissions will be emitted shall be required to use all available, practical methods which are technologically feasible and economically reasonable in order to minimize emissions resulting from the use of such roadway in accordance with the requirements of Section III.D. of this regulation.

##### III.D.2.a.(i).(C). Applicable Emission Limitation Guideline

The nuisance emission limitation guideline shall apply to unpaved roadways. Abatement and control plans submitted for unpaved roadways shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

##### III.D.2.a.(i).(D). Control Measures and Operating Procedures

Control measures or operations procedures to be employed may include but are not necessarily limited to, watering, chemical stabilization, road carpeting, paving, suggested speed restrictions and other methods or techniques approved by the division.

III.D.2.a.(i).(E). If the division receives a complaint that any new or existing unpaved roadway is creating a nuisance, it may require persons owning or operating or maintaining such roadways to supply vehicle traffic count information by any reasonable available means for the purpose of determining if they have sufficient traffic to subject them to the requirements of this Section III.D.

#### III.D.2.a.(ii). Paved

##### III.D.2.a.(ii).(A). Applicability - Attainment and Non-attainment Areas

##### III.D.2.a.(ii).(B). General Requirement

Any person who through operations or activities repeatedly deposits materials which may create fugitive particulate emissions on a public or private paved roadway is required to submit a control and abatement plan upon request by the division which provides for the removal of such deposits and appropriate measures to prevent future deposits such that fugitive particulate emissions which may result are minimized; except that sand, salt or other materials may be dropped on snow or ice covered roadways for the purpose of safety and such deposits shall not be required to be removed on a more frequent basis than the community's normal street cleaning schedule except as otherwise provided in an applicable SIP provision.

##### III.D.2.a.(ii).(C). Applicable Emission Limitation Guideline

The nuisance emission limitation guideline shall apply to paved roadways. Abatement and control plans submitted for paved roadways shall be evaluated for compliance with the requirements of section III.D. of this regulation.



### III.D.2.a.(ii).(D). Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include but are not necessarily limited to, covering the loaded haul truck, washing or otherwise treating the exterior of the vehicle, limiting the size of the load and the vehicle speed, watering or treating the load with chemical suppressants, keeping the roadway access point free of materials that may be carried onto the roadway, removal of materials from the roadway and other methods or techniques approved by the division.

### III.D.2.b. Construction Activities

#### III.D.2.b.(i). Applicability - Attainment and Non-attainment Areas

#### III.D.2.b.(ii). General Requirement

Any owner or operator engaged in clearing or leveling of land or owner or operator of land that has been cleared of greater than five acres in attainment areas or one (1) acre in nonattainment areas from which fugitive particulate emissions will be emitted shall be required to use all available and practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

#### III.D.2.b.(iii). Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to construction activities; except that with respect to sources or activities associated with construction for which there are separate requirements set forth in this regulation, the emission limitation guidelines there specified as applicable to such sources and activities shall apply. Abatement and control plans submitted for construction activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

[Cross Reference: Subsections e. and f. of Section III.D.2. of this regulation.]

#### III.D.2.b.(iv). Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not necessarily limited to, planting vegetation cover, providing synthetic cover, watering, chemical stabilization, furrows, compacting, minimizing disturbed area in the winter, wind breaks and other methods or techniques approved by the division.

### III.D.2.c. Storage and Handling of Materials

#### III.D.2.c.(i). Applicability - Attainment and Non-attainment Areas

#### III.D.2.c.(ii). General Requirement

Any owner or operator or any new or existing materials storage and handling operation from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

#### III.D.2.c.(iii). Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to storage and handling operations. Abatement and control plans submitted for storage and handling operations shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

#### III.D.2.c.(iv). Control Measures And Operating Procedures

Control measures or operational procedures to be employed may include, but are not necessarily limited to, the use of enclosures, covers, stabilization, compacting, watering, limitation of fines and other methods or techniques approved by the division.

#### III.D.2.d. Mining Activities

##### III.D.2.d.(i). Applicability - Attainment and Non-attainment Areas

##### III.D.2.d.(ii). General Requirements

Any owner or operator of any new or existing mining operation from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

##### III.D.2.d.(iii). Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to mining activities' except that with respect to sources or activities associated with mining for which there are separate requirements set forth in this regulation, the emission limitation guidelines there specified as applicable to such sources and activities shall apply. Abatement and control plans submitted for mining activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

##### III.D.2.(iv). Control Measures and Operating Procedures

Control measures or operating procedures to be employed may include, but are not necessarily limited to:

III.D.2.d.(iv).(A). watering or chemical stabilization of unpaved roads as often as necessary to minimize re-entrainment of fugitive particulate matter from the road surface, or paving of roads;

III.D.2.d.(iv).(B). prompt removal of coal, rock minerals, soil, and other dust-forming debris from paved roads and scraping and compaction of unpaved roads to stabilize the road surface as often as necessary to minimize re-entrainment of fugitive particulate matter from the road surface;

III.D.2.d.(iv).(C). restricting the speed of vehicles in and around the mining operation;

III.D.2.d.(iv).(D). revegetating, mulching, or otherwise stabilizing the surface of all areas adjoining roads that are a source of fugitive particulate emissions;

III.D.2.d.(iv).(E). to the extent practicable restricting vehicular travel vehicles to established roads;

III.D.2.d.(iv).(F). enclosing, covering, watering, or otherwise treating loaded haul trucks and railroad cars, or limiting size of load, to minimize loss of material to wind and spillage;

III.D.2.d.(iv).(G). substitution of conveyor systems for haul trucks;

III.D.2.d.(iv).(H). minimizing the area of disturbed land;

III.D.2.d.(iv).(I). prompt revegetation of disturbed surface areas;

III.D.2.d.(iv).(J). planting of special windbreak vegetation at critical points;

III.D.2.d.(iv).(K). restricting the areas to be blasted at any one time;

III.D.2.d.(iv).(L). reducing the period of time between initially disturbing the soil and revegetating or other surface stabilization;

III.D.2.d.(iv).(M).control of fugitive particulate emissions from storage piles through use of enclosures, covers, or stabilization, minimizing the slope of the upwind face of the pile, confining as much pile activity as possible to the downwind side of the pile and other methods or techniques as approved by the division.

[Cross Reference: Subsections a., b., c., e., f., g., and i. of Section III.D.2. of this regulation.]

#### III.D.2.e. Haul Roads

III.D.2.e.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.e.(ii). General Requirement

Any owner or operator of any new or existing haul road which has vehicle traffic exceeding 40 haul vehicles or 200 total vehicles per day (averaged over any consecutive 3-day period) from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

III.D.2.e.(iii). Applicable Emission Limitation Guideline

The no off-property transport emission limitation guideline shall apply to on-site haul roads (i.e., those located on and abutted by the property owned or under control of the owner or operator of the haul road) and the nuisance guideline shall apply to off-site haul roads (i.e., those abutted on both sides by property not owned or under the control of the owner or operator of the haul road). Abatement and control plans submitted for haul roads shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

III.D.2.e.(iv). Control Measures and Operating Procedures

Control measures and operational procedures to be employed may include, but are not necessarily limited to, the use of vehicular speed reduction, watering, chemical stabilization, road carpeting and other methods of techniques approved by the division.

III.D.2.e.(v). The division may require persons owning or operating or maintaining any new or existing haul roads to supply vehicle traffic count information by any reasonable available means for the purpose of determining if they have sufficient traffic to subject them to the requirements of this Section III.D.

#### III.D.2.f. Haul Trucks

III.D.2.f.(i) Applicability - Attainment and Non-attainment Areas

#### III.D.2.f.(ii). General Requirement

Any owner or operator of any new or existing haul trucks from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

#### III.D.2.f.(iii). Applicable Emission Limitation Guideline

The no off-property transport emission limitation guideline shall apply to haul trucks; except that when operating off the property of the owner or operator, the applicable guideline shall be no off-vehicle transport of visible emissions. Abatement and control plans submitted for haul trucks shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

#### III.D.2.f.(iv). Control Measures and Operating Procedures

Control measures or operation procedures to be employed may include but are not necessarily limited to, covering the materials, washing or otherwise treating loaded haul trucks to remove materials from the exterior of the vehicle prior to transporting materials, limiting load size, wetting the load and other methods or techniques approved by the division.

[Cross Reference: C.R.S. 1973, Section 42-4-1208]

#### III.D.2.g. Tailings Piles and Ponds

##### III.D.2.g.(i). Applicability - Attainment and Non-attainment Areas

##### III.D.2.g.(ii). General Requirement

Any owner or operator of any new or existing tailings piles and ponds from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

##### III.D.2.g.(iii). Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to tailings piles and ponds. Abatement and control plans submitted for tailings piles and ponds shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

##### III.D.2.g.(iv). Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not necessarily limited to:

III.D.2.g.(iv).(A). watering and/or chemical stabilization,

III.D.2.g.(iv).(B). synthetic and/or revegetate covers,

III.D.2.g.(iv).(C). wind breaks,

III.D.2.g.(iv).(D) minimizing the area of disturbed tailings,

III.D.2.g.(iv).(E). restricting the speed of vehicles in and around the tailings operation, and/or,

III.D.2.g.(iv).(F). other equivalent methods or techniques approved by the division.

#### III.D.2.h. Demolition Activities

III.D.2.h.(i). Applicability - Non-attainment Areas

III.D.2.h.(ii) General Requirements

Any owner or operator of any new demolition activities from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

III.D.2.h.(iii). Applicable Emission Limitation Guideline

Only the no off-property transport emission limitation guideline shall apply to demolition activities. Abatement and control plans submitted for demolition activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

III.D.2.h.(iv). Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not limited to:

III.D.2.h.(iv).(A). wetting down, including pre-watering of work surface,

III.D.2.h.(iv).(B). removal of dirt and mud deposited on improved streets and roads,

III.D.2.h.(iv).(C). wetting down, washing, or covering haulage equipment when necessary to minimize fugitive dust emissions during loading and transit.

III.D.2.h.(v) Any demolition or renovation activity that has materials insulated or fireproofed with friable asbestos will also be subject to the provisions of the Air Quality Control commission's Regulation No. 8, Part B.

#### III.D.2.i. Blasting Activities

III.D.2.i.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.i.(ii). General Requirement

Any owner or operator of any new or existing blasting activities from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

III.D.2.i.(iii). Applicable Emission Limitation Guideline

Only the no off-property transport emission limitation guideline shall apply to blasting activities. Abatement and control plans submitted for blasting activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

#### III.D.2.i.(iv). Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not limited to, the use of:

III.D.2.i.(iv).(A). the removal of overburden prior to blasting,

III.D.2.i.(iv).(B). watering down the blasted area as soon as practicable after blasting,

III.D.2.j.(iv).(C). other equivalent methods or techniques approved by the division.

#### III.D.2.j. Sandblasting Operations

III.D.2.j.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.j.(ii). General Requirement

Any owner or operator of any new or existing sandblasting activities from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

III.D.2.j.(iii). Applicable Emission Limitation Guideline

Only the 20% opacity emission limitation guideline shall apply to sandblasting operations. Abatement and control plans submitted for sandblasting operations shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

III.D.2.j.(iv). Control Measures and Operating Procedures

Control measures and operating procedures to be employed may include, but are not limited to the use of enclosures with necessary dust collecting equipment, using wet sandblasting methods, and other methods or techniques approved by the division.

III.D.2.k. Livestock Confinement Operations

III.D.2.k.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.k.(ii). General Requirement

Any owner or operator of any new or existing livestock confinement operations from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

III.D.2.k.(iii). Applicable Emission Limitation Guideline

Only the no off-property transport guideline shall apply to livestock confinement operations. Abatement and control plans submitted for livestock confinement operations shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

III.D.2.k.(iv). Control Measures and Operating Procedures

Control measures or operating procedures to be employed may include, but are not limited to the use of sprinkler systems and/or other equivalent methods or techniques as approved by the division.

#### **IV. CONTINUOUS EMISSION MONITORING REQUIREMENTS FOR NEW OR EXISTING SOURCES**

IV.A. Sources which are required to install, calibrate, certify and maintain continuous emission monitoring (CEM) systems for opacity, and/or sulfur dioxide and/or carbon monoxide (listed in Sections B, C, and D, of this Section IV and in Section VII.) shall have such equipment installed in a location which in accord with sound engineering practice will provide for accurate opacity and/or sulfur dioxide, and/or carbon monoxide emission readings. The averaging times for these monitors shall correspond to the averaging times for the appropriate emission standard.

##### **IV.B. Fossil Fuel-fired Steam Generators**

IV.B.1. A continuous emission monitoring system for the measurement of opacity shall be installed, calibrated, maintained and operated by the owner or operator of any steam generator of a total rated capacity of or greater than 250 million BTU per hour heat input except where:

IV.B.1.a. Gaseous fuel is the only fuel burned or,

IV.B.1.b. Oil or a mixture of gas and oil are the only fuels burned and the source is able to comply with the applicable particulate matter and opacity regulation without utilization of particulate matter collection equipment,

IV.B.1.c. The source demonstrates that a continuous monitoring system would not provide accurate determinations of the opacity of emissions (e.g., condensed, uncombined water vapor in the emissions would prevent accurate readings) and an alternative method of determining opacity approved by the division is employed.

IV.B.2. Either a continuous emission monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained and operated or a division approved sampling plan shall be developed and implemented for determining the amount of sulfur in the fuel in order to calculate sulfur oxide emissions on any fossil fuel fired steam generator of a total rated capacity of or greater than 250 million BTU per hour heat input.

IV.B.3. If an owner or operator is required to install a continuous monitoring system for sulfur oxides, a continuous monitoring system for measuring either oxygen or carbon dioxide is also required.

##### **IV.C. Sulfuric Acid Plant**

IV.C.1. The owner or operator of each sulfuric acid plant of or greater than 300 tons per day production capacity (the production capacity being expressed as 100 percent acid) shall install, calibrate, maintain and operate a continuous emission monitoring system for the measurement of sulfur dioxide for each sulfuric acid producing unit within such plant.

##### **IV.D. Fluid Bed Catalytic Cracking Unit at Petroleum Refineries**

IV.D.1. The owner or operator of each catalyst regenerator for fluid bed catalytic cracking units of or greater than 20,000 barrels per day fresh feed capacity shall install, calibrate, maintain and operate a continuous emission monitoring system for the measurement of opacity.

IV.D.2. The owner or operator of each fluid bed catalytic cracking unit of 5,000 barrels per day or greater fresh feed capacity, located in a carbon monoxide (CO) nonattainment area shall install, calibrate, maintain, and operate a continuous emission monitoring system for the measurement of carbon monoxide.

IV.D.3. Exemptions:

IV.D.3.a. The owner or operator of a fluid bed catalytic cracking unit described in IV.D.2. may apply to the division for an exemption from continuous emission monitoring requirements listed in subsection IV.D.2. In order for an exemption to be granted, the following requirements must be met:

IV.D.3.a.(i). The owner or operator of a source must conduct a flue gas emission test for carbon monoxide concentration. The test protocol must be approved at least 30 days in advance by the division and emissions during the test must not exceed 250 ppm by volume on a one hour average; and

IV.D.3.a.(ii). Source owners or operators must establish a consistent relationship between carbon monoxide flue gas concentration and indicator parameter(s) such as flue gas oxygen content, or flue gas temperature, through a division approved test program; and

IV.D.3.a.(iii). Source owners or operators must maintain records of CO indicator parameter(s), as described above, for a period of at least two years which shall be made available for division review upon request.

IV.E. Performance Specifications

The performance specifications used to determine the acceptability of monitoring equipment installed pursuant to Section IV.D.2. shall conform to those referenced in Appendix B of Part 60, Title 40, Code of Federal Regulations, or other specifications approved by the division.

IV.F. Calibration of Equipment

Owners or operators of all continuous monitoring systems subject to Section IV. of this regulation shall check the zero and span drift of the system at least once per day and at such other times as designated by the division, according to procedures approved by the division. The division may also make such determinations in order to assure proper quality assurance.

IV.G. Notification and Recordkeeping

The owner or operator of a facility required to install, maintain, and calibrate continuous monitoring equipment shall submit to the division within 30 days following the end of each calendar quarter, a report of excess emissions for all pollutants monitored for that quarter. This report shall consist of the following information and/or other reporting requirements as specified by the division.

IV.G.1. The magnitude of excess emissions computed in accordance with division guidelines, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.

IV.G.2. The nature and cause of the excess emissions, if known.



IV.G.3. The date and time identifying each period of equipment malfunction and the nature of the system repairs or adjustments, if any, made to correct the malfunction.

IV.G.4. A schedule of the calibration and maintenance of the continuous monitoring system.

IV.G.5. Compliance with the reporting requirements of this Section IV.G. shall not relieve the owner or operator of the reporting requirements of Section II.E. of the Common Provisions Regulation concerning upset conditions and breakdowns.

IV.H. A file of all data collected relating to the preceding two- year period shall be maintained by the owner or operator of an affected source. The format in which the required information is submitted shall be determined by the division.

IV.I. The owner or operator of a facility utilizing fuel sampling as an alternative to continuous emission monitoring shall report fuel analysis data as specified in the sampling plan to the division within 30 days following the end of each calendar half in a format prescribed by the division. The purpose of such report shall be to disclose emissions that would exceed SO<sub>2</sub> emission standards.

## **V. EMISSION STANDARDS FOR EXISTING IRON AND STEEL PLANT OPERATIONS**

### **V.A. Electric Arc Furnaces**

V.A.1. Visible emissions from the gas-cleaning device or from uncaptured emissions escaping the Electric Arc Furnace shop, shall not exceed twenty percent (20%) opacity at any time. The approved reference test method for visible emissions measurement on which these standards are based is EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)).

V.A.2. Emissions from the gas-cleaning device shall not exceed a mass emission rate of 0.00520 gr/dscf of filterable particulates maximum two-hour average, as measured by EPA Methods 1–4 and the front half of Method 5 (40 CFR 60.275, and Appendices A1 - A3, Part 60), ~~or by other credible method approved by the division.~~ This particulate emissions standard does not include condensable emissions, or the back-half emissions of Method 5.

V.B. Sources of particulate emissions at iron and steel plants not subject to specific emission limitations set forth in Section V shall comply with applicable emission limitations set forth elsewhere in this regulation.

### **V.B.1. Smoke Emissions and Opacity Requirements**

[Cross-reference: Section II, subsections A.1., A.2 and A.6.i and A.6.iii]

### **V.B.2. Particulate Emission Requirements**

[Cross-reference: Section III, subsection A.1, A.2, C.1 and C.3]

V.C. A statement of the basis and purpose for the revisions to this Section adopted March 11, 1982 is hereby incorporated by reference, and a copy of the statement is available from the Air Quality Control commission office.

## **VI. SULFUR DIOXIDE EMISSION REGULATIONS**

VI.A. Sources constructed or modified prior to August 11, 1977 shall be considered an existing source. All existing sources of sulfur dioxide emissions, except for sources listed in Section VII, shall comply with the following:

VI.A.1. Averaging time - Unless otherwise specified in other sections of this regulation, the averaging time for all sulfur dioxide emissions standards shall be a three hour rolling average.

VI.A.2. If the sum of sulfur dioxide emission rates for all sources located on a contiguous site is less than three tons per day potential uncontrolled SO<sub>2</sub> emissions, and if all federal and state ambient air quality standards are met no process based SO<sub>2</sub> emission standard shall apply.

VI.A.3. Existing sources of sulfur dioxide shall not emit sulfur dioxide in excess of the following process-specific limitations. (Heat input rates shall be the manufacturer's guaranteed maximum heat input rates).

VI.A.3.a. Coal-fired operations including coal-fired steam generation:

(These standards are also applicable to the use of coal-based by-product fuels.)

VI.A.3.a.(i). Units with a heat input from coal or coal-based by-product fuels of less than 300 million BTU per hour:

1.8 pounds of sulfur dioxide per million BTU of heat input.

VI.A.3.a.(ii). Units with a heat input from coal or coal-based by-product fuels equal to or greater than 300 million BTU per hour:

1.2 pounds of sulfur dioxide per million BTU of heat input.

VI.A.3.b. Oil-fired Operations Including Oil-Fired Steam Generation

VI.A.3.b.(i) Units with a heat input from oil of less than 300 million BTU per hour:

1.5 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.b.(ii). Units with a heat input from oil equal to or greater than 300 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.c. Combustion Turbines

VI.A.3.c.(i). Combustion Turbines with a heat input of less than 300 million BTU per hour:

1.2 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.c.(ii) Combustion Turbines with a heat input equal to or greater than 300 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.d. Natural Gas Desulfurization

Desulfurization Plants emitting more than five tons of sulfur dioxide per day:

2 pounds of sulfur dioxide per 1,000 cubic feet of (actual) delivered gas.

VI.A.3.e. Petroleum Refining

0.7 pounds sulfur dioxide for the sum of all SO<sub>2</sub> emissions from a given Refinery, per barrel of oil processed, per day. This emission limit shall be calculated over each 24-hour period that commences at midnight. If the refinery does not operate for the entire 24-hour period, the actual hours of operation shall be used as the averaging time. At no time shall the averaging time be greater than 24 hours. Refineries in operation on or before August 1, 1995, which are covered by this regulation, shall submit a plan for division approval no later than February 1, 1996. Sources constructed after August 1, 1995 shall submit a plan for division approval along with construction permit applications. The plan shall define how compliance with this limitation will be demonstrated. This plan shall address both how the SO<sub>2</sub> value is calculated, i.e. mass balance, monitors, and how the barrels of oil processed value is derived, taking into account intermediate storage. The division shall not limit the determination of barrels processed per day to a 24-hour period.

All data used to show compliance with this emission standard shall be maintained by the owner or operator of the affected source for a period of two years for sources that are not subject to the operating permit program, and five years for sources that are subject to the operating permit program. This data shall be available for inspection by the division upon request.

VI.A.3.f. Cement Manufacture

Seven pounds of sulfur dioxide per ton of material (including fuel) processed. This emission limit shall be calculated over each 24-hour period that commences at midnight. If the source does not operate for the entire 24-hour period, the actual hours of operation shall be used as the averaging time. At no time shall the averaging time be greater than 24 hours.

All data used to show compliance with this emission standard shall be maintained by the owner or operator of the affected source for a period of two years for sources that are not subject to the operating permit program, and five years for sources that are subject to the operating permit program. This data shall be available for inspection by the division upon request.

VI.A.3.g. Sources Not Specifically Listed Above

Application of all available practical methods of control, which are technologically feasible and economically reasonable. This is to be determined by the division.

VI.A.4. Recordkeeping and Reporting - All sources that have record keeping and reporting requirements shall comply with Sections IV.G. and IV.I of this regulation.

VI.A.5. Data Retention - All sources that have recordkeeping and reporting requirements shall retain emission data for the preceding two-year period as referenced in Section IV.H. of this regulation or for a longer period if required under other applicable regulations.

VI.B. All new sources of sulfur dioxide emissions shall comply with emission limitations as specifically provided by this subsection B.

VI.B.1. For purposes of this Section VI.B. a new source is defined as a newly constructed or modified source of sulfur dioxide emissions that has not been issued an Emission Permit (in accord with Regulation No. 3 of this commission) prior to the August 11, 1977 effective date of this amended regulation.

VI.B.2. The averaging time for all new source emissions standards for sulfur dioxide shall be three hours, and any three-hour rolling average of emission rates which exceeds these standards is a violation of this regulation.

VI.B.3. The term "modification" is as defined in the Common Provisions Regulation, Section I.G. except that any source of sulfur dioxide subject to an emission standard which measures the sum of all sulfur dioxide emissions from a given facility shall not be considered "modified" for the purposes of this regulation unless the alteration may cause an increase in the sum of all sulfur dioxide emissions from such facility.

VI.B.4. New sources of sulfur dioxide shall not emit or cause to be emitted sulfur dioxide in excess of the following process-specific limitations (Heat input rates shall be the manufacturer's guaranteed maximum heat input rates.)

VI.B.4.a. All Coal-Fired Operations, Including Coal-Fired Steam Generators

VI.B.4.a.(i). Units converted from other fuels to coal:

1.2 lbs. SO<sub>2</sub>/million BTU of coal heat input.

VI.B.4.a.(ii). Units with a coal heat input of less than 250 million BTU per hour:

1.2 lbs. SO<sub>2</sub>/million BTU coal heat input.

VI.B.4.a.(iii). Units with a coal heat input of 250 million BTU per hour or greater:

0.4 lbs. SO<sub>2</sub>/million BTU coal heat input.

VI.B.4.b. All Oil-fired Operations, Including Oil-Fired Steam Generation.

VI.B.4.b.(i). Units with an oil heat input of less than 250 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of oil heat input.

VI.B.4.b.(ii). Units with an oil heat input of 250 million BTU per hour or greater:

0.3 lbs. SO<sub>2</sub>/million BTU of oil heat input.

VI.B.4.c. Combustion Turbines

VI.B.4.c.(i). Combustion Turbines with a heat input of less than 250 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of heat input.

VI.B.4.c.(ii). Combustion Turbines with heat input of 250 million BTU per hour or greater:

0.35 lbs. SO<sub>2</sub>/million BTU of heat input.

IV.B.4.d. Natural Gas Desulfurization

(As employed in this section, the term “delivered” means (a quantity of gas) delivered to the transmission pipeline).

VI.B.4.d.(i). Desulfurization Plants emitting less than three tons per day of SO<sub>2</sub>:

2.0 lbs. SO<sub>2</sub>/1000 cubic feet of (actual) delivered natural gas.

VI.B.4.d.(ii). Sources emitting three or more tons per day of SO<sub>2</sub>:

0.8 lbs. SO<sub>2</sub>/1000 cubic feet of (actual) delivered natural gas.

VI.B.4.e. Petroleum Refining

0.3 lbs. sulfur dioxide, for the sum of all SO<sub>2</sub> emissions from a given refinery per barrel of oil processed. (Averaged over a daily 24-hour period, I.E. Midnight through 23:59.)

VI.B.4.f. Production of Oil from Shale

Production of oil from shale shall be subject to the emission limitations provided in Colorado Air Quality Control commission Regulation No. 6, Subpart B (Non-federal New Source Performance Standards (NSPS), Section IV.C.3.)

VI.B.4.g. Refining of Oil Produced from Shale

VI.B.4.g.(i). Refineries processing less than 1,000 barrels per day: No process emission standard.

VI.B.4.g.(ii). Refineries processing 1,000 or more barrels per day:

0.3 lbs. sulfur dioxide, for the sum of all Sulfur dioxide emissions from a given refinery, per barrel of oil processed.

VI.B.4.h. Sulfuric Acid Production

4.0 lbs. sulfur dioxide/ton of acid produced and 0.15 lbs. H<sub>2</sub>SO<sub>4</sub> mist/ton of acid produced.

VI.B.5. Any new source of sulfur dioxide not specifically regulated above shall:

VI.B.5.a. Limit emissions to not more than two (2) tons per day of sulfur dioxide, or

VI.B.5.b. Utilize best available control technology as determined by the division subject to review by the commission.

VI.B.6. Recordkeeping and Reporting - All sources that have recordkeeping and reporting requirements shall comply with Sections IV.G. and IV.I of this regulation.

V.I.B.7. Data Retention - All sources that have recordkeeping and reporting requirements shall retain emission data for the preceding two-year period as referenced in Section IV.H. of this regulation or for a longer period if required under other applicable regulations.

V.I.B.8. A written statement of the basis and purpose of this new source emission control regulation, which includes a detailed analytical evaluation of the scientific and technical rationale justifying this regulation has been prepared and adopted by the commission on August 11, 1977. This written statement entitled, "Rationale for the Promulgation of a New Source Emission Control Regulation and Ambient Air Quality Standards for Sulfur Dioxide", is hereby incorporated in this regulation by reference, in accord with C.R.S. 1973, 24-4-103 as amended.

#### VI.C. Fuel Sampling

All fuel sampling plans must be approved by the division. The appropriate ASTM test methods or other equivalent method approved by the division shall be used for all fuel sampling plans.

#### VI.D. Performance Tests

Prior to granting of a final approval permit or amending a permit, when an emission source or control equipment is altered, or at any time when there is reason to believe that emission standards are being violated, the division may require the owner or operator of any facility subject to the emission standards under Section VI to conduct performance tests, as measured by EPA Methods 1-4 Methods 6, 6a, 6b, 6c and Method 8 (40 CFR 60.275, Appendix A, Part 60), or any other method which the division finds appropriate to determine compliance with this subsection of this regulation.

VI.D.1. The owner or operator of an existing source of sulfur dioxide shall, upon request of the division, conduct performance test(s) and furnish the division a written report of the results of such performance test(s) to determine compliance with this regulation.

VI.D.2. Performance test(s) shall be conducted and data reduced and recorded in accordance with the test methods and procedures specified above unless the division:

VI.D.2.a. Approves the use of an alternative method the results of which the division has determined to be adequate for indicating whether a specific source is in compliance, or

VI.D.2.b. 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 is in compliance with the standard. Nothing in this paragraph C. shall be construed to abrogate the commission's or division's authority to require testing under Article 7 of Title 25, Colorado Revised Statute 1973, and regulations of the commission promulgated thereunder.

VI.D.3. 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.

#### VI.E. Related Compounds Containing Sulfur in Oxidized States:

VI.E.1. For the purposes of this regulation, all oxidized forms of sulfur (including, but not restricted to sulfur trioxide (SO<sub>3</sub>), trionyl chloride (SOCl<sub>2</sub>), and sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>)) shall be considered as sulfur dioxide.

VI.E.2. Quantities of such oxidized sulfur compounds shall be converted on a molar basis to an equivalent quantity of sulfur dioxide. The total of all such quantities, (expressed in parts per million by volume sulfur-dioxide-equivalents of other oxidized forms) shall be interpreted as “parts per million by volume sulfur dioxide” as used in Section B. above.

VI.F. Alternative Compliance Procedures

VI.F.1. Any person may apply to the division Director for approval of an alternative:

VI.F.1.a. Test method,

VI.F.1.b. Method of control,

VI.F.1.c. Compliance period,

VI.F.1.d. Emission limit, or

VI.F.1.e. Monitoring schedule.

VI.F.2. The application shall include a demonstration that the proposed alternative produces:

VI.F.2.a. An equal or greater air quality benefit than that required in this subsection VI, or

VI.F.2.b. The alternative test method is equivalent to that required by these regulations.

VI.F.3. The division Director shall obtain concurrence from EPA prior to approving an alternative.

**VII. EMISSION REGULATIONS FOR CERTAIN ELECTRIC GENERATING STATIONS OWNED AND OPERATED BY THE PUBLIC SERVICE COMPANY OF COLORADO**

VII.A. The electric generating stations owned and operated by the Public Service Company of Colorado listed below shall not emit or cause to be emitted nitrogen oxides (NO<sub>x</sub>) or sulfur dioxide (SO<sub>2</sub>) in excess of the following limits. The emission rates for NO<sub>x</sub> and SO<sub>2</sub> are measured in terms of pounds of pollutant per million British Thermal Units of fuel fired in the unit (lb/mmBTU).

VII.A.1. Cherokee Electric Generating Station, 6198 North Franklin Street, Denver, CO

VII.A.1.a. NO<sub>x</sub> and SO<sub>2</sub> limits:

	NO <sub>x</sub> (lb/mmBTU)	SO <sub>2</sub> (lb/mmBTU)
Unit 1	-	1.1
Unit 2	-	1.1
Unit 3	0.60	1.1

Unit 4	0.45	1.1
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The NO<sub>x</sub> limit will be calculated based on a 30-day rolling average, and is effective November 1, 1994.

The SO<sub>2</sub> limit will be calculated as a three-hour rolling average, and is effective November 1, 1994.

Public Service Company of Colorado shall install, certify and operate continuous emission monitoring equipment in accordance with 40 CFR Part 60.13, for measuring opacity, SO<sub>2</sub>, NO<sub>x</sub>, and either O<sub>2</sub> or CO<sub>2</sub> on Units 1, 2, 3 and 4.

VII.A.b. Effective January 1, 2005, the NO<sub>x</sub> limit for Unit 1 shall be 0.60 lb/mm BTU, provided EPA approves the designation of the Denver area as a PM-10 attainment/maintenance area. Such limit shall be calculated based on a 30-day rolling average.

VII.A.c. Upon EPA approval of the designation of the Denver area as a PM-10 attainment/maintenance area, the SO<sub>2</sub> emission rate from units 1 and 4 shall not exceed 0.88 lb/mm BTU, calculated separately for each unit, based on a 30-day rolling average. Such emission limit shall apply seasonally from November 1 through March 1. The additional SO<sub>2</sub> limit set out in this subsection VII.A.1.c. shall not apply unless EPA repeals the incorporation of SO<sub>2</sub> permit limits into the SIP at 40 CFR 52.320(c)(82)(i)(E).

VII.A.2. Arapahoe Electric Generating Station, 2601 South Platte River Drive, Denver, CO

VII.A.2.a. NO<sub>x</sub> and SO<sub>2</sub> limits:

	NO <sub>x</sub> (lb/mmBTU)	SO <sub>2</sub> (lb/mmBTU)
Unit 1	-	1.1
Unit 2	-	1.1
Unit 3	-	1.1
Unit 4	0.60	1.1 +20% annual tonnage reduction

- The NO<sub>x</sub> limit will be calculated based on a 30-day rolling average, and is effective November 1, 1994.

- The SO<sub>2</sub> limit will be calculated as a three-hour rolling average, and is effective January 1, 1995.

- The 20% SO<sub>2</sub> limit from Unit 4 shall be calculated on a calendar year, total annual tonnage basis. Public Service Company of Colorado shall install, certify and operate continuous emission monitoring equipment in accordance with 40 CFR Part 60.13, for measuring opacity, SO<sub>2</sub>, NO<sub>x</sub>, and either O<sub>2</sub> or CO<sub>2</sub> on Units 1, 2, 3, and 4.

VII.A.2.b. Upon EPA approval of the designation of the Denver area as a PM-10 attainment/maintenance area, the SO<sub>2</sub> emission rate from unit 4 shall not exceed 0.88 lb/mm BTU, calculated on a 30-day rolling average. Such emission limit shall apply seasonally from November 1 through March 1.



VII.A.2.c. Retirement of units 1 and 2

VII.A.2.c.(i). Units 1 and 2 shall be permanently retired by January 1, 2003. This section VII.A.2.c. shall become effective upon EPA approval of the designation of the Denver area as a PM-10 attainment/maintenance area.

VII.A.2.(ii). This section VII.A.2.c shall not be construed to prevent the construction or operation of a new source on the site of such units, provided any such new source complies with all laws and regulations applicable to new sources.

VII.A.3. Valmont Electric Generating Station, 1800 North 63rd Street, Boulder, CO

	NO <sub>x</sub> (lb/mmBTU)	SO <sub>2</sub> (lb/mmBTU)
Unit 5	0.45	1.1

- The NO<sub>x</sub> limit will be calculated based on a 30-day rolling average, and is effective November 1, 1994.

- The SO<sub>2</sub> limit will be calculated as a three-hour rolling average, and is effective November 1, 1994.

- Public Service Company of Colorado shall install, certify and operate continuous emission monitoring equipment in accordance with 40 CFR Part 60.13, for measuring opacity, SO<sub>2</sub>, NO<sub>x</sub>, and either O<sub>2</sub> or CO<sub>2</sub> on Unit 5.

**VIII. RESTRICTIONS ON THE USE OF OIL AS A BACKUP FUEL**

VIII.A. Applicability

The provisions of this section are applicable to all points at the following stationary sources in the Denver PM10 Attainment/Maintenance area that use oil as a backup fuel for natural gas, which is the primary process fuel:

VIII.A.1. Public Service Company of Colorado, Zuni Electric Generating Station;

VIII.A.2. Public Service Company of Colorado, Valmont Electric Generating Station;

VIII.A.3. Public Service Company of Colorado, Delgany Steam Generating Station;

VIII.A.4. University of Colorado Health Science Center (Fitzsimmons); and

VIII.A.5. Trigen-Colorado Energy, Golden, CO.

VIII.B. Requirements

Beginning November 1, 1993, natural gas shall be the only fuel used from November 1 to March 1 of each year, except under the following circumstances:

VIII.B.1. The supplier or transporter of natural gas imposes a curtailment or an interruption of service;

VIII.B.2. For necessary testing of equipment used to operate the unit on oil, testing of fuel and training of personnel; or

VIII.B.3. When an equipment malfunction at the facility makes it impossible or unsafe for the unit to operate on natural gas.

#### VIII.C. Recordkeeping

Each stationary source subject to these provisions shall maintain records for a period of two years, which include the following information:

VIII.C.1. dates and number of hour's fuel oil are burned;

VIII.C.2. percent sulfur analysis of the fuel oil that is burned;

VIII.C.3. number of gallons burned each day; and

VIII.C.4. reason(s) for the use of the fuel oil.

#### VIII.D. Reporting

Beginning April 1, 1994 and by April 1 of each year thereafter, each stationary source subject to these provisions shall submit to the division a report containing the information listed in Section VIII.C.

#### VIII.E. Alternate Recordkeeping and Reporting

Where the information required under subsections C and D above is otherwise made available to the division, for example in Air Pollution Emission Notice (APEN) reports submitted by the source or pursuant to operating permit requirements or analogous information is maintained by the source in a credible form approved by the division, the requirements of subsections C and D of this Section VIII are satisfied.

### **IX. EMISSION REGULATIONS CONCERNING AREAS WHICH ARE NONATTAINMENT OR ATTAINMENT/MAINTENANCE FOR CARBON MONOXIDE – REFINERY FLUID BED CATALYTIC CRACKING UNITS:**

No later than nine months after the effective date of this revision (January 30, 1987) no source which has emitted 1,000 or more tons of carbon monoxide during any 12 month period, nor any source which can reasonably be expected to emit 1,000 or more tons of carbon monoxide during any future 12-month period, shall emit any gas in which carbon monoxide constitutes 0.050% (500 ppm) or more of the volume of the gas, based on a one hour average.

#### **APPENDIX A**

##### Method for Measuring Opacity from Fugitive Particulate Emission Sources

###### a. Principle and Applicability

(i) Principle. The opacity of emissions from fugitive particulate emission sources is determined visually by a qualified observer.

(ii) Applicability. This method is applicable for the determination of the opacity of emissions from fugitive particulate emission sources and for qualifying observers for visually determining opacity of emissions; provided, however, this method shall not be used when wind velocities exceed 30 m.p.h. as determined by records from the nearest official station of the U.S. Weather Service, by interpretation of surface weather maps by a qualified meteorologist, or by use of one or more anemometers at the site. The division shall use anemometers where practicable.

b. Procedures. The observer qualified in accordance with Section c. of this method shall use the following procedures for visually determining the opacity of emissions:

(i) Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction. The observer's line of sight should not include more than one plume at a time. Where the plumes from more than one source have been combined such that it is not possible to observe the emissions from a subject source alone this method shall not be applied to the "combined plume" to determine the opacity of emissions from any of the contributing sources. Emissions from rock or mineral drilling, crushing, conveying, screening, and storing are evaluated in the following manner:

(A) Drilling. Emissions from drilling operations are evaluated at the point at which they are released from the drilling device or from the drill hole.

(B) Crushing. Emissions included at this evaluation point are released as material is discharged from the primary and secondary crushing machines. Observations are performed on the same elevation as the discharge if possible.

(C) Conveying. Visible emissions are evaluated as material is discharged at conveyer belt transfer points and loading points. Evaluation shall occur at the same elevation as the discharge if possible.

(D) Screening. Visible emissions are evaluated as material is discharged from the screen into the chutes. The observer shall obtain an observation point as close to the same elevation of the screens as possible.

(E) Storage. Observations are performed at ground level.

(F) In operations involving rock or mineral drilling, moisture content of the material plays an important part in type and quantity of visible emissions. Therefore, any moisture in the feedstock or addition of moisture to the process should be noted on the field data sheet.

(G) Emissions from all other sources of fugitive particulate emissions subject to this regulation shall be evaluated in a manner consistent with the above procedures.

(ii) Field Records. The observer shall record the name of the plant, emission location, type facility, observer's name and affiliation, and the date on a field data sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time opacity readings are initiated and completed.

(iii) Observations. Opacity observations shall be made at the point of greatest opacity in the plume and with a background of contrasting color. The observer shall not look continuously at the plume, but instead shall observe the plume momentarily at 15-second intervals. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

(iv) Recording Observations. Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on an observational record sheet. A minimum of 24 observations shall be recorded. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

(v) Data Reduction. Opacity shall be determined as an average of 24 consecutive observations recorded at 15-second intervals. Divide the observations recorded on the record sheet into sets of 24 consecutive observations. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. If an applicable standard specifies an averaging time requiring more or less than 24 observations, calculate the average for all observations made during the specified time period. Record the average opacity on a record sheet.

### c. Qualifications and Testing

(i) Certification requirements. To receive certification as a qualified observer, a candidate must be tested and demonstrate the ability to assign opacity readings in 5 percent increments to 25 different black plumes and 25 different white plumes, with an error not to exceed 15 percent opacity on any one reading and an average error not to exceed 7.5 percent opacity in each category. Candidates shall be tested according to the procedures described in paragraph c. (ii). Smoke generators used pursuant to this paragraph shall be equipped with a smoke meter which meets the requirements of paragraph c. (iii).

The certification shall be valid for a period of six months, at which time the qualification procedure must be repeated by the observer in order to retain certification.

(ii) Certification Procedure. The certification test consists of showing the candidate a complete run of 50 plumes - 25 black plumes and 25 white plumes - produced by a smoke generator. Plumes within each set of 25 black and 25 white runs shall be presented in random order. The candidate assigns an opacity value to each plume and records his observation on a suitable form. At the completion of each run of 50 readings, the score of the candidate is determined. If a candidate fails to qualify, the complete run of 50 readings must be repeated in any retest. The smoke test may be administered as part of a smoke school or training program, and may be preceded by training or familiarization runs of the smoke generator during which candidates are shown black and white plumes of known opacity.

(iii) Smoke Generator Specifications. Any smoke generator used for the purposes of paragraph c. (ii) shall be equipped with a smoke meter installed to measure opacity across the diameter of the smoke generator stack. The smoke meter output shall display in stack opacity based upon a path length equal to the stack exit diameter, on a full 0 to 100 percent chart recorder scale. The smoke meter optional design and performance shall meet the specifications shown in Table 1. The smoke meter shall be calibrated as prescribed in paragraph c. (iii)(A) prior to the conduct of each smoke reading test. At the completion of each test, the zero and span drift shall be checked and if the drift exceeds 1 percent opacity, the condition shall be corrected prior to conducting any subsequent test runs. The smoke meter shall be demonstrated, at the time of installation, to meet the specifications listed in Table 1. This demonstration shall be repeated following any subsequent repair or replacement of the photocell or associated electronic circuitry including the chart recorder or output meter, or every 6 months, whichever occurs first.

(A) Calibration. The smoke meter is calibrated after allowing a minimum of 30 minutes warm-up by alternately producing simulated opacity of 0 percent and 100 percent. When stable responses at 0 percent or 100 percent is noted, the smoke meter is adjusted to produce an output of 0 percent or 100 percent, as appropriate. This calibration shall be repeated until stable 0 percent or 100 percent readings are produced without adjustment. Simulated 0 percent and 100 percent opacity values may be produced by alternately switching the power to the light source on and off while the smoke generator is not producing smoke.

<u>Table 1</u>		
<u>Smoke Meter Design and Performance Specifications</u>		
	<u>Parameter</u>	<u>Specification</u>
a.	Light Source	Incandescent lamp operated at nominal rate voltage
b.	Spectral Response of Photocell	Photopic (daylight spectral response of the human eye - reference d(iii))
c.	Angle of View	15° maximum total angle
d.	Angle of Projection Angle	15° maximum total
e.	Calibration Error	3% opacity, maximum
f.	Zero and Span	1% opacity, maximum
g.	Response Time	Five seconds

B. Smoke Meter Evaluation. The smoke meter design and performance are to be evaluated as follows:

(1) Light Source. Verify from manufacturer's data and from voltage measurements made at the lamp, as installed, that the lamp is operated within 6 percent of the nominal rated voltage.

(2) Spectral Response of Photocell. Verify from manufacturer's data that the photocell has a photopic response; i.e., the spectral sensitivity of the cell shall closely approximate this standard spectral-luminosity curve for photopic vision that is referenced in (b) of Table 1.

(3) Angle of View. Check construction geometry to ensure that the total angle of view of the smoke plume, as seen by the photocell, does not exceed 15°. The total angle of view may be calculated from:  $\theta = 2 \tan^{-1} d/2L$  where  $\theta$ =total angle of view; d=the sum of the photocell diameter + the diameter of the limiting aperture; and L=the distance from the photocell to the limiting aperture. The limiting aperture is the point in the path between the photocell and the smoke plume where the angle of view is most restricted. In smoke generator smoke meters this is normally an orifice plate.

(4) Angle of Projection. Check construction geometry to ensure that the total angle of projection of the lamp on the smoke plume does not exceed 15°. The total angle of projection may be calculated from:  $\theta = 2 \tan^{-1} d/2L$ , where  $\theta$ =total angle of projection; d=the sum of the length of the lamp filament and the diameter of the limiting aperture; and L=the distance from the lamp to the limiting aperture.

(5) Calibration Error. Using neutral-density filters of known opacity, check the error between the actual response and the theoretical linear response of the smoke meter. This check is accomplished by first calibrating the smoke meter according to (1) and then inserting a series of three neutral-density filters of nominal opacity of 20, 50, and 75 percent in the smoke meter path length. Filters calibrated within 2 percent shall be used. Care should be taken when inserting the filters to prevent stray light from affecting the meter. Make a total of five nonconsecutive readings for each filter. The maximum error on any one reading shall be 3 percent opacity.

(6) Zero and Span Drift. Determine the zero and span drift by calibrating and operating the smoke generator in a normal manner over a 1-hour period. The drift is measured by checking the zero and span at the end of this period.

(7) Response Time. Determine the response time by producing the series of five simulated 0 percent and 100 percent opacity values and observing the time required to reach stable response. Opacity values of 0 percent and 100 percent may be simulated by alternately switching the power to the light source off and on while the smoke generator is not operating.

## APPENDIX B

### Method of Measurement of Off-Property Transport of Fugitive Particulate Emissions

a. Applicability. This method is applicable for the determination of the off-property transport of fugitive particulate emissions sources covered by Section III.D.2 of this regulation; provided, however, this method shall not be used when wind velocities exceed 30 m.p.h. as determined by records from the nearest official station of the U.S.

Weather Service, by interpretation of surface weather maps by a qualified meteorologist, or by use of one or more anemometers at the site. The Division shall use anemometers where practicable.

#### b. Procedure

(i) Position. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. The observer shall position himself off said property so as to be able to sight along a line which does not cross the property of emission origination. Consistent with maintaining the above requirements, the observer shall, to the extent possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction.

(ii) Field Records. The observer shall record the name of the plant, emission location, type facility, observer's name and affiliation, and the date on a field data sheet. The time, estimated distance and the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time readings are initiated and completed.

(iii) Observations. Observations shall be made in accordance with the provisions of this Appendix B sighting along a line which does not cross the property of emission origination and two such observations

of fugitive particulate emissions transported off the property of at least 15 seconds in duration [within 24 hours] must be made and must be separated by at least fifteen (15) minutes.



**DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

**Air Quality Control Commission**

**REGULATION NUMBER 3**

**STATIONARY SOURCE PERMITTING AND AIR POLLUTANT EMISSION NOTICE REQUIREMENTS**

**5 CCR 1001-5**

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

**Outline of Regulation**

- PART A Concerning General Provisions Applicable to Reporting and Permitting
- PART B Concerning Construction Permits
- ~~PART C Concerning Operating Permits~~
- PART D Concerning Major Stationary Source New Source Review and Prevention of Significant Deterioration
- ~~PART E Reserved for Environmental Management Systems~~
- PART F Regional Haze Limits - Best Available Retrofit Technology (BART) and Reasonable Progress (RP)
- ~~PART G Statements of Basis, Specific Statutory Authority and Purpose~~

**PART A CONCERNING GENERAL PROVISIONS APPLICABLE TO REPORTING AND PERMITTING**

**I. Applicability**

- I.A. The provisions of this Part A shall apply statewide to all sources of air pollutants except as otherwise provided herein.

All sources of air pollutants that have previously obtained an emissions permit (prior to July 1, 1992) or a construction permit, and are subject only to the Part B Construction Permit Program, may choose to reapply for a new construction permit pursuant to Part B of this Regulation Number 3 in order to obtain the operational flexibility provided in Section IV. of this Part A, or to obtain federally enforceable limitations to limit the source's potential to emit ("synthetic minor"). Sources of air pollutants that are subject only to the Part B Construction Permit Program may voluntarily apply for an Operating Permit pursuant to Part C.

Pursuant to Colorado Revised Statutes Section 24-4-103 (12.5), materials incorporated by reference are available for public inspection during normal business hours, or copies may be obtained at a reasonable cost from the Technical Secretary of the Air Quality Control Commission (the Commission), 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. The material incorporated by reference is also available through the United States Government Printing Office, online at [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys). 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. Definitions

I.B.1. Administrative Permit Amendment.

I.B.1.a. A permit revision that:

I.B.1.a.(i) Corrects typographical errors;

I.B.1.a.(ii) Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;

I.B.1.a.(iii) Requires more frequent monitoring or reporting by the permittee;

I.B.1.a.(iv) Allows for a change in ownership or operational control of a source where the Division determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Division;

I.B.1.b. An administrative permit amendment for purposes of the acid rain portion of a permit shall be governed by regulations promulgated under Title IV of the Federal Act, found at Code of Federal Regulations Title 40, Part 72.

I.B.2. Administrator

The administrator of the U.S. Environmental Protection Agency (U.S. EPA).

I.B.3. Adverse Environmental Effect

As a term used in the context of regulating hazardous air pollutants, any significant and widespread adverse effect, that may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.

I.B.4. Affected States

All states whose air quality may be affected by issuance of an operating permit, operating permit modification, or operating permit renewal and that are contiguous to Colorado; and/or all states that are within fifty miles of a permitted source.

I.B.5. Affected Unit

A unit that is subject to any acid rain emissions reduction requirement or acid rain emissions limitation pursuant to Title IV of the Federal Act or regulations promulgated there under, in the Code of Federal Regulations Title 40, Part 72.

I.B.6. Air Pollutant

Means carbon monoxide, nitrogen oxides, sulfur dioxide, PM10, PM2.5, total suspended particulates, ozone, volatile organic compounds, lead, all pollutants regulated under Section 111 of the Federal Act (Regulation Number 6), all hazardous air pollutants, and all class I and class II ozone depleting compounds as defined and referenced in Section 602 of the Federal Act.

I.B.7. Allowable Emissions

The emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable or enforceable as a practical matter, permit conditions that restrict the operating rate or hours of operation, or both) and the most stringent of the following:

- I.B.7.a. The applicable standards promulgated pursuant to the Federal Act for new source performance or hazardous air pollutants;
- I.B.7.b. The applicable Colorado Emission Control Regulation; or
- I.B.7.c. The emissions rate specified as a federally enforceable, or enforceable as a practical matter, permit condition, including those with a future compliance date.

I.B.8. Annual Actual Emissions

The actual rate of emissions of a pollutant, excluding excess emissions from a malfunction, or startups and shutdowns associated with a malfunction. Annual actual emissions shall be calculated using the source's actual operating rates, and types of materials processed, stored, or combusted during the calendar year.

I.B.9. Applicable Requirement

Means all of the following as they apply to emissions units in a source subject to operating permit requirements of this regulation (including requirements that have been promulgated or approved by the U.S. EPA through rulemaking at the time of permit issuance but have future effective compliance dates);

- I.B.9.a. Any term or condition of any construction permit issued pursuant to Part B of this Regulation Number 3, or any such term or condition as modified by procedures authorized by the operating permit program pursuant to Parts B and C of this Regulation, or any permit issued under Part C or Part D of the Federal Act, except that state-only permit terms or conditions shall remain enforceable solely pursuant to state law;
- I.B.9.b. Any standard or other requirement provided for in the state implementation plan;
- I.B.9.c. Any standard or other requirement under Section 111 of the Federal Act (New Source Performance Standards), including Section 111(d) of the Federal Act (Standards of Performance for existing sources) (Regulation Number 6);
- I.B.9.d. Any standard or other requirement under Section 112 of the Federal Act (hazardous air pollutants, including any requirement concerning accident prevention under Section 112(r)(7) of the Federal Act) (Regulation Number 8) but not including the contents of any risk management plan required under Section 112(r) of the Federal Act;
- I.B.9.e. Any requirements for monitoring and compliance assurance monitoring methods and procedures to ensure compliance with permit requirements, including periodic monitoring and testing, and compliance certifications, established pursuant to Sections 504(b) or 114(a)(3) of the Federal Act;
- I.B.9.f. Any standards or other requirement under the Code of Federal Regulations Title 40, Part 72 (acid deposition control);

- I.B.9.g. Any standard or other requirement governing solid waste incineration;
- I.B.9.h. Any standard or other requirement for consumer and commercial products;
- I.B.9.i. Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Federal Act, except where the Administrator has determined such requirement need not be contained in an operating permit (Regulation Number 15);
- I.B.9.j. Any national ambient air quality standard or increment or visibility requirement under Part C of Title I of the Federal Act, but only as it would apply to temporary sources permitted pursuant to Part C of this Regulation Number 3.

I.B.10. Carbon Dioxide Equivalent (CO<sub>2</sub>e)

A metric used to compare the emissions from various GHG classes based upon their global warming potential (GWP). The CO<sub>2</sub>e 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>2</sub>e (tons per year). The applicable GWPs codified in 40 CFR Part 98, Subpart A, Table A-1 – Global Warming Potentials (December 11, 2014) are hereby incorporated by reference.

I.B.11. Commence, also Commence Construction

When the owner or operator has obtained all necessary pre-construction approvals or permits required by federal, state, or local air pollution and air quality laws and regulations and has either; (a) begun, or caused to begin, a continuous program of physical onsite construction of the source, or (b) entered into binding agreements or contractual obligation that cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time. The following activities do not require the owner or operator to obtain a permit: 1) planning; 2) site clearing and grading; 3) ordering of equipment and materials; 4) storing of equipment; 5) setting up temporary trailers to house construction management staff and contractor personnel; 6) engineering and design; and 7) geotechnical investigation. In the event that the source does not qualify for issuance of a permit, the owner or operator accepts the financial risk of commencing these activities.

I.B.12. Commencement of Operation

A new source commences operation when it first conducts the activity that it was designed and permitted for (i.e., producing cement or generating electricity). In addition, for oil and gas well production facilities, commencement of operations is the date any permanent production equipment is in use and product is consistently flowing to sales lines, gathering lines or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback).

I.B.13. Construction Permit

Means the same as an emission permit as required under Part B of this regulation as it existed prior to July 1, 1992, and is the permit required under Colorado Revised Statutes Section 25-7-114.2 after July 1, 1992.

I.B.14. Continuous Emissions Monitoring System (CEMS)

All of the equipment that is required to meet the data acquisition and availability requirements of Part D of this Regulation or of a permit issued in accordance with Parts B or C of this regulation, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.

I.B.15. Continuous Emissions Rate Monitoring Systems (CERMS)

The total equipment required for the determination and recording of the pollutant mass emissions rate (in terms of mass per unit of time).

I.B.16. Continuous Parameter Monitoring System (CPMS)

All of the equipment necessary to meet the data acquisition and availability requirements of Part D of this Regulation, to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O<sub>2</sub> or CO<sub>2</sub> concentrations), and to record average operational parameter value(s) on a continuous basis.

I.B.17. Criteria pollutants

Those pollutants for which the U.S. EPA has established national ambient air quality standards, including: carbon monoxide, nitrogen dioxide (direct emissions and as a precursor to ozone and PM<sub>2.5</sub>), sulfur dioxide (direct emissions and as a precursor to PM<sub>2.5</sub>), PM<sub>10</sub>, PM<sub>2.5</sub>, total suspended particulate matter, ozone, volatile organic compounds (as a precursor to ozone), and lead.

For the purposes of Air Pollutant Emission Notice reporting, criteria pollutants shall also include nitrogen oxides, fluorides, sulfuric acid mist, hydrogen sulfide, total reduced sulfur, reduced sulfur compounds, municipal waste combustor organics, municipal waste combustor metals, and municipal waste combustor acid gases.

I.B.18. Designated Representative

Means a responsible natural person authorized by the owners and operators of an affected source and of all affected units at the source, as evidenced by a certificate of representation submitted in accordance with Subpart B of Code of Federal Regulations, Title 40, Part 72, to represent and legally bind each owner and operator, as a matter of law, in matters pertaining to the acid rain program. Whenever the term responsible official is used, it shall be deemed to refer to the designated representative with regard to all matters under the acid rain program.

I.B.19. Draft Permit

Means a proposed form of a permit that is released to the public for an opportunity for public comment and hearing, and for affected state review prior to the Division's final decision on a permit application.

I.B.20. Existing Source

An air pollutant source that has been constructed, is in operation, or has received an initial approval of a construction permit prior to the effective date of applicable requirements.

I.B.21. Fugitive Dust

For purposes of this Regulation Number 3, fugitive dust means soil or other airborne particulate matter (excluding particulates produced directly during combustion) resulting from natural forces or from surface use or disturbance, including, but not limited to, all dust from agriculture, construction, forestry, unpaved roads, mining, exploration, or similar activities in which earth is either moved, stored, transported, or redistributed; except that fugitive dust shall not include any fraction of such soil or other airborne particulate matter that is of a size or substance to adversely affect public health or welfare.

I.B.22. General Permit

Means a single permit issued to cover numerous similar sources.

I.B.23. Greenhouse Gas (GHG)

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) as the pollutant GHG. See definition for carbon dioxide equivalent (CO<sub>2</sub>e). For purposes of a GHG PAL, these gases shall not be subject to regulation if the stationary source maintains its total source-wide emissions below the GHG PAL level, meets the requirements of Part D, Section XV., and complies with the PAL permit containing the GHG PAL.

I.B.24. Indirect Source

A facility, building, structure, or installation, or any combination thereof, excluding dwellings, which 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.

I.B.25. Major Source

Any stationary source or group of stationary sources belonging to the same industrial grouping (see Section I.B.43. of this Part A), that are located on one or more contiguous or adjacent properties and are under common control of the same person (or persons under common control) that:

- I.B.25.a. Directly emits, or has the potential to emit considering enforceable controls, in the aggregate, ten tons per year or more of any hazardous air pollutant or twenty-five tons per year or more of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as may be established pursuant to the Federal Act. Emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources, and in the case of any oil or gas exploration or production well (with its associated equipment), such emissions shall not be aggregated for any purpose under this provision. Fugitive emissions shall be considered in determining whether a stationary source of hazardous air pollutants is a major source.

- I.B.25.b. Directly emits, or has the potential to emit, one hundred tons per year or more of any pollutant subject to regulation. Fugitive emissions shall not be considered in determining whether a source is a major source for purposes of this Section I.B.25.b., unless the source belongs to one of the following categories of stationary sources:
- I.B.25.b.(i) Coal cleaning plants (with thermal dryers);
  - I.B.25.b.(ii) Kraft pulp mills;
  - I.B.25.b.(iii) Portland cement plants;
  - I.B.25.b.(iv) Primary zinc smelters;
  - I.B.25.b.(v) Iron and steel mills;
  - I.B.25.b.(vi) Primary aluminum ore reduction plants;
  - I.B.25.b.(vii) Primary copper smelters;
  - I.B.25.b.(viii) Municipal incinerators capable of charging more than 250 tons of refuse per day;
  - I.B.25.b.(ix) Hydrofluoric, sulfuric, or nitric acid plants;
  - I.B.25.b.(x) Petroleum refineries;
  - I.B.25.b.(xi) Lime plants;
  - I.B.25.b.(xii) Phosphate rock processing plants;
  - I.B.25.b.(xiii) Coke oven batteries;
  - I.B.25.b.(xiv) Sulfur recovery plants;
  - I.B.25.b.(xv) Carbon black plants (furnace process);
  - I.B.25.b.(xvi) Primary lead smelters;
  - I.B.25.b.(xvii) Fuel conversion plants;
  - I.B.25.b.(xviii) Sintering plants;
  - I.B.25.b.(xix) Secondary metal production plants;
  - I.B.25.b.(xx) Chemical process plants;
  - I.B.25.b.(xxi) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
  - I.B.25.b.(xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
  - I.B.25.b.(xxiii) Taconite ore processing plants;

- I.B.25.b.(xxiv) Glass fiber processing plants;
- I.B.25.b.(xxv) Charcoal production plants;
- I.B.25.b.(xxvi) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; or
- I.B.25.b.(xxvii) Any other stationary source categories regulated by a standard promulgated as of August 7, 1980 under Section 111 or 112 of the Federal Act, but only with respect to those air pollutants that have been regulated for that category.

I.B.25.c. Meets any of the definitions of major stationary source set forth in Section II.A.25. of Part D of this Regulation Number 3.

#### I.B.26. Minor Source

Any stationary source that does not qualify as a major source (as defined in Section I.B.25. above).

#### I.B.27. Mobile Source

Motor vehicles and other sources of air pollution that emit pollutants while 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), but does not include portable sources.

#### I.B.28. Modification

Any physical change in, or change in the method of operation of, a stationary source that does not meet the definition of major modification (as defined in Section II.A.23. of Part D of this regulation), and that increases the emission rate of any pollutant for which a federal or state emission standard has been promulgated or that results in the emission of any such pollutant previously not emitted. The following exceptions apply:

- I.B.28.a. Routine maintenance, repair, and replacement shall not be considered a physical change;
- I.B.28.b. Unless previously limited by enforceable permit terms and conditions, the following shall not be considered to be a change in the method of operation:
  - I.B.28.b.(i) An increase in the production rate if such increase does not exceed the design capacity of the source and does not lead to emissions in excess of the emission standards;
  - I.B.28.b.(ii) An increase in the hours of operation that does not lead to emissions in excess of the emission standards.
  - I.B.28.b.(iii) Use of an alternative fuel or raw material by reason of an order in effect under Sections 2(a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), a prohibition under the Federal Power Plan and Industrial Fuel Act of 1978 (or any superseding legislation) or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act;

I.B.28.b.(iv) Use of an alternative fuel by reason of an order or rule under Section 125 of the Federal Act; or

I.B.28.b.(v) Change in ownership of the source.

I.B.28.c. Emissions resulting from construction and exploration shall be excluded in determining whether a modification will occur. Emissions from ongoing construction, and emissions from natural gas flaring are not considered to be temporary emissions, and are included in determining whether a modification will occur.

I.B.28.d. This definition shall not be used as a definition of major modification or minor permit modification (as defined in Section I.A.2. of Part C of this regulation)-- these are distinct and separate definitions.

I.B.28.e. Any physical change or change in the method of operation at a source with an operating permit issued pursuant to Part C of this Regulation Number 3, that does not constitute a major modification (as defined in Part D, Section II.A.23. of this Regulation Number 3) and that does not trigger new source performance standards or hazardous air pollutant requirements under the Federal Act is not considered to be a modification; except that any such change shall trigger the provisions of Part B, Section III.D.1.a. through III.D.1.g., and Part C, Sections X.A., and Part C Sections XII.A. or XII.B., as appropriate.

for Administrative Permit Amendment see Section I.B.1. of Part A
for Minor Permit Modification, see Section I.A.2. of Part C
for Major Modification, see Section II.A.23. of Part D
for Permit Modification, see Section I.A.3. of Part C
for Permit Revision, see Section I.B.34. of Part A
for Significant Permit Modification, see Section I.A.7. of Part C

#### I.B.29. New Source

A stationary air pollution source, other than an existing source; or any source that resumes operation after being inactive for more than one year after having been shut down for the purpose of eliminating emissions that violated any applicable emission control regulation or regulation for the control of hazardous air pollutants.

#### I.B.30. Non-criteria Reportable Pollutants

The list of pollutants set forth in Appendix B and those ozone-depleting compounds listed in Section 602 of the Federal Act.

#### I.B.31. Non-Road Engine

I.B.31.a. Except as discussed in Section I.B.31.b. of this definition, a non-road engine is an internal combustion engine:

I.B.31.a.(i) In or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or

I.B.31.a.(ii) In or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers);  
or



I.B.31.a.(iii) That, by itself or in or on a piece of equipment is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to wheels, skids, carrying handles, dolly, trailer or platform.

I.B.31.b. An internal combustion engine is not a non-road engine if:

I.B.31.b.(i) The engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under Section 202 of the Federal Act; or

I.B.31.b.(ii) The engine is regulated by a federal New Source Performance Standard promulgated under Section 111 of the Federal Act; or

I.B.31.b.(iii) The engine otherwise included in Section I.B.31.a.(iii) of this definition remains or will remain at a location for more than twelve consecutive months or a shorter period of time for an engine located as a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at a single location approximately three months (or more) each year. This Section does not apply to an engine after the engine is removed from the location.

~~I.B.31.c. (State-only Requirements) Non-road engines not co-located at an existing major source~~

~~An operator of a non-road engine as defined in Section I.B.31.a.(iii), with a manufacturer's site-rated horsepower of 1,200 or greater, or an aggregation of such non-road engines each with a manufacturer's site-rated horsepower of 1,200 or greater, that operate more than 4,380 hours per year at the same location are subject to the following state-only requirements:~~

~~I.B.31.c.(i) Submit an air pollutant emission notice and pay the appropriate fees pursuant to Section VI. of Part A of this regulation;~~

~~I.B.31.c.(ii) Submit an application for a site-specific, temporary, non-road engine permit on forms supplied by the Division if the estimated annual actual emissions reported on the Air Pollutant Emission Notice, as required by Section I.B.31.c.(i), are equal to or exceed one hundred tons per year or more of nitrogen oxides, 100 tons per year or more of carbon monoxide, or forty tons per year or more of sulfur dioxide. After receipt and review of a complete application, the Division shall issue a state-only non-road engine permit containing such terms and conditions as are necessary to protect the ambient air quality standards.~~

~~I.B.31.c.(iii) The operator of a non road engine that is exempt based on hours of operation or the annual emissions thresholds, must maintain sufficient records to verify that the engine or engines are exempt from the state only reporting and permit requirements. Such records shall be made available for Division review upon request.~~

~~I.B.31.d. (State only Requirements) Non road engines co located at an existing major source of nitrogen oxides or sulfur dioxide~~

~~An operator of a non road engine or aggregation of engines each with a manufacturer's site rated horsepower of 1,200 or greater, and are non road engines under Section I.B.31.a.(iii) of this definition, are subject to the following state only requirements:~~

~~I.B.31.d.(i) Submit an air pollutant emission notice and pay the fees required by Section VI. of this Part;~~

~~I.B.31.d.(ii) Submit an application for a site specific, temporary, state only non road engine permit on forms supplied by the Division if the estimated annual actual emissions reported on the air pollutant emission notice, as required by Section I.B.29.d.(i), are equal to or exceed forty tons per year or more of nitrogen oxides, one hundred tons per year or more of carbon monoxide, or forty tons per year or more of sulfur dioxide. After receipt and review of a complete application, the Division shall issue a temporary state only non road engine permit containing such terms and conditions as are necessary to protect the ambient air quality standards.~~

~~I.B.31.d.(iii) The operator of a non road engine that is 1,200 horsepower or greater, but is exempt on the basis of the annual emissions thresholds, must maintain sufficient records to verify that the engine or engines are exempt from the state only reporting and permit requirements. Such records shall be made available for Division review upon request.~~

#### I.B.32. Operating Permit

Unless the context suggests otherwise, any permit or group of permits covering an operating permit source that is issued, renewed, amended or revised pursuant to Part C of this Regulation Number 3.

#### I.B.33. Operating Permit Source

Any source subject to the permitting requirements of Part C of this regulation.

#### I.B.34. Permit Revision

Any permit modification, minor permit modification, or administrative permit amendment. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program provided that such increases do not require a permit revision under any other applicable requirement.

I.B.35. Pollution Prevention

Any activity that through process changes, product reformulation or redesign, or substitution of less polluting raw materials, eliminates or reduces the release of air pollutants (including fugitive emissions) and other pollutants to the environment prior to recycling, treatment, or disposal. This definition does not include recycling (other than certain "in-process recycling" practices), energy recovery, treatment, or disposal.

I.B.36. Portable Source

A source such as, but not limited to, asphalt batch plants and aggregate crushers that commonly and by usual practice is moved from one site to another. A source will not be considered portable if it remains on one site for more than two years.

I.B.37. 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.

I.B.38. Predictive Emissions Monitoring System (PEMS)

All of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O<sub>2</sub> or CO<sub>2</sub> concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.

I.B.39. Regulated Air Pollutant

Nitrogen oxides or any volatile organic compounds, except as listed in the definition of negligibly reactive volatile organic compounds in the Common Provisions regulation; any pollutant for which a national or state ambient air quality standard has been promulgated; any pollutant that is subject to any standard promulgated under Section 111 of the Federal Act (Regulation Number 6); any class I or II substance subject to a standard promulgated under or established by Title VI of the Federal Act; any pollutant subject to a standard promulgated under Section 112 or other requirements established under Section 112 of the Federal Act, including Sections 112(g), (j), and (r) of the Federal Act; and any pollutant subject to a standard promulgated pursuant to Colorado Revised Statutes Section 25-7-109.3(5)(a), (state-only hazardous air pollutants listed in Section 25-7-109.3(5)(a) are subject to state enforcement only and do not trigger enforcement by the Administrator or by citizens under Section 304 of the Federal Act.) Once a source becomes subject to the operating permit requirements, regulated air pollutants must be addressed in the permit application and in the permit.

I.B.40. Responsible Official

One of the following:

- I.B.40.a. For a corporation: a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
- I.B.40.a.(i) The facilities employ more than two hundred and fifty persons or have gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars); or
  - I.B.40.a.(ii) The delegation of authority to such representative is approved in advance by the Division;
- I.B.40.b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- I.B.40.c. For a municipality, state, federal, or other public agency; either a principal executive officer, or ranking elected official. For the purposes of this section, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or
- I.B.40.d. For affected sources:
- I.B.40.d.(i) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Federal Act or the regulations, found at Code of Federal Regulations Title 40, Part 72, promulgated there under are concerned; and
  - I.B.40.d.(ii) The designated representative under Title IV of the Federal Act or the Code of Federal Regulations Title 40, Part 72 for any other purposes under the Code of Federal Regulations Title 40, Part 70.

I.B.41. Schedule of compliance

A schedule of required measures, including an enforceable sequence of actions or operations, leading to compliance with an applicable state implementation plan, emission standard, emission limitation, emission prohibition, or emission control regulation.

I.B.42. State-only Condition

Means any standard, term or condition that is not required by Part C of this regulation (Title V Operating Permits), Part D of this regulation (major New Source Review), Title III (hazardous air pollutants) or Section 111 (New Source Performance Standards) of the Federal Act, is not required to be federally enforceable to participate in the early reductions program, is not required to create a federally enforceable emissions limitation in order to create a synthetic minor source (as defined in Section I.A. of this Part), or is otherwise more stringent than a requirement under the Federal Act.

I.B.43. Stationary Source

Any building, structure, facility, or installation, or any combination thereof belonging to the same industrial grouping that emits 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 I.B.29. of this Part shall not be considered a stationary source. Building, 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 Number 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.

for Affected Source see Section I.A.1. of Part C
for Existing Source, see Section I.B.20. of Part A
for Indirect Source, see Section I.B.24. of Part A
for Major Source, see Section I.B.25. of Part A
for Major Stationary Source, see Section II.A.25. of Part D
for Minor Source, see Section I.B.26. of Part A
for Mobile Source, see Section I.B.27. of Part A
for New Source, see Section I.B.29. of Part A
for Portable Source, see Section I.B.36. of Part A
for Temporary Source, see Section I.B.45. of Part A

I.B.44. Subject to Regulation

For any air pollutant, that the pollutant is subject to either a provision in the Federal Act, or a nationally-applicable regulation codified by the Administrator in Subchapter C of 40 CFR Chapter I of the Federal Act, that requires actual control of the quantity of emissions of the pollutant, and that such a control requirement has taken effect and is operative to control, limit or restrict the quantity of emissions of that pollutant released from the regulated activity, except that:

- I.B.44.a. GHG shall not be subject to regulation except as provided in Sections I.B.44.d. through f. of this Part A.
- I.B.44.b. For purposes of Section I.B.44.c. through e., the term CO<sub>2</sub>e of this Part A, shall represent an amount of GHG emitted, and shall be computed as follows:
  - I.B.44.b.(i) Multiplying the mass amount of emissions (tpy), for each of the six GHGs in the pollutant GHG, by the gas's associated GWP published at Table A-1 to Subpart A of Part 98 of 40 CFR (December 11, 2014).

I.B.44.b.(ii) Sum the resultant value from Section I.B.44.b.(i) of this Part A, for each gas to compute a tpy CO<sub>2</sub>e.

I.B.44.c. The term emissions increase as used in Sections I.B.44.d. through e. of this Part A, shall mean that both a significant emissions increase (as calculated using the procedures in Section II.A.23 of Part D) and a significant net emissions increase (as defined in Sections II.A.26, and II.A.44 of Part D) occur. For the pollutant GHG, an emissions increase shall be based on tpy CO<sub>2</sub>e, and shall be calculated assuming the pollutant GHG is a regulated NSR pollutant, and significant is defined as 75,000 tpy CO<sub>2</sub>e instead of applying the value in Section II.A.44.b. of Part D.

I.B.44.d. Beginning January 2, 2011, the pollutant GHG is subject to regulation concerning major stationary source new source review and prevention of significant deterioration if:

I.B.44.d.(i) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHG, and also will emit or will have the potential to emit 75,000 tpy CO<sub>2</sub>e or more; or

I.B.44.d.(ii) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHG, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO<sub>2</sub>e or more.

I.B.44.e. Repealed.

I.B.44.f. If there is a change in federal law that supersedes, or the District of Columbia Circuit Court of Appeals or the United States Supreme Court directs or issues an order, which limits or renders ineffective the regulation of GHG emissions at stationary sources under the New Source Review Prevention of Significant Deterioration(PSD) or Title V provisions of the Federal Act the regulation, GHG emissions under the corresponding programs in this Regulation Number 3 shall be limited or rendered ineffective to the same extent.

#### I.B.45. Temporary Source

A source in operation for not more than two years in duration unless the Division determines that a longer time period is appropriate.

#### I.B.46. Uncontrolled Actual Emissions

The annual emission rate corresponding to the annual process rate listed on the Air Pollutant Emission Notice form, without consideration of any emission control equipment or procedures. The Division may allow a source to forego calculating or estimating its uncontrolled actual emissions of hazardous air pollutants upon a showing by the source and a determination by the Division that the creation of such data is unreasonably costly, technically impractical or not reasonably related to information necessary for making regulatory decisions with respect to that source. The Division's final determination may be appealed to the Commission by the source.

I.B.47. Well Production Facility

All equipment at a single stationary source directly associated with one or more oil wells or natural gas wells upstream of the natural gas processing plant. This equipment includes, but is not limited to, equipment used for storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline.

I.B.48. Wet Screening Operations

A screening operation at a nonmetallic mineral processing plant that removes unwanted material or that separates marketable fines from the product by a washing process that is designed and operated at all times such that water is an integral part of the process and the product is saturated with water. Screens that use spray bars for the purposes of dust control are not included in this definition.

**II. Air Pollutant Emission Notice (APEN) Requirements**

II.A. Air Pollutant Emission Notices for New, Modified, and Existing Sources

II.A.1. Except as specifically provided in Section II.A.2, or as exempted in Section II.D., no person shall allow emission of air pollutants from, or construction, modification or alteration of, any facility, process, or activity which constitutes a stationary source, except residential structures, from which air pollutants are, or are to be, emitted unless and until an Air Pollutant Emission Notice and the associated Air Pollutant Emission Notice fee has been filed with the Division with respect to such emission. Each such notice shall specify the location at which the proposed emission will occur, the name and address of the persons operating and owning such facility, the nature of such facility, process or activity, an estimate of the quantity and composition of the expected emission and other information as required in the current Air Pollutant Emission Notice form.

II.A.2. The following requirements apply to oil and gas well production facilities

II.A.2.a. [Expired 05/15/2021 per SB 21-152]

II.A.2.b. Owners or operators of well production facilities must file Air Pollutant Emissions Notices prior to modification of the well production facility (this includes both construction of a new emission source and modification of an existing emission source at the same well production facility).

II.A.3. By January 31, 2024, and by every January 31 thereafter, stationary sources in the ozone nonattainment area with the potential to emit VOC and/or NO<sub>x</sub> emissions equal to or greater than 25 tons per year (per pollutant) must certify annually through a Division approved format that annual actual VOC and/or NO<sub>x</sub> emissions estimates are as reported on Air Pollutant Emission Notices for that certifying year, including per the thresholds defined as significant changes in Section II.C.2.

II.B. General

II.B.1. Emission Estimate

The Air Pollutant Emission Notice shall include an estimate of the annual actual emissions, including emission controls. The emissions estimate shall be based upon actual test data or, in the absence of such data, upon estimations acceptable to the Division. The following alternative estimate methods, in order of descending acceptability, are acceptable to the Division:

II.B.1.a. Mass balance calculations or a published, verifiable emission factor, whichever is best applied to the source; or

II.B.1.b. Other engineering calculations.

Stack testing or emission monitoring will not be required solely to meet the Air Pollutant Emission Notice reporting requirements.

An owner or operator shall provide a justification to the Division for not using any methods that are higher on the list than the method the owner or operator proposes to use. If none of the above methods are available or applicable to the source, an appropriate method will be determined on a case-by-case basis by the Division, taking into account the provisions of Section II.C.2. of this Part A.

The Division shall make available to all air pollution control authority offices appropriate forms on which the information required by this section shall be submitted.

II.B.2. Air Pollutant Emission Notice Term

An Air Pollutant Emission Notice is valid for a period of five years. The five-year period recommences when a revised Air Pollutant Emission Notice is received by the Division.

II.B.3. APEN Applicability

For the purposes of Air Pollutant Emission Notice applicability, a source will be considered to be an individual emission point, or group of points pursuant to Section II.B.4. of this Part A.

II.B.3.a. Criteria Pollutants

For criteria pollutants, Air Pollutant Emission Notices are required for: each individual emission point in a nonattainment area with uncontrolled actual emissions of one ton per year or more of any individual criteria pollutant (pollutants are not summed) for which the area is nonattainment; each individual emission point in an attainment or attainment/maintenance area with uncontrolled actual emissions of two tons per year or more of any individual criteria pollutant (pollutants are not summed); each individual emission point with uncontrolled actual emissions of lead greater than one hundred pounds per year, regardless of where the source is located.

II.B.3.b. Non-criteria Reportable Pollutants

For non criteria reportable pollutants, Air Pollutant Emission Notices are required for each individual emission point with uncontrolled actual emissions equal to or greater than 250 pounds per year or more of any individual non-criteria reportable pollutant (pollutants are not summed).

II.B.4. Source Grouping

Grouping of multiple emission points on a single Air Pollutant Emission Notice shall be allowed as often as possible, provided the overall goals of receiving accurate and verifiable emissions information are not compromised. The following guidelines shall be used to delineate occasions when grouping can be allowed. These are intended to be used as guidelines only, and specific questions regarding grouping should be directed to the Division.



Multiple pieces of equipment or processes from a single facility may be grouped or associated together and reported on one single Air Pollutant Emission Notice provided the individual sources of emissions meet the following guidelines:

- II.B.4.a. All of the aggregated sources have identical source classification codes and emission factors for criteria pollutants;
- II.B.4.b. Each of the aggregated sources share a similar location within the facility;
- II.B.4.c. Similar sources regulated under the New Source Performance Standards (Regulation Number 6) and non-New Source Performance Standard sources should not be grouped;
- II.B.4.d. None of the individual sources is required to monitor emissions through the use of continuous emission monitors;
- II.B.4.e. Each of the individual emission points has fuel usage, production, and a consumption level, which are indistinguishable from the other points, which have been grouped on the Air Pollutant Emission Notice;
- II.B.4.f. None of the individual sources grouped on the Air Pollutant Emission Notice has previously been issued its own separate emissions permit.

The Division maintains its authority to require individual separate Air Pollutant Emission Notices for any process or activity.

The Division may allow a source to deviate from this emission point grouping criteria upon a showing that an alternative is reasonable and will not compromise the overall goals of receiving accurate and verifiable emissions information.

- II.B.5. Air Pollutant Emission Notices and revised Air Pollutant Emission Notices shall be based on calendar years (January through December).
- II.B.6. The emissions noted on the current Air Pollutant Emission Notice on file with the Division shall be used for emission fee calculations as described in Section VI. of this Part A.

## II.C. Revised Air Pollutant Emission Notices

- II.C.1. A revised Air Pollutant Emission Notice shall be filed:
  - II.C.1.a. Annually whenever a significant change (as defined in Section II.C.2.) in annual actual emissions occurs; or
  - II.C.1.b. Whenever there is a change in the owner or operator of any facility, process, or activity; or
  - II.C.1.c. Whenever new control equipment is installed, or whenever a different type of control equipment replaces an existing type of control equipment (revised Air Pollutant Emission Notices are not required for routine maintenance, repair, or replacement of control equipment; or
  - II.C.1.d. Whenever a permit limitation must be modified; or
  - II.C.1.e. Before the Air Pollutant Emission Notice expires.

- II.C.1.f. A revised Air Pollutant Emission Notice is not required whenever the location of a portable facility, process, or activity is changed, however, the owner or operator of such source must file a relocation notice. Such notice shall be received by the Division at least ten days prior to the change in location. Alternatively, the owner or operator of a portable source may request written approval from the Division to report multiple relocations. Relocation forms are available at the Division offices.
- II.C.1.g. A revised Air Pollutant Emission Notice is not required for emergency or backup generators that are ancillary to the main units at electric utility facilities, and that have a permit under Parts C or D of Title I, or Title V of the Federal Act.
- II.C.1.h. A revised Air Pollutant Emission Notice is not required for emergency or backup generators for electric power generating facilities that are not ancillary to a main unit at an electric utility facility, and that have a permit containing limits on the physical or operational capacity of the source to emit a pollutant such that the source is not considered to be a major stationary source as defined in Section II.A.25. of Part D of this Regulation Number 3. If an owner or operator of such a source chooses to file a revised Air Pollutant Emission Notice, the Air Pollutant Emission Notice shall list the average of the annual actual emissions for the preceding three years.
- II.C.2. Significant change, for the purposes of this section means:
- II.C.2.a. For any non-criteria reportable pollutant if the emissions increase by fifty percent or five tons per year, whichever is less, above the level reported on the last Air Pollutant Emission Notice submitted to the Division.
- II.C.2.b. For criteria pollutants:
- II.C.2.b.(i) For sources emitting less than one hundred tons per year, a change in annual actual emissions, of the individual criteria pollutant less than one hundred tons per year, of five tons per year or more, above the level reported on the last Air Pollutant Emission Notice submitted to the Division; or
- II.C.2.b.(ii) For volatile organic compound and nitrogen oxides sources in ozone nonattainment areas emitting less than one hundred tons of volatile organic compound and nitrogen oxides per year, a change in annual actual volatile organic compound or nitrogen oxide emissions of one ton per year or more or five percent, whichever is greater, above the level reported on the last Air Pollutant Emission Notice submitted to the Division; or
- II.C.2.b.(iii) For sources emitting one hundred tons per year or more, a change in annual actual emissions, of the criteria pollutant above one hundred tons per year, of five percent or fifty tons per year or more, whichever is less, above the level reported on the last Air Pollutant Emission Notice submitted to the Division; or
- II.C.2.b.(iv) A change in annual actual emissions, above the level reported on the last Air Pollutant Emission Notice submitted to the Division, of fifty pounds of lead.

II.C.3. Timeframe for Revised Air Pollutant Emission Notice submittals

II.C.3.a. Revised Air Pollutant Emission Notices shall be submitted no later than within thirty days before the five-year term expires.

II.C.3.b. Owners or operators of sources that are required to obtain a permit revision must file a revised Air Pollutant Emission Notice along with a request for permit revision. A revised permit must be obtained before the change at the source occurs.

II.C.3.c. Sources submitting revised Air Pollutant Emission Notices to inform the Division of a change in annual actual emission rates must do so by April 30 of the following year (e.g., a change in emissions in calendar year 1993 must be reported by April 30, 1994).

II.C.3.d. Air Pollutant Emission Notices for changes in control equipment must be submitted before the change occurs; except for control equipment at condensate storage tanks located at oil and gas exploration and production facilities subject to the requirements in Regulation Number 7, Section XII. For this control equipment, a revised APEN shall be filed once per year, as specified in Section II.C.3.c. of Part A, if any control equipment is added or if control equipment is relocated or removed.

II.C.4. Emissions reported

II.C.4.a. Sources submitting revised Air Pollutant Emission Notices due to Sections II.C.1.a., II.C.1.b., or II.C.1.e. must report actual annual emissions. Actual annual emissions for sources utilizing emission control equipment or procedures represent controlled actual annual emissions.

II.C.4.b. Sources submitting revised Air Pollutant Emission Notices due to Sections II.C.1.c. or II.C.1.d. must report both uncontrolled actual annual emissions and controlled actual emissions.

II.D. Exemptions from Air Pollutant Emission Notice Requirements

II.D.1. Stationary sources having emission units that are exempt from the requirement to file an Air Pollutant Emission Notice must nevertheless comply with all requirements that are otherwise applicable specifically to the exempted emission units, including, but not limited to: Title V, Prevention of Significant Deterioration, nonattainment New Source Review, opacity limitations, odor limitations, particulate matter limitations and volatile organic compounds controls. An applicant may not omit any information regarding APEN exempt emission units in any permit application if such information is needed to determine the applicability of Title V (Part C of this Regulation Number 3), Prevention of Significant Deterioration (Section VI., Part D of this Regulation Number 3), or nonattainment New Source Review (Section V., Part D of this Regulation Number 3).

The following sources are exempt from the requirement to file Air Pollutant Emission Notices because by themselves, or cumulatively as a category, they are deemed to have a negligible impact on air quality.

- II.D.1.a. Individual emission points in nonattainment areas having uncontrolled actual emissions of any criteria pollutant of less than one ton per year, and individual emission points in attainment or attainment/maintenance areas having uncontrolled actual emissions of any criteria pollutant of less than two tons per year, and each individual emission point with uncontrolled actual emissions of lead less than one hundred pounds per year, regardless of where the source is located.
- II.D.1.b. Individual emission points having uncontrolled actual emissions of any individual non-criteria reportable pollutant less than 250 pounds per year.
- II.D.1.c. Air conditioning or ventilating systems not designed to remove air pollutants generated by or released from other processes or equipment.
- II.D.1.d. Fireplaces used for recreational purposes, inside or outside.
- II.D.1.e. Fires and equipment used for noncommercial cooking of food for human consumption, or cooking of food for human consumption at commercial food service establishments, except for char broilers and wood fired equipment (but not including campfires) in PM10 nonattainment areas. Charbroiler shall mean a cooking device in a commercial food service establishment, either gas fired or using charcoal or other fuel, upon which grease drips down upon an open flame, charcoal or embers.
- II.D.1.f. Safety flares used to indicate danger to the public.
- II.D.1.g. Agricultural operations such as farming, cultivating, harvesting, seasonal crop drying, grain handling operations that are below New Source Performance Standards de minimis levels (including milling and grain elevator operations), and animal feeding operations that are not housed commercial swine feeding facilities as defined in Regulation Number 2, Part B. This exemption does not apply to an agricultural operation that: (1) is a major source (as defined in Section I.B.25. of this part); (2) meets or exceeds the storage capacity thresholds of a federal New Source Performance Standard (Regulation Number 6, Part A); or (3) participates in the early reduction program of the Federal Act, Section 112. Ancillary operations such as fueling stations located at farms or ranches are not exempt from Air Pollutant Emission Notice and permit requirements unless otherwise below the de minimis emission levels contained in this regulation, and are not exempt from other applicable regulation promulgated by the Commission.
- II.D.1.h. Emissions from, or construction, or alteration of residential structures, including all buildings or other structures used primarily as a place of residence, and including home heating devices.
- II.D.1.i. Laboratories and research & development facilities:
  - II.D.1.i.(i) Noncommercial (in house) experimental and analytical laboratory equipment that is bench scale in nature including quality control/quality assurance laboratories, process support laboratories, environmental laboratories supporting a manufacturing or industrial facility, and research and development laboratories.
  - II.D.1.i.(ii) Research and development activities that are of a small pilot scale and that process less than ten thousand pounds of test material per year;

- II.D.1.i.(iii) Small pilot scale research and development projects less than six months in duration with controlled actual emissions less than five hundred pounds of any criteria pollutant or ten pounds of any non criteria reportable pollutant.
- II.D.1.j. Disturbance of surface areas for purposes of land development, that do not exceed twenty-five contiguous acres and that do not exceed six months in duration. (This does not include mining operations or disturbance of contaminated soil).
- II.D.1.k. Each individual piece of fuel burning equipment, other than smokehouse generators and internal combustion engines, that uses gaseous fuel, and that has a design rate less than or equal to five million British thermal units per hour. (See definition of fuel burning equipment, Common Provisions Regulation).
- II.D.1.l. Internal combustion engines powering portable drilling rigs.
- II.D.1.m. Exemption Repealed
- II.D.1.n. Chemical storage tanks or containers that hold less than five hundred gallons, and that have an annual average daily throughput of less than twenty-five gallons.
- II.D.1.o. Unpaved public and private roadways, except for haul roads located within a stationary source site boundary.
- II.D.1.p. Sanding of streets and roads to abate traffic hazards caused by ice and snow.
- II.D.1.q. Open burning activities, except that all reporting and permitting requirements that apply to such operations must be followed (see Regulation Number 9).
- II.D.1.r. Brazing, soldering, or welding operations, except those that use lead based compounds. All welding that occurs strictly for maintenance purposes is exempt.
- II.D.1.s. Street and parking lot striping.
- II.D.1.t. Battery recharging areas.
- II.D.1.u. Aerosol can usage.
- II.D.1.v. Sawing operations, that is ancillary to facility operations, and is not part of the production process.
- II.D.1.w. The process of demolition and re bricking of furnaces and kilns. This does not include subsequent operation of such furnaces or kilns.
- II.D.1.x. Road and lot paving operations at commercial and industrial facilities, except that asphalt and cement batch plants require Air Pollutant Emission Notices and permits, unless exempt under some other section.
- II.D.1.y. Adhesive use that is not related to production.

- II.D.1.z. Fire training activities.
- II.D.1.aa. Caulking operations that are not part of a production process.
- II.D.1.bb. Landscaping and site housekeeping devices equal to or less than ten horsepower in size (lawnmowers, trimmers, snow blowers, etc.).
- II.D.1.cc. Fugitive emissions from landscaping activities (e.g., weeding, sweeping).
- II.D.1.dd. Landscaping use of pesticides, fumigants, and herbicides.
- II.D.1.ee. Exemption Repealed
- II.D.1.ff. Emergency events such as accidental fires.
- II.D.1.gg. Smoking rooms and areas.
- II.D.1.hh. Plastic pipe welding.
- II.D.1.ii. Vacuum cleaning systems used exclusively for industrial, commercial, or residential housekeeping purposes.
- II.D.1.jj. Beauty salons.
- II.D.1.kk. Operations involving acetylene, butane, propane and other flame cutting torches.
- II.D.1.ll. Pharmacies.
- II.D.1.mm. Chemical storage areas where chemicals are stored in closed containers, and where total storage capacity does not exceed five thousand gallons. This exemption applies solely to storage of such chemicals. This exemption does not apply to transfer of chemicals from, to, or between such containers.
- II.D.1.nn. Architectural painting, roof coating material and associated surface preparation (except for sandblasting and except for volatile organic compound emissions, associated with surface preparation, above Air Pollutant Emission Notice de minimis levels) for maintenance purposes at industrial or commercial facilities.
- II.D.1.oo. Emissions that are not criteria (as defined in Section I.B.17. of this part) or non-criteria reportable pollutants (as defined in Section I.B.30. of this part) (These emissions include methane, ethane, and carbon dioxide).
- II.D.1.pp. Janitorial activities and products.
- II.D.1.qq. Grounds keeping activities and products.
- II.D.1.rr. Sources of odorous emissions that do not utilize emission control equipment for control of odorous emissions. This exemption applies to the odor emissions only. All other emissions are subject to other exemptions set forth in this regulation. This exemption does not exempt any source from the requirements of Regulation Number 2.

- II.D.1.ss. Truck and car wash units.
- II.D.1.tt. Office emissions, including cleaning, copying, and restrooms.
- II.D.1.uu. Exemption Repealed
- II.D.1.vv. Electrically operated curing ovens, drying ovens and similar activities, articles, equipment, or appurtenances. This exemption applies to the ovens only, and not to the items being dried in the ovens.
- II.D.1.ww. Equipment used exclusively for portable steam cleaning.
- II.D.1.xx. Blast cleaning equipment using a suspension of abrasive in water and any exhaust system or collector serving them exclusively.
- II.D.1.yy. Commercial laundries (except dry cleaners) that do not burn liquid or solid fuel.
- II.D.1.zz. Storage of butane, propane, or liquefied petroleum gas in a vessel with a capacity of less than sixty thousand gallons, provided the requirements of Regulation Number 7, Section IV. are met, where applicable.
- II.D.1.aaa. Storage tanks of capacity less than forty thousand gallons of lubricating oils or used lubricating oils.
- II.D.1.bbb. Venting of compressed natural gas, butane or propane gas cylinders, with a capacity of one gallon or less.
- II.D.1.ccc. Fuel storage and dispensing equipment in ozone attainment areas operated solely for company owned vehicles where the daily fuel throughput is no more than four hundred gallons per day that is calculated as an annual average. Sources in an ozone attainment/maintenance area must utilize Stage 1 vapor recovery on all tanks greater than 550 gallons capacity, as required by Regulation Number 7, in order to take this exemption.
- II.D.1.ddd. Exemption Repealed
- II.D.1.eee. Indirect sources are exempt until a permit regulation specific to indirect sources is promulgated by the Commission.
- II.D.1.fff. Storage tanks meeting all of the following criteria:
  - II.D.1.fff.(i) Annual throughput is less than four hundred thousand gallons;  
and
  - II.D.1.fff.(ii) The liquid stored is one of the following:
    - II.D.1.fff.(ii)(A) Diesel fuels 1 D, 2 D, or 4 6;
    - II.D.1.fff.(ii)(B) Fuel oils #1 through #6;
    - II.D.1.fff.(ii)(C) Gas turbine fuels 1 GT through 4 GT;

- II.D.1.fff.(ii)(D) oil/water mixtures with a vapor pressure equal to or lower than that of diesel fuel (Reid Vapor Pressure of 0.025 pounds per square inch absolute).
- II.D.1.ggg. Each individual piece of fuel burning equipment that uses gaseous fuel, and that has a design rate less than or equal to ten million British thermal units per hour, and that is used solely for heating buildings for personal comfort.
- II.D.1.hhh. Natural gas vehicle fleet fueling facilities.
- II.D.1.iii. Electric motors driving equipment at non-commercial machining shops.
- II.D.1.jjj. Recreational swimming pools.
- II.D.1.kkk. Forklifts.
- II.D.1.lli. Exemption Repealed (January 30, 2020).
- II.D.1.mmm. Handling equipment and associated activities for glass that is destined for recycling.
- II.D.1.nnn. Fugitive emissions of hazardous air pollutants that are natural constituents of native soils and rock (not added or concentrated by chemical or mechanical processes) from underground mines or surface mines unless such source is a major source of hazardous air pollutants under Part C of Regulation Number 3.
- II.D.1.ooo. The use of pesticides, fumigants, and herbicides when used in accordance with requirements established under the federal Insecticide, Fungicide and Rodenticide Act as established by the U.S. EPA (United States Code Title 7, Section 136 et seq.).
- II.D.1.ppp. Ventilation of emissions from mobile sources operating within a tunnel, garage, or building that are not operating for transportation purposes and are subject to stationary source requirements.
- II.D.1.qqq. Non-asbestos demolition.
- II.D.1.rrr. Sandblast equipment when the blast media is recycled and the blasted material is collected, including small sandblast glove booths.
- II.D.1.sss. Exemption Repealed
- II.D.1.ttt. Exemption Repealed
- II.D.1.uuu. Surface water storage impoundment of non-potable water and storm water evaporation ponds, with the exceptions of oil and gas production wastewater impoundments (including produced water tanks) and commercial facilities that accept oil and gas production wastewater for processing.
- II.D.1.vvv. Non-potable water pipeline vents.
- II.D.1.www. Steam vents and safety release valves.
- II.D.1.xxx. Exemption Repealed



- II.D.1.yyy. Seal and lubricating oil systems for steam turbine electric generators.
- II.D.1.zzz. Venting of natural gas lines for safety purposes. This exemption does not apply to routine or predictable emissions at or associated with a stationary source.
- II.D.1.aaaa. Chemical Storage Tanks
  - II.D.1.aaaa.(i) Sulfuric acid storage tanks not to exceed ten thousand five hundred gallons capacity.
  - II.D.1.aaaa.(ii) Sodium hydroxide storage tanks.
- II.D.1.bbbb. Containers, reservoirs, or tanks used exclusively for dipping operations that contain no organic solvents for coating objects with oils, waxes, greases, or natural or synthetic resins.
- II.D.1.cccc. Wet screening operations notwithstanding the applicability of the New Source Performance Standards included in the Code of Federal Regulations, Title 40, Part 60, Subpart OOO.
- II.D.1.dddd. Non-road engines as defined in Section I.B.31. of this Part A, except certain non-road engines subject to state-only air pollutant emission notice and permitting requirements pursuant to Section I.B.31.c. and I.B.31.d. of this part.
- II.D.1.eeee. Exemption Repealed
- II.D.1.ffff. Exemption Repealed
- II.D.2. An Air Pollutant Emission Notice must be filed for all incinerators.
- II.D.3. Air Pollutant Emission Notices are required for emergency and backup generators that are ancillary to the main units at electric utility facilities however, these units may be included on the same Air Pollutant Emission Notice as the main unit.
- II.D.4. Any person may request the Division to examine a particular source category or activity for exemption from Air Pollutant Emission Notice or permit requirements.
  - II.D.4.a. Such requests shall be made separately from the permit application review procedure.
  - II.D.4.b. Such requests shall include documentation indicating that emissions from the source category or activity have a negligible impact on air quality and public health in Colorado, based on, but not limited to, the following criteria.
    - II.D.4.b.(i) Emissions from the source or activity are below the Air Pollutant Emission Notice or permit emission de minimis levels set forth in this Regulation Number 3; or
    - II.D.4.b.(ii) The existing Division emission inventory is sufficient to indicate that the source or activity has a negligible impact; or

II.D.4.b.(iii) For permit exemptions, criteria in Sections II.D.4.b.(i) and/or II.D.4.b.(ii), above, are met, and the source or activity has no applicable requirement that applies to it, and the Division finds that monitoring or record keeping are not necessary.

II.D.4.b.(iv) Exemptions shall not be granted for any source or activity that is subject to any federal applicable requirement. The Division shall determine on a case-by-case basis if sources or activities subject to state only regulations may be granted an exemption.

II.D.4.c. None of the activities submitted as exemption requests to the Division may be taken by a source until the Commission has duly adopted the exemptions as revisions to this Regulation Number 3 and the U.S. EPA has approved the exemption requests.

II.D.5. Commercial (for hire) laboratories whose primary responsibilities are to perform qualitative or quantitative analysis on environmental, clinical, geological, forensic, or process samples may estimate emissions for purposes of Air Pollutant Emission Notice reporting based upon a mass balance calculation utilizing inventory and purchase records of solvents and reagents. Such laboratories may, at their discretion, group emission points if such grouping meets the grouping criteria outlined in this regulation. All inert samples are exempt from Air Pollutant Emission Notice reporting. Emissions from samples subjected to analysis provided to such laboratories for analysis and testing, and by-products that result from sample testing, are exempt from Air Pollutant Emission Notice reporting, provided such samples subjected to analysis are less than five gallons for liquids, or five pounds for solids.

II.D.6. Research and development activities that do not fall within the small scale exemption in Section II.D.1.i. may estimate emissions for purposes of Air Pollutant Emission Notice reporting based upon either a mass balance calculation utilizing inventory and purchase records, or best engineering judgment. Such facilities may file an Air Pollutant Emission Notice or revised Air Pollutant Emission Notice on an annual basis by April 30 of the year following the project's conclusion for each project that is not exempt under Section II.D.1.i., irrespective of Section II.C., herein (revised Air Pollutant Emission Notice requirements), such Air Pollutant Emission Notices shall be filed on a per project basis and shall be based on controlled actual emissions.

### **III. Administrative Permit Amendment Procedures**

III.A. An application for an administrative permit amendment shall be prepared on forms supplied by the Division.

III.B. Within sixty calendar days after receipt of a complete application for an administrative permit amendment the Division shall issue its final determination on such application in accordance with the following:

III.B.1. Deny the application for an administrative permit amendment; or

III.B.2. Grant the application and incorporate any such changes into the permit providing such permit revisions are made pursuant to this Part A, Section III.

III.C. A source may implement the changes addressed in the application for an administrative amendment immediately upon submittal of request, subject to the final determination of the Division.

- III.D. As required under the Federal Act, the Division shall transmit to the Administrator a copy of each revised permit made pursuant to an administrative permit amendment under this provision.
- III.E. No public notice or review by affected states shall be necessary for permit revisions made pursuant to administrative amendment procedures.
- III.F. Administrative permit amendments for purposes of the acid rain portion of a permit shall be governed by regulations promulgated under Title IV of the Federal Act, found at Code of Federal Regulations Title 40, Part 72.

**IV. Operational Flexibility**

IV.A. Alternative operating scenarios

No permit revision is required for reasonably anticipated operating scenarios identified by the source in its application for a permit and approved by the Division, provided the permit contains terms and conditions that:

- IV.A.1. Require the source, contemporaneously with making a change from one operating scenario to another, to record in a log at the permitted facility a record of the scenario under which it is operating;
- IV.A.2. Ensure that the terms and conditions of each such alternative scenario meet all applicable requirements of the state and Federal Act.
- IV.A.3. Extend the permit shield to all operating permit terms and conditions under each such operating scenario.

IV.B. Trading based on the permit

If allowed by the applicable state implementation plan, no permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes in emissions that are provided for in the permit. The permit applicant must request such provisions to be included in its permit, and if approved by the Division, the permit shall contain terms and conditions that:

- IV.B.1. For operating permits, include all terms required under Section V.C. of Part C;
- IV.B.2. Ensure that changes resulting from such increases and decreases in emissions meet all applicable requirements under the state and Federal Acts;
- IV.B.3. Extend the permit shield to all operating permit terms and conditions that allow such increases and decreases in emissions.

IV.C. Emissions trading under permit caps

No permit revision shall be required where an applicant requests, and the Division approves such request, for a permit containing terms and conditions allowing for the trading of emissions increases and decreases in the permitted facility. Procedures for such changes are:

- IV.C.1. For operating permits, the permit shall contain terms and conditions required pursuant to Section V.C. of Part C;
- IV.C.2. The permit applicant shall include in its application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable;

- IV.C.3. Any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades shall not be included in this provision allowing emissions trading without permit revision;
- IV.C.4. The source shall comply with all other applicable requirements.
- IV.C.5. The source shall provide a minimum of seven days written notification in advance of the proposed changes to the Division and to the Administrator. The notice must be received by the Division no later than seven days in advance of the proposed changes. The source and the Division shall attach each such notice to their copy of the relevant permit. The notice shall contain:
- IV.C.5.a. When the change will occur;
- IV.C.5.b. A description of the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit;
- IV.C.5.c. The permit shield shall extend to all operating permit terms and conditions that allow such increases and decreases in emissions.
- IV.C.6. A source shall be allowed to make such change proposed in its notice on the day following the last day of the advance notice described in Section IV.C.5. above, if the Division has not responded nor objected to such changes on or before that day.

## **V. Certification And Trading Of Emission Reduction Credits Offset And Netting Transactions**

### **V.A. Purpose**

This section establishes procedures for the recording of certified emissions reductions and for their use in emission credit transactions. These procedures are intended to:

- V.A.1. Promote economic development and lower the cost of meeting pollution control requirements while assuring ambient air quality progress and continued air quality maintenance; and
- V.A.2. Encourage development of innovative pollution control methods and technologies.

### **V.B. Scope**

This section applies to any pollutant regulated under the Colorado Air Quality Control Act or the regulations promulgated there under in all attainment, attainment/maintenance, and nonattainment areas of the state. This section does not apply to emissions trading under permit caps in Section IV.C. of Part A.

### **V.C. Definitions**

- V.C.1. Alternative compliance methods means the use of emissions reductions credits to meet emissions control requirements in lieu of an applicable control technique guidance method or reasonably available control technology.
- V.C.2. Bubble lets existing sources (or groups of sources) increase emissions at one operation in exchange for compensating extra decreases in emissions at another operation. The net result must be equivalent to or better than would have been accomplished using conventional source specific controls.

- V.C.3. Certified emissions reduction means a reduction in emissions below the baseline that has been certified by the Division in accordance with the criteria of Section V.E., and that may then be used in an emission credit transaction.
- V.C.4. Criteria pollutant means an air pollutant for which a National Ambient Air Quality Standard has been promulgated.
- V.C.5. Emission credit transaction means the use of certified emission reduction credits in a bubble, netting or offset transaction or as an alternative compliance method.
- V.C.6. Major stationary source means major stationary source as defined in Section II.A.25. of Part D of this regulation.
- V.C.7. Net emissions increase means net emissions increase as defined in Section II.A.27. of Part D of this regulation.
- V.C.8. Netting is designed to exempt modifications of existing major stationary sources from new source review requirements if the resultant impact does not exceed any of the significant values found in the definition of significant in Section II.A.44. of Part D of this regulation.
- V.C.9. Non-inventoried source means any source that has not been recorded on the Division's emission inventory system.
- V.C.10. Offset means a transaction in which a certified emissions reduction is used either to avoid causing a violation of an increment in an attainment or attainment/maintenance area, to meet the requirements of Section V.A.3. of Part D of this regulation, regarding the maintenance of reasonable further progress towards attainment of the National Ambient Air Quality Standards in nonattainment areas, or to avoid contributing to visibility or other air quality related values impairment in a Class I area.
- V.C.11. Registry means the Division's record of the certification and use of emissions reductions.
- V.C.12. Significant means significant as defined in Section II.A.44. of Part D of this regulation.
- V.C.13. Surplus means emission reductions not required by current regulations, relied on for state implementation plan planning purposes, and not used to meet any other regulatory requirement.
- V.C.14. Open Dust means solid or other air borne particulate matter (excluding particulates produced directly during combustion) resulting from natural forces or from surface use or disturbance, including, but not limited to, all dust from agriculture, construction, forestry, unpaved roads, mining, exploration, or similar activities in which earth is either moved, stored, transported or redistributed.
- V.C.15. Baseline emissions are equal to the product of the:
- V.C.15.a. Emission Rate (ER), specified in terms of mass emission per unit of production or throughput (e.g., pounds sulfur dioxide per million British thermal units or pounds of volatile organic compounds per weight of solids applied);
  - V.C.15.b. Average hourly capacity utilization (CU) e.g., millions of British thermal units per hour or weight of solids applied per hour; and

V.C.15.c. Number of hours of operation (H) during the relevant time period i.e.,  
baseline emissions = ER x CU x H. Net baseline emissions for a bubble are the  
sum of the baseline emissions of all sources involved in the trade.

V.D. Procedure for Certification of Emissions Reductions and Approval of Transactions

V.D.1. The owner or operator of a source may request the Division to certify any emissions reduction anticipated to occur after the effective date of this section, provided the owner or operator files his application prior to the occurrence of the reduction, at a time at which the source is emitting the baseline emissions of the subject pollutant. Sources that shutdown prior to the application to bank or trade have zero emissions, and therefore no credit is available.

V.D.2. Upon receiving an application for certification, the Division may require the applicant to submit all data and calculations necessary to verify the baseline emissions or the reduction of emissions below the base level including, but not limited to, documentation of operating hours and inputs. The Division may also require the applicant to perform source tests to establish the baseline emissions or the reduction of emissions below the baseline emissions. The Division shall not certify reductions anticipated to occur after the effective date of this regulation until the reductions have occurred and been verified.

V.D.3. The Division shall maintain an emissions reduction registry, in which it shall maintain a record of all certified emissions reductions, and of the use of certified emissions reductions in emission credit transactions. The information contained in such registry shall include the name and address of the owner or operator of the source creating the emissions reduction, the location of the source, its stack parameters, the temperature and velocity of its plume, particle size, the existence of any hazardous pollutants, daily and seasonal emission rates, and any other data that might reasonably be necessary to evaluate future use.

V.D.4. If the Division determines that certification should be granted it shall modify the permit of the applicant to provide that the allowable emissions are equal to the level of current emissions utilized in the calculation of the emissions reduction. The owner or operator of a source not required to obtain a permit by provisions of law other than this section shall be required to apply for and accept a permit as a condition of obtaining a certified emissions reduction. Such permits shall contain only those conditions necessary to ensure the enforcement of the emissions limitations applicable to the source as a result of certification of its emissions reduction.

V.D.5. The amount of the emissions reduction to be certified and entered in the registry shall be calculated as follows:

V.D.5.a. For any emissions reduction that has occurred in an attainment or attainment/maintenance area, the amount of the certified emissions reduction shall be 90 percent of the amount by which emissions have been reduced below the baseline emissions.

V.D.5.b. For any emissions reduction that has occurred in a nonattainment area, the amount of the certified emission reduction shall be 80 percent of the amount by which emissions have been reduced below the baseline emissions.

- V.D.5.c. For bubbles in nonattainment areas that need, but lack, approved demonstrations of attainment, i.e., areas with unapproved state implementation plans, a greater discount may be taken. This discount will be based on the area's total baseline emissions, the target emissions for attainment, the emissions for the projected attainment year and the reductions needed to achieve attainment. These values are dynamic and so the discount value may change from year to year but will never be less than 20 percent. These transactions will require a state implementation plan revision.
- V.D.6. An application may be filed for approval of the use of a certified emissions reduction in an emissions credit transaction simultaneously with the filing of a certification application, or within seven years after certification has been granted. If the transaction would require the modification of permits held by more than one person, the application shall be jointly submitted by all potentially affected permittees. The Commission shall determine whether to approve all bubble and alternative compliance method transactions, or any offset transactions that, pursuant to Section V.H., require a state implementation plan revision. The Division shall determine whether to approve all netting transactions, or any offset transactions for which no state implementation plan revision is required. The Commission may approve the use of a certified emissions reduction credit as an alternative compliance method in lieu of a specified control technique guidance method or reasonable available control technology.
- V.D.7. Applications for certification of emissions reductions and approval of transactions shall be made on forms provided by the Division. Any source applying for approval of an alternative compliance method transaction shall submit to the Division a construction permit application in accordance with Regulation Number 3, Part B, Section III. for the construction or modification, reflecting the source and proposed use of the emissions credit. The application shall contain information sufficient to demonstrate that the criteria set forth in Section V.F. of this Part A are met as well as the criteria for approval of the state implementation plan revision. The Division shall review the application and prepare its preliminary analysis in accordance with Regulation Number 3, Part B, Section III.B. The source requesting approval for the transaction and the state implementation plan revision should be granted, and shall provide with its petition, a copy of the preliminary analysis of the Division. The Division shall not grant initial approval of any such application until the Commission has approved the transaction, the source has met the conditions placed on the transaction by the Commission, and the requirements of all other applicable regulations are met.
- V.D.8. Where the owner or operator of a source requests a state implementation plan revision pursuant to this Section V., the Commission shall set a hearing on the proposed revision to be held in accordance with the procedures set forth in Colorado Revised Statutes Section 25-7-119. With respect to applications for certification of emissions reductions, or for approval of any netting transactions, or offset transactions within the Division's jurisdiction under Section V.H.2., the same time limitations for emission permits as found in Part B Section III.B. of this regulation shall apply.

- V.D.9. Applicants for certification of an emissions reduction, or for approval of any emission credit transaction, shall be assessed fees for time spent by Division personnel in evaluating such applications in accord with the criteria for assessment of emissions permit fees set forth in Section VI.C. of this Part A. Where more than one person applies for approval of a transaction, all such persons shall be jointly liable for the fees assessed. Applicants shall be responsible for paying such fees regardless of whether the Division approves or denies an application. The costs of Division review of any emissions modeling or other information necessary for the Division to formulate recommendations to the Commission regarding any proposed emission credit transaction shall be included in the costs attributed to the permit application for the source(s) seeking approval of the transaction and shall be paid by the source regardless of whether the emission credit transaction is approved.
- V.D.10. The state shall not utilize a certified emissions reduction in making demonstrations of attainment, or reasonable further progress toward attainment of the National Ambient Air Quality Standards, within seven years after the date of certification, or at any time after an application for use of the certified emissions reduction in a transaction has been approved. Where no application has been filed for the approval of the use of a certified emissions reduction within seven years after certification was granted, the state shall subsequently utilize the reduction in making demonstrations of attainment, or reasonable further progress towards attainment of the National Ambient Air Quality Standards. This seven-year period shall be tolled during any time in that there is a pending application before the Division or the Commission for approval of a bubble, netting, or offset transaction based on the certified emissions reduction.
- V.D.11. Applications for approval of transactions involving PM10 (fine particulates for Prevention of Significant Deterioration increment consumption), sulfur dioxide, carbon monoxide, lead, and oxides of nitrogen (where visibility impacts are of concern), shall be subject to the following ambient air quality modeling requirements:
- V.D.11.a. De minimis: In general modeling is not required to determine the ambient equivalence of trades in which applicable net baseline emissions do not increase and in that the sum of the emissions increases, looking only at the increasing sources, 15 tons per year for PM10, 40 tons per year for sulfur dioxide, 100 tons per year for carbon monoxide, 40 tons per year for nitrogen oxide (where visibility impacts are of concern), or 0.6 tons per year for lead, after applicable control requirements. For purposes of Prevention of Significant Deterioration any increase in PM10 should be modeled.
- V.D.11.b. Level 1: In general, modeling to determine ambient equivalence is not required if:
- V.D.11.b.(i) The trade does not result in an increase in applicable net baseline emissions;
- V.D.11.b.(ii) The relevant sources are located in the same immediate vicinity (within 250 meters) of each other;
- V.D.11.b.(iii) An increase in baseline emissions does not occur at the source with the lower effective plume height, as determined under the U.S. EPA approved and Division accepted guidelines, as interpreted in the Code of Federal Regulations Title 40, Subpart 52.343.
- V.D.11.b.(iv) No complex terrain is within the area of significant impact (see Figure 1) of the trade or 50 kilometers, whichever is less;



- V.D.11.b.(v) Stacks with increasing baseline emissions are sufficiently tall to avoid possible downwash situations, as determined by good engineering practice;
- V.D.11.b.(vi) The trade does not involve open dust sources.
- V.D.11.c. Level II: Bubble trades that are neither De minimis nor Level I may nevertheless be evaluated for approval based on modeling to determine ambient equivalence limited solely to the impacts of the specific emission sources involved in the trade, if:
- V.D.11.c.(i) There is no increase in applicable net baseline emissions;
- V.D.11.c.(ii) If the potential change in emissions before and after the trade will not cause a significant increase in pollutant concentrations at any receptor for an averaging time specified in an applicable ambient air quality standard; and
- V.D.11.c.(iii) Such an analysis does not predict any increase in ambient concentrations in a Class I or Category I area. However, a bubble will not be approved under Level II where evidence clearly indicates the bubble would create a new violation of an ambient standard or Prevention of Significant Deterioration increment or would delay the planned removal of an existing violation. The change in concentration from the before-trade case to the after-trade case must, in general, be modeled using refined models for each appropriate averaging time for the relevant national ambient air quality standards for each receptor, using the most recent full year of meteorological data. Other techniques may be approved where sources show they equally well protect national ambient air quality standards, applicable Prevention of Significant Deterioration increments, and visibility.

For example, in limited circumstances conservative screening models may be acceptable in lieu of refined models. In such cases, use of a full year of meteorological data may not be necessary. Such screening models may be acceptable where: (A) the screening model shows that all the emissions from the stack(s) with increasing emissions would not produce exceedances of the Level II significance values; (B) the stack parameters at the stack(s) with increasing emissions do not change; and (C) the screening model shows that the increase in emissions at the increasing stack(s) would not produce exceedances of these significant values.

In determining significant impact for Level II bubble trades, the Division will use the following significance values to identify trades whose potential ambient impact need not be further evaluated before approval:

8-micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any twenty-four hour period for PM10
4-micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any annual arithmetic mean for PM10
13-micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any twenty-four hour period for sulfur dioxide
46-micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any three-hour period for sulfur dioxide
3-micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any annual period for sulfur dioxide
575-micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any eight-hour period for carbon monoxide
2,300-micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any one-hour period for carbon monoxide
0.1 micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ) for any three-month period for lead.

Except that:

V.D.11.c.(iii)(A) For offset transactions, significant impact shall be determined by the values found in the table of significant values in Section VI.D.2. of Part D of this regulation.

V.D.11.c.(iii)(B) Only process fugitive emissions vented through stacks may be approved in a Level II analysis.

V.D.11.c.(iii)(C) Trades involving open dust sources may not be approved in a Level II analysis.

V.D.11.c.(iii)(D) Trades involving complex terrain cannot be approved with a Level II analysis.

V.D.11.d. LEVEL III full dispersion modeling considering all sources affecting the trade's area of impact is required to determine ambient equivalence if applicable net baseline emissions will increase as a result of the trade, or if the trade cannot meet criteria for approval under De Minimis, Level I or Level II.

V.D.11.e. Approved Models:

Modeling: Only U.S. EPA-approved models may be used in banking transactions. Use of non-guideline models will be allowed once they have been approved according to the requirements of Section VIII.A.1. of Part A of this regulation.

V.D.12. Following the certification of an emissions reduction, if the Division determines that certification was granted on the basis of fraud or material misstatement or omission, the Division shall revoke certification of the reduction. Certification shall be revoked only after the owners or operators of the affected sources have received notice and, if requested, a hearing has been conducted. In such cases the Division shall also modify the permit of the source that has used the emissions reduction, so that the permit will contain all conditions that would have applied if the emissions reduction had not been certified initially.

V.E. Criteria for Certification of Emissions Reductions

An emissions reduction shall be certified for use in an emission credit transaction, provided it meets the following criteria:

V.E.1. The emissions reduction shall be surplus. Surplus reductions are those below the baseline emissions. The baseline emissions shall be determined as follows:

V.E.1.a. In attainment and attainment/maintenance areas, the baseline emissions shall be a source's actual emissions of the subject pollutant, or allowable emissions whichever is lower, for the three baseline factors. Reasonably Available Control Technology shall be as set forth in the State implementation plan for the source. Where Reasonably Available Control Technology has not been determined in the state implementation plan for the source, it shall be determined by the Division.

- V.E.1.b. In nonattainment areas for which there is a demonstration of attainment of the National Ambient Air Quality Standards approved by the U.S. EPA the baseline emissions shall be actual emissions, provided, however, the baseline emissions shall not exceed reasonably available control technology as defined in the state implementation plan or the level of emissions used by the state in making a demonstration of attainment.
- V.E.1.c. In nonattainment areas for which there is not a demonstration of attainment of National Ambient Air Quality Standards approved by the U.S. EPA, the baseline emissions shall be the lower of: 1) the actual emissions, 2) allowable emissions under the state implementation plan or 3) allowable emissions if the source is subject to Reasonably Available Control Technology.
- V.E.1.d. Emission rate, capacity utilization and hours of operation must be used to compute pre-trade and post-trade emission levels. Baseline must be established on an annual basis and for all other averaging periods consistent with the relevant National Ambient Air Quality Standards and Prevention of Significant Deterioration increments.
- V.E.2. No emissions reduction shall be certified if the Division has relied upon the occurrence of the reduction in demonstrating attainment of the National Ambient Air Quality Standards or reasonable further progress towards attainment, or in establishing a baseline concentration.
- V.E.3. Each certified reduction of a pollutant's emissions shall be quantified in the same unit of measurement used in the standard or regulation applicable to the pollutant.
- V.E.4. In attainment and attainment/maintenance areas, reductions at major stationary sources that commenced construction after January 1, 1975 may be able to qualify for credit whether such reductions occurred before or after the Prevention of Significant Deterioration baseline triggering date. Other emission reductions (e.g., at minor sources) cannot qualify for credit where the Prevention of Significant Deterioration baseline date is or has been triggered and such reductions occurred prior to the trigger date, unless these reductions are not assumed in the Prevention of Significant Deterioration baselines. Since banked emission reduction credits must be considered to be "In the Air" for all planning purposes, if the baseline date is triggered before banked credits are actually used, such banked credits will be considered as part of the baseline and will not consume increment when used in an emissions trade.

In attainment and attainment/maintenance areas where the Prevention of Significant Deterioration baseline has not been triggered as of the date the permitting authority takes relevant final action on the trading transaction, reductions below current state implementation plan or permit limits generally may be used without special restrictions in bubble or banking transactions, provided they are otherwise creditable and there is assurance that National Ambient Air Quality Standards will not be violated due to any potential increase in actual emissions. However, reductions at sources other than major stationary sources on which construction commenced before January 1, 1975 may not be used to balance increases at such pre 1975 major sources.

- V.E.5. Emission reductions achieved by shutting down an existing source or curtailing production or operating hours below baseline levels may be generally credited if such reductions are permanent, quantifiable, and federally enforceable, and if the area has an U.S. EPA-approved attainment plan. In addition, the shutdown or curtailment is creditable only if it occurred on or after the date specified for this purpose in the plan, and if such date is on or after the date of the most recent emissions inventory used in the plan's demonstration of attainment. Where the plan does not specify a cutoff date for shutdown credits, the date of the most recent emissions inventory or attainment demonstration, as the case may be, shall apply. However, in no event may credit be given for shutdowns that occurred prior to August 7, 1977. For purposes of this section a permitting authority may choose to consider a prior shutdown or curtailment to have occurred after the date of its most recent emissions inventory, if the inventory explicitly includes as current existing emissions the emissions from such previously shutdown or curtailed sources.
- V.E.5.a. Such reductions may be credited in the absence of an approved attainment demonstration only if the shutdown or curtailment occurred on or after the date the new source permit application is filed, or, if the applicant can establish that the proposed new source is a replacement for the shutdown or curtailed source, and the cutoff date provisions of Section A, above, are met.
- V.E.6. No emission reduction credits are allowed from mobile sources unless those sources are subject to ambient impact and new source review permitting.
- V.E.7. Reductions down to compliance levels may not qualify for emission reduction credit.
- V.E.8. If an existing source commits to switch to a cleaner fuel at some future date, emission reduction credit is allowable only if a permit is conditioned to require use of a specified alternative control measure that would achieve the same degree of emission reduction should the source switch back to a dirtier fuel at some later date. The Division will ensure that adequate long-term supplies of the new fuel are available before granting the reduction credit.
- V.E.9. Emission reductions otherwise required by the Federal Act shall not be creditable as emission reductions. Incidental emission reductions that are not otherwise required by the Federal Act are creditable as emission reductions if such emission reductions meet the requirements of Section V. of Part D of this regulation, if applicable and this Section V.
- V.E.10. The total tonnage of increased emissions, in tons per year, resulting from a major modification that must be offset in accordance with Section 173 of the Federal Act shall be determined by summing the difference between the allowable emissions (as defined in Section I.B.7. of this part) after the modification and the actual emissions (as defined in Section II.A.1. of Part D) before the modification for each emissions unit.
- V.F. Criteria for Approval of all Transactions
- The use of an emissions reduction in an emission credit transaction shall be approved only if it meets the following criteria:

- V.F.1. The transaction shall involve like pollutants. For toxic or volatile organic compound pollutants, the trade should involve the same degrees of toxicity or photochemical reactivity or else a greater reduction may be required. New or modified major sources of a PM10 precursor can only obtain offsets from emissions reductions in that same PM10 precursor or in PM10. New or modified major sources of PM10 can only obtain offsets from emissions reductions in PM10. The offsets must be greater than one for one and represent a net air quality benefit in the area the source is proposing to locate or modify. (See exception in Section V.H.8.)
- V.F.2. No transaction shall be approved if it will result in an increased concentration, at the point of maximum impact, of hazardous air pollutants.
- V.F.3. Where a significant fraction of a criteria pollutant stream has been listed as hazardous by the Commission under Regulation Number 8 or the U.S. EPA under United States Code, Title 42, Section 7412 but has not yet been regulated, emissions containing that pollutant from sources within two hundred and fifty meters of each other may only be traded against each other on a greater than one for one basis that assures a net decrease in emissions of the hazardous pollutant.
- V.F.4. Hazardous and non-hazardous emissions of the same criteria pollutant may be traded against each other, provided the total emissions containing the hazardous pollutant from the sources involved in the transaction are required to decrease as a result of the transaction.
- V.F.5. No transaction may be approved that is inconsistent with any standard established by the Federal Act, the state Act or the regulations promulgated under either, or to circumvent New Source Performance Standards requirements or Best Available Control Technology although the Commission may approve a transaction using a certified emissions reduction credit in lieu of a specified control technique guidance method or reasonably available control technology.
- V.F.6. No transaction shall be approved unless either:
- V.F.6.a. The source at which the emissions reduction occurred and the source using the emissions reductions are in the same nonattainment area or Prevention of Significant Deterioration baseline area; or
- V.F.6.b. The emissions reduction is to be used as an offset to meet the requirements of Section V.A.3. of Part D of this regulation, and the conditions of that section are met for the use of an offset obtained from a source outside the nonattainment area.
- V.F.7. Emission reduction credits may not be used to meet applicable technology based requirements for new sources such as New Source Performance Standards, Best Available Control Technology, or Lowest Achievable Emission Rate, although the Commission may approve a transaction using a certified emissions reduction credit in lieu of a specified control technique guidance method or reasonably available control technology.
- V.F.8. Trades Involving Open Dust: Sources of particulate emissions may be approved through case by case state implementation plan revisions based on modeled demonstrations of ambient equivalence. Sources proposing such trades must commit, as part of the trade's approval, to:

- V.F.8.a. Undertake a post approval monitoring program to evaluate the impact of their control efforts, and
- V.F.8.b. Make further enforceable reductions if post trade monitoring indicates initial open dust controls do not produce the predicted air quality results.
- V.F.9. The federal land manager must be notified if an emissions trade will take place within one hundred kilometers of a Prevention of Significant Deterioration Class I area. Notification must occur early enough in the review process to allow at least thirty days for the submittal of comments before the trade will be approved by the reviewing authority.

Where a bubble within fifty kilometers of a Prevention of Significant Deterioration Class I area is submitted as a case-by-case state implementation plan revision, the Division may call for additional technical support, beyond the applicable requirements of the modeling screen if deemed necessary to protect air quality in the Class I area.

- V.F.10. Effect on Trades of Subsequently-Discovered Clean Air Act Problems: Revisitation Considerations - If ambient violations are discovered in an area where the Division has approved a trade, or if other violations of the act are discovered in that area, sources in the trade should be aware that they are potentially subject to requirements for additional emission reductions, just as are all other sources in the area.
- V.F.11. For volatile organic compound and nitrogen oxide trades, pound for pound trades will be considered equal in ambient effect where all sources involved in the trade are in the same control strategy demonstration area (nonattainment area) or if outside that area are sufficiently close to show an equal effect.
- V.F.12. For volatile organic compound trades involving surface coating, the emissions must be calculated on a solids applied basis and should specify the maximum time period over which the emissions may be averaged, not to exceed twenty-four hours.
- V.F.13. The following trades require a state implementation plan revision:
  - V.F.13.a. PM10, sulfur dioxide, carbon monoxide or lead trades requiring full-scale dispersion modeling under Level III;
  - V.F.13.b. PM10, sulfur dioxide, carbon monoxide or lead trades where complex terrain is within the area of the source's significant impact or fifty kilometers, whichever is less, unless the trade does not result in a modification of effective stack heights and the trade otherwise qualifies as De minimis or Level I. The area of significant impact can be determined from Figure 1;
  - V.F.13.c. Open Dust Trades;
  - V.F.13.d. Level II trades involving process fugitive PM10, sulfur dioxide, carbon monoxide or lead emissions not discharged through stacks;
  - V.F.13.e. Trades involving Emission Reduction Credits from mobile sources (see Section V.E.7.);
  - V.F.13.f. Trades involving sources that are subject of a notice of violation (NOV), noncompliance penalty action or the filing of a judicial complaint;
  - V.F.13.g. Interstate trades;

- V.F.13.h. Volatile organic compound trades with averaging times longer than twenty-four hours;
- V.F.13.i. Trades involving work practice and equipment standards;
- V.F.13.j. Trades involving negotiated Reasonably Available Control Technology baselines;
- V.F.13.k. Trades affecting areas that need but lack approved demonstrations of attainment.
- V.F.13.l. Emission credit transactions used as an alternative compliance method.
- V.F.14. No emission credit transaction shall be approved unless the terms of the transaction are incorporated in permits applicable to the originating (as applicable) and receiving emissions sources.
- V.F.15. Emission credit transactions that require a state implementation plan revision shall be considered by the Commission on a case-by-case basis. The source requesting approval of the transaction has the burden of demonstrating that all the criteria of this Section V.F., are met and of demonstrating that all applicable requirements for approval of the state implementation plan revision has been met.
- V.G. Bubble Transactions
- V.G.1. An owner or operator of an existing source may apply to the Commission for approval of a state implementation plan revision establishing a bubble. The bubble shall establish new emissions limitations for two or more facilities or operations within the source.
- V.G.2. The Commission shall not approve a bubble unless it meets the criteria for approval of Section V.F., and the Division has first certified an emissions reduction at a facility or operation included in the bubble.
- V.G.3. As part of the certification process, the amount of allowable emissions shall be reduced at the facility or operation where the emissions reduction has occurred in accord with Section V.D.5. As part of the bubble approval, the Commission may approve an increase in the total allowable emissions at the other facilities or operations covered by the bubble, by an amount not to exceed the amount of the subject certified emissions reduction.
- V.G.4. As part of the bubble approval, the Commission may extend compliance deadlines otherwise required by Commission regulations for volatile organic compounds or carbon monoxide emissions, provided the following criteria are met:
- V.G.4.a. The applicant must demonstrate to the satisfaction of the Commission that reasonable further progress toward the attainment of the National Ambient Air Quality Standards under the state implementation plan shall be maintained either by:
- V.G.4.a.(i) Achievement of emissions reductions earlier than otherwise required by certain facilities or operations covered by the bubble; or
- V.G.4.a.(ii) Temporary use of a certified emissions reduction to assure reasonable further progress toward attainment of the National Ambient Air Quality Standards.

- V.G.5. If subsequent to the approval of a bubble, the Commission promulgates new regulations or amends existing regulations applicable to a source for which the bubble has been approved, the source shall be required to meet the new or amended regulations, irrespective of the bubble, by either further reducing emissions or using certified emissions reductions as offsets.
- V.G.6. Bubble applications in areas that require but lack approved demonstrations of attainment, i.e., non approved state implementation plans, must be accompanied by assurances of consistency with ambient progress and air quality planning goals specified below:
- V.G.6.a. The resulting emission limits comply with the reduction requirements of Section V.D.5.c., and the baseline requirements of Section V.E.;
  - V.G.6.b. The bubble emission limits will be included in any new state implementation plan and associated control strategy demonstration;
  - V.G.6.c. The bubble will not constrain the Division's ability to obtain any additional emission reductions needed to expeditiously attain and maintain ambient air quality standards;
  - V.G.6.d. The Division is making reasonable efforts to develop a complete approvable state implementation plan and intends to adhere to the schedule for such development (including dates for completion of emission inventory and subsequent increments of progress) stated in or with the letter formally submitting the bubble.
- V.G.7. Bubbles should not increase applicable net baseline emissions. Ordinarily, bubbles may not result in an increase in applicable net baseline emissions. Such a bubble would require a case-by-case state implementation plan revision, and may only be approved based upon a combined Level III and Level II modeling analysis (i.e., an analysis sufficient to show that all applicable requirements of a full Level III analysis are met, and that the bubble would not result in any exceedance of significance values specified for a Level II analysis at any receptor for any averaging time specified in an applicable ambient air quality standard).
- V.G.8. Bubbles should not increase emissions of hazardous or toxic air pollutants.
- V.H. Offset Transactions
- V.H.1. The owner or operator of a source at which an emissions reduction has occurred, and the owner or operator of another source who wishes to use the emissions reduction as an offset, may apply for approval of an offset transaction. In such transactions certified emissions reductions may be applied to avoid causing a violation of an increment in an attainment or attainment/maintenance area, or to meet the requirements of Section V.A.3. of Part D of this regulation. A certified emissions reduction may not be used as an offset for the purpose of complying with an existing applicable emissions control regulation, except for Reasonably Available Control Technology.
- V.H.2. The Division shall determine whether to approve an offset transaction in the following cases:
- V.H.2.a. Where the source using the emissions reduction would be allowed to increase emissions by less than one hundred tons per year.



- V.H.2.b. Where the transaction involves volatile organic compounds or oxides of nitrogen emissions.
- V.H.2.c. Where the transaction involves sulfur dioxide, PM10 or carbon monoxide emissions, and all sources involved in the transaction are within two hundred and fifty meters of one another.
- V.H.3. Any proposed offset transaction, other than those referred to in Section V.H.2., shall be treated as a request to the Commission for a state implementation plan revision.
- V.H.4. Sources of PM10 precursors, sulfur dioxide, nitrogen oxide and carbon monoxide must seek offsets within reasonably close proximity. Sources of nitrogen oxide and volatile organic compounds may seek offsets over a greater area. However, for widely dispersed and volatile organic compound trades, a higher offset may be required.
- V.H.5. If the applicant has used his best efforts in seeking the required emission offsets but was unsuccessful, the source may petition for use of some portion of growth allowance. The petition must state the emission increase will not interfere with Reasonably Further Progress and the petitioner is willing to enter into an enforceable program to provide the required emission offset at some future time.
- V.H.6. In the absence of an approved attainment demonstration, banked Emission Reduction Credits from shutdowns or curtailments may be used for offsets only if the criteria stated in Section V.E.5.b. of Part A of this regulation are met.
- V.H.7. In nonattainment areas with approved demonstrations, banked Emission Reduction Credits may be used for offsets in any trade provided the criteria stated in Section V.E.5.a. of Part A of this Regulation are met.
- V.H.8. Interpollutant offsets (other than those offsets discussed above) may be approved by U.S. EPA on a case-by-case basis provided that the applicant demonstrates, on the basis of U.S. EPA-approved methods where possible, that the emissions increases from the new or modified source will not cause or contribute to a violation of an ambient air quality standard. A source's permit application that includes such an interpollutant offset proposal shall not be approved by the Division until there has been an opportunity for public hearing on the proposed emissions trade and until written approval has been received from the U.S. EPA.
- V.I. Netting Transactions
- V.I.1. Netting may exempt modifications of existing major sources from certain pre-construction permit requirements under new source review, so long as there is no significant net emission increase, as net emissions increase is defined in Section II.A.27. of Part D of this regulation. By netting out, the modifications is not considered major and therefore not subject to pre-construction permit requirements for major modifications as follows:
- V.I.1.a. Section VI. of Part D of this regulation, for prevention of significant deterioration;
- V.I.1.b. Visibility analysis; and
- V.I.1.c. Section V.A. of Part D of this regulation, for nonattainment new source review.

- V.I.2. The Division shall grant such an exemption if the emissions reduction qualifies as an Emission Reduction Credit under Regulation Number 3 meets the criteria in Section V.E., for certification, and the difference between the amount of the certified emissions reduction, and the amount of new pollutants to be emitted from the new or modified facility, does not constitute a significant increase of pollutants.
- V.I.3. An increase of pollutants shall be considered significant if it equals or exceeds the amounts specified in the definition of significant in Part D of this regulation.

**VI. Fees**

**VI.A. General**

- VI.A.1. Every person required to obtain a Construction or Operating Permit or to file an Air Pollution Emission Notice shall pay fees as set forth in the following sections. Such fees shall be charged to recover the direct and indirect costs incurred by the Division in processing permit applications, issuing permits, and in conducting a compliance monitoring and enforcement program. Such fees shall apply without regard to whether a permit is issued, denied, withdrawn, or revoked. Fees shall be charged as indicated in Section VI.D. of this part.

**VI.B. Permit Processing Fees**

- VI.B.1. Applicants for a permit shall be assessed total fees that shall be partially determined at the time that the Division makes its decision whether to issue preliminary approval of the permit and partially at the time the Division makes its decision whether to issue final approval.
- VI.B.2. The partial fee collected at the time the Division makes its decision whether to issue preliminary approval of the permit shall include the costs associated with the preliminary engineering evaluation, modeling, and analysis of impact on ambient air quality, notice and publication requirements, and such other costs as are required for the aforementioned activities incurred by the Division up to the time of the decision of whether to issue preliminary approval.
- VI.B.3. The final fee collected at the time the Division makes its decision of whether to issue final approval shall include the balance of the total of all costs associated with enforcement of any terms and conditions of the emission permit, the supervision of compliance testing, notice and publication requirements, and such other costs as are required for the processing, issuance, and administration of the permit.
- VI.B.4. If the Division requires more than thirty hours to process an application, the Division shall inform the owner or operator of the source and provide an estimate of what the actual charges may be, prior to commencing with processing of the application, unless the owner or operator waives this requirement in writing.
- VI.B.5. All permit processing fees assessed must be received within thirty days of the date of receipt of the written request therefore. All fees collected under this regulation shall be made payable to the Colorado Department of Public Health and Environment. Construction permits may be issued prior to the Division's receipt of such fees. Failure to pay the permit processing fees within ninety days of the written request for fees may result in late fees or revocation of the permit. Permits issued in accordance with Part C of this regulation may be issued upon approval by the Division of a fee payment schedule.

VI.C. Annual Emissions Fees

VI.C.1. As used in this Section VI., in accordance with Colorado Revised Statute Section 25-7-114.7, regulated air pollutant means:

VI.C.1.a. A volatile organic compound;

VI.C.1.b. Each hazardous air pollutant;

VI.C.1.c. Each pollutant regulated under Section 111 of the Federal Act (New Source Performance Standards), except GHG;

VI.C.1.d. Each pollutant for which a National Ambient Air Quality Standard has been promulgated, except for carbon monoxide; and

VI.C.1.e. Each pollutant regulated under Section 25-7-109, except GHG of the state Act.

VI.C.1.f. The term regulated air pollutant does not include fugitive dust as defined in Section I.B.21. of this Part A, or any fraction thereof.

VI.C.2. Every owner or operator of an air pollution source required to file an Air Pollutant Emission Notice shall pay a nonrefundable annual emissions fee as set forth in Section VI.D.1. of this Part A.

VI.C.3. All annual emissions fees assessed must be received within sixty days of the date of issuance of the written request therefore. All fees collected under this regulation shall be made payable to the Colorado Department of Public Health and Environment.

VI.C.4. In no event shall an owner or operator of a source pay more than a fee based upon total annual emissions of four thousand tons of each regulated air pollutant per source.

VI.D. Fee Schedule

VI.D.1. Annual emission fees and permit processing fees shall be charged in accordance with and in the amounts and limits specified in the provisions of Colorado Revised Statutes Section 25-7-114.7. Annual emission fees for regulated pollutants shall be \$22.90 per ton. Annual emission fees for hazardous air pollutants shall be \$152.90 per ton. GHG is exempt from the requirement to pay annual emission fees.

VI.D.2. Air Pollutant Emission Notice filing fees shall be charged in accordance with and in the amounts and limits specified in the provisions of Colorado Revised Statutes Section 25-7-114.1.

**VII. Confidential Information or Data Contained in Air Pollutant Emission Notices, Permit Applications, or Reports Submitted Pursuant to Part C, Section V.C.6.**

VII.A. Upon written request to the Division, any person filing an Air Pollutant Emission Notice or permit application, or submitting reports pursuant to Regulation Number 3, Part C, Sections V.C.6. or V.C.7., may request that information contained in such an Air Pollutant Emission Notice, permit application, or report relating to secret processes or methods of manufacture or production be kept confidential. The written request must identify the basis for the claim that the information relates to secret processes or methods of manufacture or production. All information claimed as confidential must be segregated from the rest of the Air Pollutant Emission Notice, permit application, or report when submitted, with each page clearly marked as "Confidential," "Trade Secret," or other similar marking.

- VII.B. The Division will evaluate confidentiality claims based on the written request. The burden of establishing that the information relates to secret processes or methods of manufacture or production is on the claimant. Emission data, as defined in Colorado Revised Statutes Section 25-7-103(11.5), shall not be entitled to confidential treatment notwithstanding this Section VII., or any other law to the contrary. In no event shall an Operating Permit or the compliance certifications submitted pursuant to Section III.B.8. of Part C of this Regulation Number 3 be entitled to confidential treatment. If the Division determines that information requested to be kept confidential is not entitled to confidential treatment, it shall provide written notice of this determination at least three working days prior to making such information available to the public.
- VII.C. A request for confidential treatment of information or data submitted to the Division shall be deemed a limited waiver by the applicant of the time constraints contained in Section III.B. of Part B, or Section IV. of Part C of this regulation. Therefore, any delay in the processing of a permit application resulting from the Division's being required to give notice under Section VII.B., hereof, shall not be considered in determining whether the time constraints set forth in this regulation have been met.

### **VIII. Technical Modeling and Monitoring Requirements**

#### **VIII.A. Air Quality Models**

VIII.A.1. All estimates of ambient concentrations required under this Regulation Number 3 shall be based on the applicable air quality models, databases, and other requirements generally approved by U.S. EPA and specifically approved by the Division. If a non-U.S. EPA approved model, such as a wind tunnel study, is proposed, the nature and requirements of such a model should be outlined to the Division at a pre-application meeting. The application will be deemed incomplete until there has been an opportunity for a public hearing on the proposed model and written approval of the U.S. EPA has been received.

#### **VIII.B. Monitoring**

VIII.B.1. All monitoring must be performed in accordance with U.S. EPA accepted procedures as approved by the Division.

VIII.B.2. An owner or operator may submit a monitoring program for a proposed source or modification to the Division for review. Within sixty days after such submittal, the Division shall:

VIII.B.2.a. Approve the monitoring program; or

VIII.B.2.b. Specify the changes necessary for approval; otherwise, the monitoring program shall be deemed approved.

#### **VIII.C. Stack Heights**

This regulation sets limits for the maximum stack height credit to be used in ambient air quality modeling for the purpose of setting an emission limitation and calculating the air quality impact of a source. It does not limit the actual physical stack height for any source. The following shall not be considered in determining whether an emission limitation is met:

VIII.C.1. Stack height in excess of good engineering practice; or

VIII.C.2. Any other dispersion technique except that the provisions of this Section VIII.C. shall not apply to stack heights in existence or dispersion techniques implemented before December 31, 1970. Sources that were constructed, reconstructed, or for which major modifications were carried out after December 31, 1970, and that are emitting pollutants from such stacks, or using such dispersion techniques, shall be subject to the provisions of this section.

VIII.D. Definitions as used in Section VIII.C.

VIII.D.1. Stack in existence means that the owner or operator had:

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

VIII.D.1.b. Entered into binding agreements or contractual obligations that could not be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.

VIII.D.2. Dispersion Technique means any technique that attempts to affect the concentration of a pollutant in the ambient air by using that portion of a stack that exceeds good engineering practice stack height, varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant, or by increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise. The preceding sentence does not include:

VIII.D.2.a. The reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

VIII.D.2.b. The merging of exhaust gas streams where:

VIII.D.2.b.(i) The source owner or operator demonstrates that the facility was originally designed and constructed with such merged gas streams;

VIII.D.2.b.(ii) After July 8, 1983, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of dispersion techniques shall apply only to the emission limitation for the pollutant affected by such change in operation; or

VIII.D.2.b.(iii) Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emissions limitation or, in the event that no emission limitation was in existence prior to the merging, the reviewing agency shall presume that merging was significantly motivated by intent to gain emissions credit for greater dispersion.

Absent a demonstration by the source owner or operator that merging was not significantly motivated by such intent, the reviewing agency shall deny credit for the effects of such merging in calculating the allowable emissions for the source;

- VIII.D.2.c. Smoke management in agricultural or silvicultural prescribed burning programs;
  - VIII.D.2.d. Episodic restrictions on residential wood burning and open burning; or
  - VIII.D.2.e. Techniques that increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed five thousand tons per year.
- VIII.D.3. Good Engineering Practice Stack Height means the greater of:
- VIII.D.3.a. 65 meters; or
  - VIII.D.3.b. For stacks in existence on January 12, 1979 and for which the owner or operator had obtained all applicable pre-construction permits or approvals required,  $H_g = 2.5H$ , provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation; and
  - VIII.D.3.c. For all other stacks,  $H_g = H + 1.5L$  where:
    - VIII.D.3.c.(i)  $H_g$  = good engineering practice stack height measured from the ground level elevation at the base of the stack;
    - VIII.D.3.c.(ii)  $H$  = height of nearby structure(s) measured from the ground level elevation at the base of the stack;
    - VIII.D.3.c.(iii)  $L$  = lesser dimension (height or projected width) of nearby structure(s) provided that the reviewing agency may require the use of a field study or fluid model to verify Good Engineering Practice stack height for the source; or
  - VIII.D.3.d. The height demonstrated by a fluid model or a field study approved by the reviewing agency, which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, structures, or terrain obstacles.
- VIII.D.4. Nearby as applied to good engineering practice is:
- VIII.D.4.a. For purposes of applying the formulae provided in Sections VIII.D.3.b. and VIII.D.3.c. in the definition of good engineering practice stack height means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 kilometers (1/2 mile), and
  - VIII.D.4.b. For conducting demonstrations in Section VIII.D.3. in the definition of good engineering practice means not greater than 0.8 kilometers (1/2 mile), except that the portion of a terrain feature may be considered to be nearby that falls within a distance of up to ten times the maximum height of the feature, not to exceed two miles if such feature achieves a height 0.8 kilometers from the stack that is at least forty percent of the good engineering practice stack height determine by the formula or twenty-six meters, whichever is greater.

VIII.D.5. Excessive concentrations for the purpose of determining good engineering practice, stack height in a fluid model or field study, means:

VIII.D.5.a. For sources seeking credit for stack height exceeding that established by the formulae, a maximum ground level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features that individually is at least forty percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and that contributes to a total concentration due to emissions from all sources that is greater than an ambient air quality standard. For sources subject to the prevention of significant deterioration program, an excessive concentration alternatively means a maximum ground level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features that individually is at least forty percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations shall be prescribed by the new source performance standard that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the Division, an alternative emission rate shall be established in consultation with the source owner or operator;

VIII.D.5.b. For sources seeking credit after October 1, 1983 for increases in existing stack heights up to the heights established by the formulae, either:

VIII.D.5.b.(i) A maximum ground level concentration due in whole or part to downwash, wakes or eddy effects as provided in Section VIII.D.5.a. above, except that the emission rate specified by any applicable state implementation plan (or, in the absence of such a limit, the actual emission rate) shall be used; or

VIII.D.5.b.(ii) The actual presence of a local nuisance caused by the existing stack, as determined by the Division; and

VIII.D.5.b.(iii) For sources seeking credit after January 12, 1979 for a stack height determined using the formula, where the Division requires the use of a field study or fluid model to verify good engineering practice stack height; for sources seeking stack height credit after November 9, 1984 based on the aerodynamic influence of cooling towers; and for sources seeking credit after December 31, 1970 based on the aerodynamic influence of structures not adequately represented by the formulae: a maximum ground level concentration due in whole or part to downwash, wakes or eddy effects that is at least forty percent in excess of the maximum concentration experienced in the absence of such downwash, wakes or eddy effects.

**APPENDIX A**

**De Minimis Level For Non-Criteria Reportable Pollutants**

An Air Pollutant Emission Notice must be filed for each emission point (individual or grouped) that has uncontrolled actual emissions equal to or greater than 250 pounds per year of any non-criteria reportable pollutant listed in Appendix B. As provided in Section II.C.4., sources submitting revised Air Pollutant Emission Notices due to Sections II.C.1.a., II.C.1.b., or II.C.1.e. must report actual annual emissions. Actual annual emissions for sources utilizing emission control equipment or procedures represent controlled actual annual emissions.

If a non-criteria reportable pollutant is not listed in Appendix B, it does not have to be reported unless it is included in a chemical compound group.

**Definitions**

Point - an individual emission point or a group of individual emission points reported on one Air Pollutant Emission Notice as provided for in Part A, Section II.B.4.

**APPENDIX B**

**Non-criteria Reportable Pollutants (Sorted by CAS Number)**

Note: HAP means federal, or federal and state hazardous air pollutant

HAPs means state-only hazardous air pollutant

	<b>CAS</b>		<b>Toxics</b>
HAP	-		Lindane (all isomers of hexachlorocyclohexane)
	-		Thallium compounds
HAPs	-		Nitrilotriacetic acid, Ca-, Na-, K salts
	-		Ozone depleting compounds (CFC, etc.)
HAP	0		Antimony compounds
HAP	0		Arsenic compounds
HAP	0		Beryllium compounds
HAP	0		Cadmium compounds
HAP	0		Chromium compounds (incl. 6+ compounds, etc.)
HAP	0		Cobalt compounds (as cobalt metal dust and fumes)
HAP	0		Coke Oven Emissions
HAP	0		Cyanide compounds
HAP	0		Fine mineral fibers
HAP	0		Glycol ethers
HAP	0		Lead compounds (except elemental lead)
HAP	0		Manganese compounds
HAP	0		Mercury compounds
HAP	0		Nickel compounds (incl. nickel subsulfide)
HAP	0		Polycyclic Organic Matter
HAP	0		Radionuclides (including radon)
HAP	0		Selenium compounds
HAP	50000		Formaldehyde
HAP	51285		2,4-Dinitrophenol
HAP	51796		Ethyl carbamate (Urethane)
HAP	53963		2-Acetylaminofluorene



	CAS	Toxics
	54115	Nicotine
	54626	Aminopterin
HAPs	55185	N-Nitrosodiethylamine
	55914	Isofluorophate
HAPs	55981	1,4-Butanediol dimethanesulphonate
HAP	56235	Carbon tetrachloride
HAP	56382	Parathion
	56724	Coumaphos
HAP	57147	1,1-Dimethyl hydrazine
	57249	Strychnine
HAP	57578	Propiolactone, beta
HAP	57749	Chlordane
HAP	59892	N-Nitrosomorpholine
HAP	60117	Dimethyl aminoazobenzene
HAP	60344	Methyl hydrazine
HAP	60355	Acetamide
	60413	Strychnine sulfate
	60515	Dimethoate
HAPs	60571	Dieldrin
HAP	62533	Aniline
HAP	62737	Dichlorvos
	62748	Sodium fluoroacetate
HAP	62759	N-Nitrosodimethylamine
HAP	63252	Carbaryl
	64006	Phenol,3-(1-methylethyl)-methylcarbamate
HAP	64675	Diethyl sulfate
	66819	Cyclohexamide
HAP	67561	Methanol (Methyl alcohol)
HAP	67663	Chloroform (Trichloromethane)
HAP	67721	Hexachloroethane
HAP	68122	Dimethylformamide
HAP	71432	Benzene
HAP	71556	1,1,1-Trichloroethane (Methyl chloroform)
	72208	Endrin
HAP	72435	Methoxychlor
HAP	74839	Methyl bromide (Bromomethane)
HAP	74873	Methyl chloride (Chloromethane)
HAP	74884	Methyl iodide (Iodomethane)
	74931	Methyl mercaptan (Methanethiol)
HAP	75003	Ethyl chloride (Chloroethane)
HAP	75014	Vinyl chloride
HAP	75058	Acetonitrile
HAP	75070	Acetaldehyde
HAP	75092	Methylene chloride (Dichloromethane)
HAP	75150	Carbon disulfide
	75183	Dimethyl sulfide (Methyl sulfide)
HAP	75218	Ethylene oxide
HAP	75252	Bromoform
HAP	75343	Ethylidene dichloride (1,1-Dichloroethane)
HAP	75354	1,1-Dichloroethylene (Vinylidene chloride)
HAP	75445	Phosgene
HAP	75558	1,2-Propylenimine (2-Methyl aziridine)

	CAS	Toxics
HAP	75569	Propylene oxide
HAP	76448	Heptachlor
HAP	77474	Hexachlorocyclopentadiene
HAP	77781	Dimethyl sulfate
	77816	Tabun
	78342	Dioxathion
	78535	Amiton
HAP	78591	Isophorone
HAP	78875	Propylene dichloride (1,2-Dichloropropane)
	78944	Methyl vinyl ketone (3-butene-2-one)
HAPs	78988	Methylglyoxal
HAP	79005	1,1,2-Trichloroethane
HAP	79016	Trichloroethylene (TCE)
HAP	79061	Acrylamide
HAP	79107	Acrylic acid
HAP	79118	Chloroacetic acid
	79196	Thiosemicarbizide
	79210	Peracetic acid
	79221	Methyl chloroformate
HAP	79345	1,1,2,2-Tetrachloroethane
HAP	79447	Dimethyl carbamoyl chloride
HAP	79469	2-Nitropropane
HAP	80626	Methyl methacrylate
	81812	Warfarin
	82666	Diphacinone
HAP	82688	Pentachloronitrobenzene (Quintobenzene)
HAP	84742	Dibutyl phthalate
HAP	85449	Phthalic anhydride
	86500	Methyl azinphos
	86884	ANTU (alpha-naphthylthiourea)
HAP	87683	Hexachlorobutadiene
HAP	87865	Pentachlorophenol
	88051	Aniline,2,4,6-Trimethyl
HAP	88062	2,4,6-Trichlorophenol
HAP	90040	o-Anisidine
	91087	2,6-Toluene diisocyanate
HAP	91203	Naphthalene
HAP	91225	Quinoline
HAP	91941	3,3-Dichlorobenzidene
HAP	92524	Biphenyl
HAP	92671	4-Aminobiphenyl
HAP	92875	Benzidine (p-Diamino diphenyl)
HAP	92933	4-Nitrobiphenyl
HAP	94757	2,4-D, salts and esters (2,4-Dichlorophenoxyacetic acid)
HAP	95476	o-Xylene
HAP	95487	o-Cresol
HAP	95534	o-Toluidine
HAP	95807	2,4-Toluene diamine
HAP	95954	2,4,5-Trichlorophenol
HAP	96093	Styrene oxide
HAP	96128	1,2-Dibromo-3-chloropropane
HAP	96457	Ethylene thiourea

	CAS	Toxics
HAP	98077	Benzotrichloride
HAP	98828	Cumene
HAP	98862	Acetophenone
	98873	Benzal chloride [(Dichloromethyl)benzene; benzylidenechloride]
HAP	98953	Nitrobenzene
	99989	Dimethyl-p-phenylenediamine
HAP	100027	4-Nitrophenol
HAP	100414	Ethyl benzene (Phenylethane)
HAP	100425	Styrene
HAP	100447	Benzyl chloride, (Chloromethyl)benzene
HAP	101144	4,4-Methylene bis (2-chloroaniline)
HAP	101688	Methylene diphenyl diisocyanate (MDI)
HAP	101779	4,4-Methylenedianiline
HAP	106423	p-Xylene
HAP	106445	p-Cresol
HAP	106467	1,4-Dichlorobenzene
HAP	106503	p-Phenylenediamine
HAP	106514	Quinone
HAP	106887	1,2-Epoxybutane
HAP	106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
HAP	106934	Ethylene dibromide (1,2-Dibromoethane)
	106967	Propargyl bromide
HAP	106990	1,3-Butadiene
HAP	107028	Acrolein
HAP	107051	Allyl chloride
HAP	107062	Ethylene dichloride (1,2-Dichloroethane)
	107073	Chloroethanol
HAP	107131	Acrylonitrile
	107153	Ethylene diamine
	107186	Allyl alcohol
HAP	107211	Ethylene glycol
HAP	107302	Chloromethyl methyl ether
	107448	Sarin
	107493	TEPP (Tetraethyldithiopyrophosphate)
HAP	108054	Vinyl acetate
HAP	108101	Methyl isobutyl ketone (MIBK) (Hexone)
	108236	Isopropyl chlorformate
HAP	108316	Maleic anhydride
HAP	108383	m-Xylene
HAP	108394	m-Cresol
HAP	108883	Toluene
HAP	108907	Chlorobenzene
	108918	Cyclohexylamine
HAP	108952	Phenol
	108985	Thiophenol (Phenyl mercaptan)
	110009	Furan
HAP	110543	Hexane
	110576	Trans 1,4-dichlorobutene
	110894	Piperidine
HAP	111422	Diethanolamine
HAP	111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)
HAP	114261	Propoxur (Baygon)

	CAS	Toxics
	115264	Dimefox
HAPs	115286	Chlorendic acid
	115297	Endosulfan
	115902	Fensulfothion
	116063	Aldicarb (Temik)
HAPs	117102	Chrysazin (Dorbane)
HAP	117817	Bis(2-ethylhexyl) phthalate (DEHP) (Diocetyl phthalate)
HAP	118741	Hexachlorobenzene
	119380	Isopropylmethylpyrazolyl dimethylcarbamate (Isolan)
HAP	119904	3,3-Dimethoxybenzidine
HAP	119937	3,3'-Dimethyl benzidine
HAP	120809	Catechol
HAP	120821	1,2,4-Trichlorobenzene
HAP	121142	2,4-Dinitrotoluene
HAP	121448	Triethylamine
HAP	121697	N,N-Diethyl aniline (N,N-Dimethylaniline)
	122145	Fenitrothion
HAPs	122601	Phenyl glyceryl ether (3 phenoxy 1,2 propanediol)
HAP	122667	1,2-Diphenylhydrazine
HAP	123319	Hydroquinone
HAP	123386	Propionaldehyde
	123739	Crotonaldehyde (E)
HAP	123911	1,4-Dioxane (1,4-Diethyleneoxide)
	126987	Methacrylonitrile
HAP	126998	Chloroprene (2-Chloro-1,3-butadiene)
HAP	127184	Perchloroethylene (Tetrachloroethylene)
	129066	Warfarin sodium
HAP	131113	Dimethyl phthalate
	131522	Sodium pentachlorophenate
HAPs	132274	2-Biphenylol sodium salt
HAP	132649	Dibenzofurans
HAP	133062	Captan
HAP	133904	Chloramben (3-amino-2,5-dichloro benzoic acid)
	140761	Pyridine, 2-methyl-5-vinyl
HAP	140885	Ethyl acrylate
	141662	Dicrotophos
	144490	Fluoroacetic acid
	149746	Dichloromethylphenylsilane
HAP	151564	Ethylene imine (Aziridine)
	152169	Diphosphoramidate, octamethyl
HAP	156627	Calcium cyanamide
	297789	Isobenzan
	297972	Thionazin (O,O-Diethyl-O-(2-pyrazinyl)phosphorothioate)
	298000	Parathion-methyl
	298022	Phorate
	298044	Disulfoton
HAP	302012	Hydrazine
HAPs	309002	Aldrin
	315184	Mexacarbate
HAP	334883	Diazomethane
	359068	Fluoroacetyl chloride
	371620	Ethylene fluorohydrin

	CAS	Toxics
HAP	463581	Carbonyl sulfide
	465736	Isodrin
	470906	Chlorfenvinfos
	505602	Mustard gas (Dichlorodiethyl sulfide)
	509148	Tetranitromethane
HAP	510156	Chlorobenzilate (ethyl-4,4'-dichlorobenzilate)
HAP	532274	2-Chloroacetophenone
	534076	Bis(chloromethyl)ketone
HAP	534521	4,6-Dinitro o-cresol, and salts
	535897	Crimidine
	538078	Ethyl bis (2-chloroethyl)amine
HAP	540841	2,2,4-Trimethylpentane
	540885	Tertiary Butyl Acetate
	541537	Dithiobiuret
HAP	542756	1,3-Dichloropropene
HAP	542881	Bischloromethyl ether
	542905	Ethylthiocyanate
	555771	Tris(2-chloroethyl)amine
	556616	Methyl isothiocyanate
	563122	Ethion
HAP	584849	2,4-Toluene diisocyanate
HAP	593602	Vinyl bromide
HAPs	615532	N-nitroso-N-methylurethane
HAP	624839	Methyl isocyanate
	624920	Methyl disulfide
	625558	Isopropyl formate
	640197	Fluoroacetamide
	644644	Dimetilan
	675149	Cyanuric fluoride
HAP	680319	Hexamethylphosphoramide
HAP	684935	N-nitroso-N-methylurea
	732116	Phosmet
	786196	Carbophenothion
	814686	Acrylyl chloride
HAP	822060	Hexamethylene-1,6-diisocyanate
	919868	Demeton-s-methyl
HAPs	924163	N-Nitroso-di-n-butylamine
	944229	Fonofos
	947024	Phosfolan
	950107	Mephosfolan
	950378	Methidathion
	991424	Norbormide
HAP	1120714	1,3-Propane sultone
	1122607	Nitrocyclohexane
	1314847	Zinc phosphide
HAP	1319773	Cresylic acid/Cresols
HAP	1330207	Xylene (and mixed isomers)
HAP	1332214	Asbestos
HAP	1336363	Polychlorinated biphenyls (PCBs) (Aroclors)
	1397940	Antimycin A
HAPs	1402682	Aflatoxins
	1420071	Dinoterb

	CAS	Toxics
	1464535	Diepoxybutane
	1563662	Carbofuran
HAP	1582098	Trifluralin
HAP	1634044	MTBE (Methyl tertiary butyl ether)
	1642542	Diethylchlorophosphate
HAP	1746016	2,3,7,8-TCDD (Dioxin)
	1910425	Paraquat
	1982474	Chloroxuron
	2001958	Valinomycin
	2032657	Methiocarb
	2074502	Paraquat methosulfate
HAPs	2475458	Disperse Blue 1
	2497076	Oxydisulfoton
	2524030	Dimethylphosphorochloridothioate
	2540821	Formothion
	2631370	Promecarb
	2642719	Ethyl azinphos
HAPs	2646175	CI Solvent Orange 2
	2778043	Endothion
HAP	3547044	DDE (Dichlorodiphenyldichloroethylene)
	3689245	Sulfotep
	3691358	Chlorophacinone
	3734972	Amiton oxalate
	3735237	Methyl phenkapton
	3878191	Fuberidazole
	4098719	Isophorone diisocyanate
	4170303	Crotonaldehyde
	4301502	Fluenuetil
	4835114	Hexamethylenediamine, N,N-dibutyl
	5836293	Coumatetralyl
	7446119	Sulfur trioxide
HAP	7550450	Titanium tetrachloride
HAPs	7644410	1,4-Dichloro-2-butene
HAP	7647010	Hydrochloric acid (Hydrogen chloride)
HAP	7664393	Hydrogen fluoride (Hydrofluoric acid)
	7664417	Ammonia
	7664939	Sulfuric acid
	7697372	Nitric acid
HAP	7723140	Phosphorous
	7726956	Bromine
	7782414	Fluorine
HAP	7782505	Chlorine
	7783064	Hydrogen sulfide
	7786347	Mevinphos
HAP	7803512	Phosphine
HAP	8001352	Toxaphene (Camphechlor)
	8065483	Demeton
	10265926	Methamidophos
	10294345	Boron trichloride
	10311849	Dialifor
	13071799	Terbufos
	13171216	Phosphamidon

	CAS	Toxics
	13194484	Ethoprophos (Ethoprop)
	13494809	Tellurium
	16752775	Methomyl
	17702577	Formparanate
	19287457	Diborane
	20859738	Aluminum phosphide
	21548323	Fosthietan
	21609905	Leptophos
	21923239	Chlorthiophos
	22224926	Fenaminophos (Fenamiphos)
	23135220	Oxamyl
	23422539	Formotamate hydrochloride
	23505411	Pirimifos-ethyl
	24934916	Chlormephos
	28347139	Xylylene dichloride
	28772567	Bromodiolone
	53558251	Pyriminil
HAPs	60153493	3-(N-Nitrosomethylamine) (Propionitrile)
HAPs	64091914	Ketone, 3-pyridyl-3-(N-methyl-N-nitrosoamino) propyl
HAPs	108171262	Chlorinated paraffins (C12, 60% chlorine)

**PART B CONCERNING CONSTRUCTION PERMITS**

**I. Applicability**

I.A. The provisions of this Part B shall apply statewide. All sources that did not commence construction or operation prior to February 1, 1972, are required to have a construction permit except as specified in Section II.

**II. General Requirements For Construction Permits**

II.A. General Considerations

II.A.1. Except where specifically authorized by the terms of this Regulation Number 3, no person shall construct, modify, or operate any stationary source or commence the conduct of any such activity without first obtaining or having a valid construction permit from the Division.

II.A.2. Any permit that has been issued pursuant to a prior regulation of the Commission, with respect to a project or the operation thereof, shall continue in full force and effect for the purpose for that it was originally issued, unless this current regulation no longer requires such permit, in that case the permit can be rescinded upon request of the owner or operator of the permitted source.

II.A.3. Any orders or decisions of the Division shall be final upon issuance, according to Section III.F.3. of this Part B.

- II.A.4. Construction permits for criteria pollutants, GHG and hazardous air pollutants shall be issued based on the production/process rate requested in the Air Pollutant Emission Notice submitted with the permit application or as requested in the application. The emission rate associated with the requested production/process rate shall be a permit condition. For permits to limit the potential to emit criteria, pollutants, GHG or hazardous air pollutants the Division may modify the production/process rate, hours of operation or other requested permit conditions in order to create state-only or federally and practically enforceable permit conditions; provided, however, that the applicant may decline to accept such modifications and elect instead to forego limits on its potential to emit or pursues any right of appeal or other available alternative. For details regarding permits to limit the potential to emit hazardous air pollutants see Regulation Number 8, Part E, Section IV.
- II.A.5. Construction permits are required for hazardous air pollutants if:
- II.A.5.a. The source is subject to Colorado Maximum Achievable Control Technology or Generally Available Control Technology.
- II.A.6. Owners or operators of sources that have valid operating permits in accordance with Part C of this regulation may construct or modify such source without obtaining a construction permit prior to construction or modification, provided the construction or modification qualifies for a minor permit modification or for operational flexibility, and the applicable provisions as set forth in Sections X., XI., or XII. of Part C are met. In addition, all applicable requirements that are related to construction permit approval and that are set forth in Sections III.D.1.a. through III.D.1.g. of this Part B remain in effect.
- II.A.7. A source that is voluntarily applying for a permit to create state-only or federally enforceable permit conditions, as appropriate, to limit the potential to emit criteria, pollutants, GHG or hazardous air pollutants may request to obtain such limits in a construction permit.

## II.B. Transfer or Assignment of Ownership

If transfer or assignment of ownership or operation of an air pollution emission source permitted pursuant to this Part B is completed, the new owner or operator shall apply to the Division on Division supplied administrative permit amendment forms for reissuance of the existing permit within 30 days of completing acquisition of the source. The responsibility for compliance with the permit shall transfer to the new owner or operator upon submittal of completed forms. Section III. of Part A of this regulation governs the administrative permit amendment procedures required for transfer or assignment of ownership.

In accordance with the provisions of this section, the permit shall be reissued upon completion of the transfer or assignment if the applicant certifies that no change is contemplated that might constitute a new or modified air pollution source. In no event shall the new owner or operator of a source that was subject to the requirements of these regulations prior to the transfer or assignment be relieved of the obligation to comply with such requirements by reason of a transfer. Such transfers are subject to all applicable permit processing and inspection fees.

If a company is changing its name only, the owner or operator shall apply to the Division, on Division supplied administrative permit amendment forms, for reissuance of the existing permit. Section III. of Part A, governs the administrative permit amendment procedures required for identifying a change in name. If all other procedures and information as stated in the last submitted Air Pollutant Emission Notice(s) remains unchanged, only one Air Pollutant Emission Notice need be submitted for each stationary source, indicating the name change.



No administrative permit amendment for transfer or assignment of ownership of a source shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage and liability between the current and new permittee is received by the Division.

#### II.C. Portable Sources

A permitted portable source (e.g., asphalt plants, crushers, etc.) shall have its permit number permanently and prominently displayed on each major component of equipment that is a part of that portable source.

#### II.D. Exemption from Construction Permit Requirements

Permit exemptions taken under this section do not affect the applicability of any State or Federal regulations that are otherwise applicable to the source. An applicant may not omit any information regarding APEN or permit exempt emission units in any application if such information is needed to determine the applicability of Title V (Part C of this Regulation Number 3), Prevention of Significant Deterioration (Section VI. of Part D of this Regulation Number 3), or Nonattainment New Source Review (Section V. of Part D of this Regulation Number 3).

II.D.1. The following sources are exempt because by themselves, or cumulatively as a category, they are deemed to have a negligible impact on air quality:

II.D.1.a. Those sources exempted from the filing of Air Pollutant Emission Notices in Section II.D. of Part A, of this regulation.

II.D.1.b. Containers, reservoirs, or tanks used exclusively for dipping operations for coating objects with oils, waxes, greases, or natural or synthetic resins containing no organic solvents.

II.D.1.c. Stationary Internal Combustion Engines that:

II.D.1.c.(i) Are power portable drilling rigs; or

II.D.1.c.(ii) Are emergency power generators that operate no more than two hundred and fifty hours per year; or

II.D.1.c.(iii) Have uncontrolled actual emissions less than five tons per year or manufacturer's site-rated horsepower of less than fifty.

II.D.1.d. The collection, transmission, liquid treatment, and solids treatment processes at domestic wastewater treatment works, or treatment facilities that treat only domestic type wastewater, except for combustion processes.

II.D.1.e. Each individual piece of fuel burning equipment, other than smokehouse generators, that uses gaseous fuel, and that has a design rate less than or equal to ten million British thermal units per hour.

II.D.1.f. Gasoline stations located in ozone attainment areas, except for stations located in the Denver 1-hour ozone attainment/maintenance area.

II.D.1.g. Surface mining activities that mine seventy thousand tons or fewer of product material per year. A fugitive dust control plan is required for such sources. Crushers, screens and other processing equipment activities are not included in this exemption.

- II.D.1.h. Composting piles, however, all odor requirements of Regulation Number 2 must be met.
  - II.D.1.i. Commercial and product quality control laboratory equipment.
  - II.D.1.j. Fires and equipment used for noncommercial cooking of food for human consumption and for cooking of food for human consumption at commercial food service establishments.
  - II.D.1.k. Petroleum industry flares, not associated with refineries, combusting natural gas containing no hydrogen sulfide except in trace (less than five hundred parts per million weight) amounts, approved by the Colorado Oil and Gas Conservation commission and having uncontrolled emissions of any pollutant of less than five tons per year.
  - II.D.1.l. Crude oil truck loading equipment at exploration and production sites where the loading rate does not exceed 10,000 gallons of crude oil per day averaged on an annual basis. Condensate truck loading equipment at exploration and production sites that splash fill less than 6750 barrels of condensate per year or that submerge fill less than 16308 barrels of condensate per year.
  - II.D.1.m. Exemption Repealed (January 30, 2020).
  - II.D.1.n. Exemption Repealed.
  - II.D.2. Facilities located in a nonattainment area for any criteria pollutant for which the area is nonattainment; with total facility uncontrolled actual emissions (potential emissions at actual operating hours) that are less than the following amounts:
    - II.D.2.a. Two tons per year volatile organic compounds.
    - II.D.2.b. One ton per year PM10.
    - II.D.2.c. One ton per year PM2.5.
    - II.D.2.d. Five tons per year total suspended particulate.
    - II.D.2.e. Five tons per year carbon monoxide.
    - II.D.2.f. Five tons per year sulfur dioxide.
    - II.D.2.g. Five tons per year nitrogen oxides.
    - II.D.2.h. Two hundred pounds per year lead.
- For purposes of calculating total facility uncontrolled actual emissions, only those individual (or grouped) emission points requiring Air Pollutant Emission Notices are to be considered.
- II.D.3. Facilities located in attainment or attainment/maintenance areas for all criteria pollutants with total facility uncontrolled actual emissions less (potential emissions at actual operating hours) than the following amounts:
    - II.D.3.a. Five tons per year volatile organic compounds.
    - II.D.3.b. Five tons per year PM10.

- II.D.3.c. Five tons per year PM2.5.
- II.D.3.d. Ten tons per year total suspended particulate.
- II.D.3.e. Ten tons per year carbon monoxide.
- II.D.3.f. Ten tons per year sulfur dioxide.
- II.D.3.g. Ten tons per year nitrogen oxides.
- II.D.3.h. Two hundred pounds per year lead.

For purposes of calculating total facility uncontrolled actual emissions, only those individual (or grouped) emission points requiring Air Pollutant Emission Notices are to be considered.

- II.D.4. Facilities that emit any other criteria pollutant that is not listed in Sections II.D.2. and II.D.3., above (fluorides, sulfuric acid mist, hydrogen sulfide, total reduced sulfur, reduced sulfur compounds, and municipal waste combustor emissions), with total facility uncontrolled actual emissions of such pollutants that are less than two tons per year.
- III.D.5. When a facility that was previously exempt from permit requirements exceeds one of the permit de minimis levels stated in Sections II.D.2. through II.D.4., above, due to the addition of new emission points, the Division will issue either a facility-wide permit for all non-grandfathered emission units above Air Pollutant Emission Notice de minimis levels, or individual emission permits for those emission units.
- II.D.6. All incinerators require a permit as stated in Regulation Number1, Section III.B.1.
- II.D.7. Exemption Repealed (January 30, 2020).
- II.D.8. Any person may request the Division to add source categories to the permit exemption list, in accordance with the procedures set forth in Section II.D.4. of Part A of this regulation.
- II.D.9. Sources with a valid operating permit are not required to obtain a construction permit prior to commencing construction or modification, as set forth in Section II.A.6. of this Part B.

### **III. Construction Permit Review Procedures**

#### **III.A. Option for Pre Application Meeting**

Prior to submitting an application for a permit, an applicant may request and, if so requested, the Division shall grant, a pre-application meeting with the applicant. At such meeting, the Division shall advise the applicant of the applicable permit requirements, including the information, plans, specifications and the data required to be furnished with the permit application.

#### **III.B. Application for a Construction Permit**

- III.B.1. An application for a Construction Permit shall be prepared on forms currently supplied by the Division.
- III.B.2. Applications for Construction Permits, and modifications to Construction Permits, must include an Air Pollutant Emission Notice or alternate forms required by the Division.

- III.B.3. Applications shall be signed by a person legally authorized to act on behalf of the applicant. The applicant shall furnish all information and data required by the Division to evaluate the permit application and to make its preliminary analysis in accordance with Section III.B.5. of this part.
- III.B.4. An application for a Construction Permit will not be deemed to be complete until all information and data required to evaluate the application have been submitted to the Division. Within sixty calendar days after the receipt of an application or any supplemental information timely requested by the Division, the Division will give notice to the applicant if and in what respect the application is incomplete. If the Division fails to notify an applicant that the application is incomplete within sixty calendar days of receipt of the original application or receipt of the requested supplemental information, the application shall be deemed to have been complete as of the day of receipt by the Division of the application or the last submitted supplemental information, whichever is later.
- III.B.5. Except for applications for sources subject to the requirements of Section VI. of Part D of this regulation (Prevention of Significant Deterioration), the Division shall prepare its preliminary analysis within sixty calendar days after receipt of a complete permit application. The preliminary analysis allows the Division to determine whether the new source will, at date of commencement of operation, comply with:
- III.B.5.a. All applicable emission control regulations,
  - III.B.5.b. Applicable regulations for the control of hazardous pollutants,
  - III.B.5.c. Requirements of the nonattainment and attainment programs (Sections V. and VI. of Part D), and
  - III.B.5.d. Any applicable ambient air quality standards and all applicable regulations.

The preliminary analysis shall indicate what impact, if any, the new source will have (as of the projected date of commencement of operation) on all areas (attainment, attainment/maintenance, nonattainment, unclassifiable), within the probable area of influence of the proposed source. If so requested on the permit application form, a copy of this preliminary analysis shall be forwarded to the applicant postmarked no later than fifteen calendar days after the completion of the preliminary analysis.

When the preliminary analysis includes modeling, the model used shall be an appropriate one given the topography, meteorology and other characteristics of the region that the source will impact. Use of any non-guideline model requires U.S. EPA approval under Section VIII.A. of Part A of this regulation.

### III.C. Public Comment Requirements

III.C.1. The following sources, unless exempted in Section III.C.2., below, are subject to public comment:

- III.C.1.a. Sources with projected controlled annual emissions of any pollutant for which an ambient air quality standard has been designated, where such emissions will be greater than twenty five tons per year if the source is located in a nonattainment area, fifty tons per year if the source is located in an attainment or attainment/maintenance area, or two hundred pounds per year of lead (for any area of the state).

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- III.C.1.b. Sources for which preliminary analysis indicates a possible violation of Commission Regulation Number 2 (odor emissions).
- III.C.1.c. For hazardous air pollutants if:
- III.C.1.c.(i) The source is subject to Federal National Emission Standards for Hazardous Air Pollutants,
- III.C.1.c.(ii) The source is subject to Federal or Colorado Maximum Achievable Control Technology or Generally Available Control Technology standards, or
- III.C.1.c.(iii) The source is voluntarily applying for permit conditions to limit the source's potential to emit hazardous air pollutants.
- III.C.1.d. Sources subject to Sections V. or VI. of Part D of this regulation that are attempting to obtain a federally enforceable limit on the potential to emit of the source in order to avoid other requirements.
- III.C.1.e. Sources submitting an application for a BART determination or BART alternative pursuant to Regulation Number 23.
- III.C.2. The following sources are generally not required to be subject to public comment, unless the Division determines that public comment is warranted pursuant to Section III.C.3. below:
- III.C.2.a. Sources of six months duration or less, except that public comment shall be required for all major sources of hazardous pollutants without regard to the duration of the operation of such source unless specifically exempted below.
- III.C.2.b. Demolition projects, even if asbestos materials are present, provided that all the requirements of Regulation Number 8 are followed for any and all materials suspected of containing asbestos.
- III.C.2.c. Construction or modification of sources in accordance with the minor modification and operational flexibility provisions of Sections X., XI., and XII. of Part C of this regulation are subject to the public participation requirements of Part C.
- III.C.3. Sources for which a permit is required, but for which public comment is not required by Sections III.C.1., III.C.2.a., or III.C.2.b., above, are exempt from public comment requirements unless the Division determines that public comment is warranted. In making such determinations, the Division shall take into consideration the duration of the operation, its location, the nature and projected amount of emissions, anticipated public concern, and other relevant factors.

III.C.4. When public comment is required by Section III.C.1., or when the Division determines, pursuant to Section III.C.3., that an application warrants public comment, the Division shall, within fifteen calendar days after the preparation of the preliminary analysis, cause public notice of the application to be published in a newspaper of general distribution in the area in which the proposed project or activity is or will be located, or by such other means necessary to assure notice to the affected public, that may include posting of such notice on the publicly accessible portion of the Division's web site. The Division will provide a copy of the application, the preliminary analysis, and the draft permit, or information about how to access digital versions of these documents on a publically accessible website, to the county clerk for each county in which the source is, or will be located. Documents provided directly to the county clerk may be in digital or hard copy format. The Division will send written or electronic notice to persons requesting notice of permit applications that are subject to public notice requirements. Electronic notice may include email notification to persons on an email list developed and maintained by the Division. For sources applying for a permit to limit the potential to emit criteria pollutants or federal hazardous air pollutants, the Division will send a copy of the public notice and the draft permit to the U.S. EPA Administrator for comment. The Division will also send a copy of the final permit approval to the U.S. EPA Administrator for comment. The newspaper notice or other such means of notice shall contain all of the following information in Sections III.C.4.a. through III.C.4.e., below:

III.C.4.a. The location and nature of the proposed project or activity for which a construction permit application has been filed.

III.C.4.b. The locations where the application and preliminary analysis are available for public inspection.

III.C.4.c. That comments concerning the ability of the proposed project or activity to comply with the applicable standards and regulations of the Commission are solicited from any interested person.

III.C.4.d. That the Division will receive and consider public comments for thirty calendar days after such publication.

III.C.4.e. The Division's preliminary determination of approval, conditional approval, or disapproval of the application.

### III.D. Construction Permit Review Requirements

III.D.1. Requirements applicable to all construction permit applications (except that processing timeframes of combined construction/operating applications shall be as set forth in Part C, Section IV., of this Regulation Number 3). Within thirty calendar days following the completion of the Division's preliminary analysis for applications not subject to the public comment, within thirty calendar days following the period for public comment for applications subject to public comment, or if a public comment hearing is held for sources subject to the provisions of Part D, Sections V. and VI., within thirty calendar days following such hearing, the Division shall grant the permit if it finds that:

III.D.1.a. The proposed source or activity will meet all applicable emission control regulations and regulations for the control of hazardous air pollutants;

- III.D.1.b. As applicable, the proposed source or activity will meet the requirements of the attainment program as outlined in Section V. of Part D of this regulation, if any;
- III.D.1.c. The proposed source or activity will not cause an exceedance of any National Ambient Air Quality Standards;
- III.D.1.d. The source or activity will meet any applicable ambient air quality standards and all applicable regulations;
- III.D.1.e. As applicable, the proposed source or modification will meet the requirements of the prevention of significant deterioration program of Section VI. of Part D of this regulation.

[Provided however, that the Division shall not deny a permit for failure of the proposed source to meet any applicable requirement of the state implementation plan where (1) there is pending an application for a revision to the state implementation plan pursuant to Colorado Revised Statute, Section 25-7-305 (Alternative Emission Reduction) that, if adopted, would require the Division to grant the permit and (2) the applicant waives the time constraints on the Division to act on its application until the Commission has issued its final decision on the request for a state implementation plan revision and the U.S. EPA has acted on the proposed revision to the state implementation plan. In such circumstances, the Division shall delay its decision on the permit application until after final action on the request for revision of the state implementation plan (including action by the U.S. EPA)];

III.D.1.f. The fees required in Section VI. of Part A of this regulation have been paid;

III.D.1.g. Permit approval shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the state implementation plan and any other requirements under local, state, or federal law.

III.D.2. RACT Requirements for new or modified Minor Sources (including new or modified minor emissions units at major stationary sources) of volatile organic compounds, carbon monoxide, nitrogen oxides, sulfur dioxide, and PM10 in nonattainment and attainment/maintenance areas:

III.D.2.a. Minor sources in designated nonattainment or attainment/maintenance areas that are otherwise not exempt pursuant to Section II.D. of this Part, shall apply Reasonably Available Control Technology for the pollutants for which the area is nonattainment or attainment/maintenance.

III.D.2.b. In the Denver Metropolitan PM10 attainment/maintenance area, for any new minor source with a potential to emit forty tons per year or more of nitrogen oxides or sulfur dioxide, or a modification of an existing minor source with a net emissions increase of forty tons per year or more of nitrogen oxides or sulfur dioxide, the source will install Reasonably Available Control Technology.

### III.E. Permit Terms and Conditions

The Division shall include such terms and conditions in any permit as it deems necessary for the proposed project or activity to qualify for the permit.

### III.F. Denial or Revocation of the Construction Permit

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- III.F.1. If the Division determines that a source cannot comply with the provisions of Part B, Section III.D., of this regulation, the Division shall issue its written denial of the permit application stating the reasons for such denial. Any Division denial of a permit shall become final upon mailing of the denial notice to the applicant by certified mail. The applicant may appeal the Division's final denial of a permit as provided in Section III.F.3., below.
- III.F.2. Any applicant for a construction permit shall advise the Division in writing of any refusal to accept any permit condition imposed by the Division within twenty calendar days after receipt of the permit. Such refusal shall be deemed a denial of the permit application.
- III.F.3. If the Division denies a permit, imposes conditions upon a permit that are contested by the applicant, revokes a permit, or requires a permit from a source that may qualify for an exemption, the applicant or owner or operator of a source may request a hearing before the Commission for review of the Division's action. The request for a hearing must be filed with the Commission within thirty days after the issuance of the permit, denial or revocation. The hearing shall be heard in accordance with the provisions of Section VI. of the Commission's Procedural Rules, Colorado Revised Statute Sections 25-7-114.5(8), and 25-7-119, (Colorado Air Pollution Prevention and Control Act) and Section 24-4-105, (State Administrative Procedure Act).
- III.F.4. Initial Approval Expiration
- III.F.4.a. An initially approved permit shall expire if the owner or operator of the source for which the permit was issued: (i) does not commence construction or operation of the source within eighteen months after either the date of issuance of the permit or the date on which such construction or activity was scheduled to commence as set forth in the permit, whichever is later; (ii) discontinues construction for a period of eighteen months or more; or (iii) does not complete construction within a reasonable time of the estimated completion date.
- III.F.4.b. Upon a showing of good cause by the permittee, the Division may grant extensions of the permit not to exceed eighteen months per extension. Construction or operation shall commence or be resumed within a reasonable period of time from the granting of the extension. In determining what constitutes good cause or a reasonable period of time, the Division shall consider the degree of construction already completed, the amount invested or legally committed to the project, whether an extension would prevent (e.g., through reservation of a Prevention Significant Deterioration increment) economic development in the affected area, general economic conditions, the health of the community as it affects the ability of the permittee to proceed, and other relevant factors. The Division shall notify the Commission of any requested extensions and the reason given for each request.
- III.G. Final Permit Approval
- III.G.1. Unless prior and mutually acceptable arrangements have been made, the applicant shall give notice to the Division within fifteen calendar days after the date on which commencement of operation takes place.
- III.G.2. Within 180 calendar days after commencement of operation, the source shall demonstrate to the Division compliance with the terms and conditions of the initial approval construction permit. The Division may inspect the source to determine whether or not the operating terms and conditions of the initial approval construction permit have been satisfied. At the end of 180 days, the Division must revoke the construction permit; or, continue the construction permit if applicable; or, notify the owner or operator that the source has demonstrated compliance with the construction permit.



- III.G.3. Before final approval of the permit is granted, the Division may require the applicant to conduct and pay for performance tests in accordance with methods approved by the Division. A test protocol shall be submitted to the Division for review and approval at least thirty days prior to testing. The Division may monitor such tests and may, at its expense, conduct its own performance tests.
- III.G.4. For sources that submit an application for an operating permit pursuant to Part C of this Regulation Number 3, including any application for a permit modification or permit renewal, prior to issuance of a final approval construction permit, upon demonstration by the source of compliance with all terms and conditions of the construction permit or a satisfactory final approval inspection, as required pursuant to this Section III.G., the Division may elect to either issue a final approval construction permit or allow the initial approval construction permit to continue in full force and effect. The Division shall provide written notice to the permittee of its election.
- III.G.5. If the Division determines that the terms and conditions of the permit have been satisfied, the Division shall issue in writing its final permit approval to the applicant, or shall incorporate the terms and conditions into an operating permit issued in accordance with Part C of this regulation. Otherwise, the Division shall revoke the permit.
- III.G.6. Final approval may be issued at the same time as initial approval for temporary sources of duration of one month or less.
- III.G.7. Prior to issuance of final approval, the applicant shall furnish:
- III.G.7.a. An operating and maintenance plan for all control equipment and control practices; and
  - III.G.7.b. A proposed record keeping format for demonstrating compliance on an ongoing basis.
- III.H. Permit Cancellation

Whenever an owner or operator wishes to cancel a permit, the owner or operator shall notify the Division, using forms provided by the Division.

III.I. General Construction Permits

- III.I.1. The Division may issue a general construction permit covering numerous similar sources to a source that would otherwise be required to obtain a construction permit pursuant to this Part B. Any general construction permit shall comply with all applicable requirements, including notice and opportunity for public participation where warranted for such sources. The Division may issue a general construction permit in accordance with one or more of the following considerations:
- III.I.1.a. The control equipment utilized by the sources;
  - III.I.1.b. The design characteristics of the sources;
  - III.I.1.c. The operational variability of the sources;
  - III.I.1.d. The location of the sources.

- III.1.2. A source shall not perform any of the following without first obtaining a valid general construction permit from the Division pursuant to this provision, or a valid construction permit as otherwise required pursuant to Section III. of this Part B:
- III.1.2.a. Construct, operate, or modify any building, facility, structure, or installation;
  - III.1.2.b. Install any machine, equipment, or other device;
  - III.1.2.c. Commence the conduct of any such activity;
  - III.1.2.d. Commence performance of any combinations thereof; or
  - III.1.2.e. Commence operations of any of the same that will or do constitute a new stationary source.
- III.1.3. Administration
- III.1.3.a. General construction permits may be issued, modified, revoked and reissued, or terminated in accordance with the provisions of this regulation.
  - III.1.3.b. Sources shall submit applications to be covered under the general construction permit on forms provided by the Division.
  - III.1.3.c. Individual Permit Requirements
    - III.1.3.c.(i) The Division may require any source authorized by a general construction permit to apply for and obtain an individual permit. Cases where an individual permit may be required include, but are not limited to, the following:
      - III.1.3.c.(i)(A) A change has occurred in the availability of control technology or practices for the control or abatement of air pollutants applicable to the source; or
      - III.1.3.c.(i)(B) Circumstances have changed since the time of the request to be covered so that the source is no longer appropriately controlled under the general construction permit.
    - III.1.3.c.(ii) Any source authorized by a general construction permit may request to be excluded from the coverage of the general construction permit by applying for an individual permit, as provided for under this regulation, Parts A and B.
    - III.1.3.c.(iii) When the Division issues an individual permit to a source otherwise subject to a general construction permit, the applicability of the general construction permit to the individual permittee is automatically terminated on the effective date of the individual permit.

- III.I.3.c.(iv) A source excluded from a general construction permit solely because it already has an individual permit may request that the individual permit be revoked, and that it be covered by the general construction permit. Upon revocation of the individual permit, the general construction permit shall apply to the source.
- III.I.3.c.(v) In determining whether an individual permit is required, the Division may consider the compliance history and current compliance status of the source.
- III.I.4. The Division shall review the application and certify or deny the request based on criteria specified in the general construction permit established by the Division for that type of source.
- III.I.5. General construction permits shall include conditions necessary to ensure the sources will meet all applicable requirements.
- III.I.6. General construction permits issued by the Division may include the following requirements, as appropriate and as specified in each permit:
- III.I.6.a. An operating and maintenance plan for all control equipment and control practices;
- III.I.6.b. A record keeping format for demonstrating compliance;
- III.I.6.c. Monitoring methods to assure compliance; and
- III.I.6.d. Alternative operating scenarios that include specific monitoring, record keeping, and reporting methods that will assure compliance with the permit conditions.
- III.I.7. All general construction permits shall undergo statewide public notice. If a source wants to be covered under a general construction permit, the source must apply within the time period specified in the public notice.

## ~~PART C CONCERNING OPERATING PERMITS~~

### ~~I. Applicability~~

~~The provisions of this Regulation Number 3, Part C shall apply statewide to all sources of air pollutants that are required to obtain an operating permit as specified in Section II. The provisions of this Part C shall also apply, except as otherwise provided herein, to those minor sources of air pollutants that voluntarily choose to obtain an operating permit.~~

#### ~~I.A. DEFINITIONS~~

##### ~~I.A.1. Affected Source~~

~~(acid deposition program) A source of air pollutants that includes one or more fossil fuel fired combustion devices subject to emission reduction requirements or limitations under Title IV of the Federal Act, Code of Federal Regulations Title 40, Part 72, or under the state Act.~~

~~XIII.B. The Division shall extend the permit shield to those parts of the permit that have been changed pursuant to the reopening and reissuance proceedings of this section of Part C.~~

~~XIII.C. A source may choose to have its operating permit renewed during any proceeding for reopening the permit under this section, provided a complete application is submitted pursuant to Part C.~~

#### **~~XIV. Compliance Assurance Monitoring~~**

~~The regulations promulgated by the U.S. EPA listed in Section XIV.A.1., are hereby incorporated by reference by the Commission and made a part of the Colorado Commission regulations. Materials incorporated by reference are those in existence as of the date indicated 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. The material incorporated by reference is also available through the United States Government Printing Office, online at [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys). Parties wishing to inspect these materials should contact the Technical Secretary of the Commission, located at the office of the Commission.~~

~~XIV.A.1. Air Pollution Control, Monitoring, Operating Permits, Reporting and Record Keeping Requirements: Compliance Assurance Monitoring, Code of Federal Regulations Title 40, Parts 64 and 70.6, October 22, 1997 (62 FR 54900).~~

~~Air Pollution Control, Monitoring, Operating Permits, Reporting and Record keeping Requirements: Compliance Assurance Monitoring, Code of Federal Regulations Title 40, Parts 64, 70.6 and 71.6, October 22, 1997 (62 FR 54900).~~

## **PART D CONCERNING MAJOR STATIONARY SOURCE NEW SOURCE REVIEW AND PREVENTION OF SIGNIFICANT DETERIORATION**

### **I. Applicability**

#### **I.A. General Applicability**

I.A.1. This Part D shall apply to any new or existing major stationary source.

Any new major stationary source or major modification, to which the requirements of this Part D apply, shall not begin actual construction in a nonattainment, attainment, or unclassifiable area unless a permit has been issued containing all applicable state and federal requirements.

I.A.2. Except as otherwise provided in Section XV. of this Part D, and consistent with the definition of major modification (Section II.A.23. of this part), a project is a major modification for a regulated NSR pollutant if it causes two types of emissions increases - a significant emissions increase (as defined in Section II.A.45. of this part), and a significant net emissions increase (as defined in Sections II.A.27. and II.A.44. of this part). The project is not a major modification if it does not cause a significant emissions increase. If the project causes a significant emissions increase, then the project is a major modification only if it also results in a significant net emissions increase.

- I.A.3. The procedure for calculating (before beginning actual construction) whether a significant emissions increase (i.e., the first step of the process) will occur depends upon the type of emissions units being constructed or modified, according to Sections I.B.1. through I.B.3. of this part. The procedure for calculating (before beginning actual construction) whether a significant net emissions increase will occur at the major stationary source (i.e., the second step of the process) is contained in the definition of Net Emissions Increase (Section II.A.27. of this part). Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.

I.B. Applicability Tests

- I.B.1. Actual-to-projected-actual applicability test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in Section II.A.38. of this part) and the baseline actual emissions (as defined in Sections II.A.4.a. and II.A.4.b. of this part, as applicable), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in Section II.A.44. of this part).
- I.B.2. Actual-to-potential test for projects that only involve construction of a new emissions unit(s). A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in Section I.B.37. of Part A of this regulation) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in Section II.A.4. of this part) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in Section II.A.44. of this part).
- I.B.3. Hybrid test for projects that involve multiple types of emissions units.
- A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the methods specified in Sections I.B.1. through I.B.3. of this part as applicable with respect to each type of emissions unit, equals or exceeds the significant amount for that pollutant (as defined in Section II.A.44. of this part).
- I.B.4. An owner or operator of a major stationary source who conducts the actual-to-projected-actual test for a project that requires a minor permit modification in accordance with Section X. of Part C, requires a significant permit modification in accordance with Section I.A.3. of Part C, a modification as defined in Section I.B.28. of Part A or that requires a minor source permit under Part B shall submit a permit application including:
- I.B.4.a. All calculations and supporting documentation used to determine baseline actual emissions of each emissions unit affected by the project;
- I.B.4.b. All calculations and supporting documentation used to determine projected actual emissions of each existing emissions unit affected by the project;
- I.B.4.c. A determination of that portion of each existing unit's emissions following the project that the unit could have accommodated during the consecutive twenty-four month period used to establish the baseline actual emissions and that are unrelated to the project, including any increased utilization due to product demand growth; and,

I.B.4.d. Any other information requested by the Division that may be needed to determine if a major modification will occur at each emissions unit affected by the project. The information submitted in accordance with Section I.B.4.a. through I.B.4.d., above, shall be incorporated into an appendix to the major stationary source's Title V Operating permit or as a permit note in the construction permit. The requirement that the owner or operator of a major stationary source who conducts the actual-to-projected-actual test for a project that requires a minor permit modification submit information in accordance with Sections I.B.4.a. through I.B.4.d., as set out in this Subsection I.B.4., shall not be federally enforceable and shall not be incorporated into the state implementation plan.

I.C. For any major stationary source requesting, or operating under, a Plant-wide Applicability Limitation (as defined in Section II.A.35.) for a regulated NSR pollutant, the major stationary source shall comply with the requirements of Section XV. of this part.

## II. Definitions

II.A. The following definitions apply specifically to the provisions contained in this Part D.

### II.A.1. Actual Emissions

The actual rate of emission of a regulated NSR pollutant from an emissions unit, determined as follows:

II.A.1.a. Actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive twenty-four month period that precedes the particular date and is representative of normal unit operation. A different period may be used if it is more representative of normal unit operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored or combusted or actual emission data during the selected time period;

II.A.1.b. The Division may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit only if actual emissions cannot be determined pursuant to Section II.A.1.a., above;

II.A.1.c. For any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

II.A.1.d. This definition shall not apply for calculating whether a significant emissions increase has occurred, or for establishing a PAL under Section XV. of Part D of this regulation. Instead, Sections II.A.38. and II.A.4. of this part shall apply for these purposes.

### II.A.2. Actuals PAL

For a major stationary source, means a PAL based on the baseline actual emissions (as defined in Sections II.A.4.a. through II.A.4.d. of this part) of all emissions units (as defined in the Common Provisions regulation) at the source that emit or have the potential to emit the PAL pollutant. For a GHG-only source, actuals PAL means a PAL based on the baseline actual emissions (as defined in Sections II.A.4.e. and II.A.4.f.) of all emissions units (as defined in Section II.A.13.b.) at the source that emit or have the potential to emit GHGs.

II.A.3. Air Quality Related Value

Any value of an area that may be affected by a change in air quality. Examples include flora, fauna, soil, water, visibility, cultural, and odor.

II.A.4. Baseline Actual Emissions

The rate of emissions, in tons per year, of a regulated NSR pollutant.

II.A.4.a. For any existing electric utility steam generating unit (as defined in Section II.A.14. of this part), baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive twenty-four month period selected by the owner or operator within the five year period immediately preceding when the owner or operator begins actual construction of the project. The Division shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

II.A.4.a.(i) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

II.A.4.a.(ii) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive twenty-four month period.

II.A.4.a.(iii) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive twenty-four month period may be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive twenty-four month period can be used for each regulated NSR pollutant.

II.A.4.a.(iv) The average rate shall not be based on any consecutive twenty-four month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by Section II.A.4.a.(ii).

II.A.4.b. For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive twenty-four month period selected by the owner or operator within the ten year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Division for a permit required under this Part D, except that the ten year period shall not include any period earlier than November 15, 1990.

II.A.4.b.(i) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

II.A.4.b.(ii) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive twenty-four month period.

- II.A.4.b.(iii) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had the major stationary source been required to comply with such limitations during the consecutive twenty-four month period. However, if an emission limitation is part of a maximum achievable control technology standard contained in Part E of Regulation Number 8, the baseline actual emissions need only be adjusted if the State has taken credit for such emissions reductions in an attainment demonstration or maintenance plan.
- II.A.4.b.(iv) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive twenty-four month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive twenty-four month period can be used for each regulated NSR pollutant.
- II.A.4.b.(v) The average rate shall not be based on any consecutive twenty-four month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required under Sections II.A.4.b.(ii) and II.A.4.b.(iii) of this part.
- II.A.4.c. For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit (as defined in Section I.B.37. of Part A of this regulation).
- II.A.4.d. For a PAL for a major stationary source, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in Section II.A.4.a., for other existing emissions units in accordance with the procedures contained in Section II.A.4.b., and for a new emissions unit in accordance with the procedures contained in Section II.A.4.c.
- II.A.4.e. For a GHG PAL means the average rate, in tons per year CO<sub>2</sub>e or tons per year GHG, as applicable, at which the emissions unit actually emitted GHGs during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins construction of the project, or the date a complete permit application is received by the Division for a permit required under this Part D or by the Division for a permit required by a plan, whichever is earlier.
- II.A.4.f. For any existing electric utility steam generating unit (as defined in Section II.A.14. of this part), baseline actual emissions for a GHG PAL means the average rate, in tons per year CO<sub>2</sub>e or tons per year GHG, at which the unit actually emitted the pollutant during any consecutive twenty-four month period selected by the owner or operator within the five year period immediately preceding when the owner or operator begins actual construction of the project. The Division shall allow the use of a different time period upon a determination that it is more representative of normal source operation.
- II.A.4.f.(i) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.



II.A.4.f.(ii) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive twenty-four month period.

II.A.4.f.(iii) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the stationary source must currently comply, had such stationary source been required to comply with such limitations during the consecutive 24-month period.

II.A.4.f.(iv) The average rate shall not be based on any consecutive twenty-four month period for which there is inadequate information for determining annual GHG emissions and for adjusting this amount if required by Sections II.A.4.a.(ii) and II.A.4.a.(iii).

#### II.A.5. Baseline Area

II.A.5.a. Any intrastate area (and every part thereof) designated as attainment or unclassifiable under Sections 107(d)(1)(A)(ii) or (iii) of the Federal Act in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact for the pollutant for which the baseline date is established, as follows: equal to or greater than one microgram/cubic meter (1  $\mu\text{g}/\text{m}^3$ ) (annual average) for SO<sub>2</sub>, NO<sub>2</sub>, or PM<sub>10</sub>; or equal to or greater than 0.3  $\mu\text{g}/\text{m}^3$ ) (annual average) for PM<sub>2.5</sub>.

II.A.5.b. Area redesignations under Section 107(d)(1)(A)(ii) or (iii) of the Federal Act cannot intersect or be smaller than the area of impact of any major stationary source or major modification that:

II.A.5.b.(i) Establishes a minor source baseline date, or

II.A.5.b.(ii) Is subject to this Part D, and would be constructed in the same state as the state proposing the redesignation.

II.A.5.c. Any baseline area established originally for the total suspended particulate increments shall remain in effect and shall apply for purposes of determining the amount of available PM<sub>10</sub> increments, except that such baseline area shall not remain in effect if the permit authority rescinds the corresponding minor source baseline date in accordance with Section II.A.26.c.

#### II.A.6. Baseline Concentration

The ambient concentration level that exists in the baseline area at the time of the applicable minor source baseline date. A baseline concentration is determined for each pollutant for which a minor source baseline date is established and shall include:

II.A.6.a. The actual emissions representative of sources in existence on the applicable minor source baseline date, except as otherwise provided in this definition; and

II.A.6.b. The allowable emissions from major stationary sources that commenced construction before the major source baseline date, but were not in operation by the applicable minor source baseline date.

II.A.6.c. The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):

II.A.6.c.(i) Actual emissions from any major stationary source on which construction commenced after the major source baseline date; and

II.A.6.c.(ii) Actual emission increases and decreases at any stationary source occurring after the minor source baseline date.

II.A.7. Begin Actual Construction

Initiation of physical on-site construction activities on an emissions unit that are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipe work, and construction of permanent storage structures. With respect to a change in the method of operation, this term refers to those on-site activities other than preparatory activities that mark the initiation of the change.

II.A.8. Best Available Control Technology (BACT)

An emission limitation (including a visible emissions standard) based on the maximum degree of reduction of each regulated NSR pollutant that would be emitted from any proposed major stationary source or major modification that the Division or Commission, 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 the best available control technology result in emissions of any pollutant that would exceed emissions allowed by the applicable standards in the Code of Federal Regulations, Title 40, Parts 60 and 61 (Regulation Number 6, Part A, and Regulation Number 8, Part A) as in effect on the effective date of this clause, but not including later amendments, unless such amendments are specifically incorporated by reference in accordance with the provisions of Colorado Revised Statutes Section 24-4-103 (12.5). Information as to the availability of such standards may be obtained from the Director, Air Pollution Control Division, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530.

If the Division or Commission determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, it may instead prescribe designs, equipment, work practices, operational standards or combination thereof, to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation and shall provide for compliance by means that achieve equivalent results.

II.A.9. Clean Coal Technology

Any technology, including technologies applied at the pre-combustion, combustion, or post-combustion stage, at a new or existing facility that will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

II.A.10. Clean Coal Technology Demonstration Project

A project using funds appropriated under the heading "Department of Energy-Clean Coal Technology," up to a total amount of \$2.5 billion for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the U.S. EPA. The federal contribution for a qualifying project shall be at least twenty percent of the total cost of the demonstration project.

II.A.11. Complete

In reference to an application for a major NSR permit, an application that contains all the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the Division from requesting or accepting any additional information.

II.A.11.a. At a minimum, a complete application for a permit to construct a major source or major modification subject to the requirements of this Part D shall include:

II.A.11.a.(i) All monitoring data required pursuant to this regulation and an analysis of ambient air quality in accordance with Section VI.A.3. of this part;

II.A.11.a.(ii) The impact analysis required by Section VI.A.2. of this part, a written summary of the data inputs to the model, and a topographic presentation of the resultant concentrations of each pollutant modeled for each applicable ambient standard or Prevention of Significant Deterioration increment within the impact area of the source;

II.A.11.a.(iii) A report of the regulatory status of the model pursuant to Section VIII.A.1. of Part A;

II.A.11.a.(iv) A demonstration that the proposed technological system of continuous emission reduction that is to be used will enable such source to comply continuously with the standards of performance that are to apply to such source and that the emission inputs to the model for the impact analysis are equivalent to the emissions allowed by such standards of performance;

II.A.11.a.(v) A description of the devices or systems that will be installed to monitor the emissions of each pollutant that will be emitted in significant amounts, maintaining such devices or systems, and the schedule and format for reporting the results of such emission monitoring to the Division;

II.A.11.a.(vi) The additional impact analysis required by Section VI.A.6. of this part, any demonstration of facts needed to establish a claim by the applicant to qualify for any exemption or exclusion under Section VI.B. of this part;

II.A.11.a.(vii) A schedule of construction in accordance with Section III.G.2. of Part B;

II.A.11.a.(viii) An additional copy of the application for the federal land manager of each affected Class 1 area, for the U.S. EPA, for the county Commissioner, and for public notice. Two additional copies shall be submitted for interested public groups.

II.A.12. Construction

Any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in actual emissions

II.A.13. Emissions Unit

II.A.13.a. Any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant and includes an electric steam-generating unit as defined in Section II.A.14. of this part. For purposes of this Part D, there are two types of emissions units described in Section II.A.13.a.(i) and II.A.13.a.(ii), below.

II.A.13.a.(i) A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than two years from the date such emissions unit first operated.

II.A.13.a.(ii) An existing emissions unit is any emissions unit that does not meet the requirements in Section II.A.13.a.(i), above. A replacement unit (as defined in Section II.A.41. of this part) is an existing emissions unit.

II.A.13.b. With respect to GHGs means any part of a stationary source that emits or has the potential to emit GHGs. For purposes of Section XV., there are two types of emissions units:

II.A.13.b.(i) A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than two years from the date such emissions unit first operated.

II.A.13.b.(ii) An existing emissions unit is any emissions unit that does not meet the requirements in Section II.A.13.b.(i).

II.A.14. Electric Utility Steam Generating Unit

Any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electrical output capacity and more than twenty-five megawatts electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

II.A.15. Federal Land Manager (FLM)

With respect to any lands of the United States, the secretary of the department with authority over such lands.

II.A.16. GHG-only source

Any existing stationary source that emits or has the potential to emit GHGs in the amount equal to or greater than the amount of GHGs on a mass basis that would be sufficient for a new source to trigger permitting requirements for GHGs under Part D, Section II.A.25. and the amount of GHGs on a CO<sub>2</sub>e basis that would be sufficient for a new source to trigger permitting requirements for GHGs under Part A, Section I.B.44. at the time the PAL permit is being issued, but does not emit or have the potential to emit any other non-GHG regulated NSR pollutant at or above the applicable major source threshold. A GHG-only source may only obtain a PAL for GHG emissions under Part D, Section XV.

II.A.17. High Terrain

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

II.A.18. Hydrocarbon Combustion Flare

Either a flare used to comply with an applicable new source performance standard or maximum achievable control technology standard (including uses of flares during startup, shutdown, or malfunction permitted under such standard), or a flare that serves to control emissions of waste streams comprised predominately of hydrocarbons and containing no more than 230 mg/dscm hydrogen sulfide.

II.A.19. Innovative Control Technology

Any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or non-air quality environmental impacts.

II.A.20. Low Terrain

Any area other than high terrain.

II.A.21. Lowest Achievable Emissions Rate (LAER)

For any source, the more stringent rate of emissions based on the following:

II.A.21.a. The most stringent emission limit contained in any state implementation plan for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limits are not achievable; or

II.A.21.b. The most stringent emission limitation that is achieved in practice by such class or category of source. In no event shall application of the term permit a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable under an applicable new source performance standard (Regulation Number 6).

II.A.22. Major Emissions Unit

II.A.22.a. Any emissions unit that emits or has the potential to emit one hundred tons per year or more of the PAL pollutant in an attainment area; or

II.A.22.b. Any emissions unit that emits or has the potential to emit the PAL pollutant in an amount that is equal to or greater than the major stationary source threshold (as defined in Section II.A.25. of this part) for the PAL pollutant for nonattainment areas.

II.A.22.c. For a GHG PAL issued on a CO<sub>2</sub>e basis, any emissions unit that emits or has the potential to emit equal to or greater than the amount of GHGs on a CO<sub>2</sub>e basis that would be sufficient for a new source to trigger permitting requirements under paragraph Part A, Section I.B.44. at the time the PAL permit is being issued.

#### II.A.23. Major Modification

Any physical change in or change in the method of operation of a major stationary source that would result in a significant emissions increase of a regulated NSR pollutant and a significant net emissions increase of that pollutant from the major stationary source.

II.A.23.a. Any significant emissions increase from any emissions units or net emissions increase at a major stationary source that is significant for volatile organic compounds or NO<sub>x</sub> shall be considered significant for ozone.

II.A.23.b. In the Denver Metropolitan PM<sub>10</sub> nonattainment area, any net emission increase that is significant for sulfur dioxide or nitrogen oxides shall be considered significant for PM<sub>10</sub>.

II.A.23.c. A physical change or change in the method of operation shall not include routine maintenance, repair, and replacement.

II.A.23.d. A physical change or change in the method of operation, unless previously limited by any enforceable or federally enforceable permit condition that was established after January 6, 1975 for sources in attainment or unclassifiable areas and after December 21, 1976 for sources in nonattainment areas, shall not include:

II.A.23.d.(i) Use of an alternative fuel or raw material by reason of an order in effect under Sections 2(a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), a prohibition under the Power Plant and Industrial Fuel Use Act of 1978 (or any superseding legislation) or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act;

II.A.23.d.(ii) Use of an alternative fuel because of an order or rule under Section 125 of the Federal Act;

II.A.23.d.(iii) Use of an alternative fuel at a steam-generating unit to the extent that the fuel is generated from municipal solid waste;

II.A.23.d.(iv) Use of an alternative fuel or raw material that:

II.A.23.d.(iv)(A) the stationary source in a nonattainment area was capable of accommodating prior to December 21, 1976, unless such change would be prohibited under a federally enforceable permit condition, or

- II.A.23.d.(iv)(B) the stationary source in an attainment or unclassifiable area was capable of accommodating prior to January 6, 1975 unless such change would be prohibited under a federally enforceable permit condition, or
- II.A.23.d.(iv)(C) the source is approved to use under any permit issued under this Regulation Number 3.
- II.A.23.d.(v) An increase in the production rate, unless such change would be prohibited under a federally enforceable permit condition;
- II.A.23.d.(vi) An increase in the hours of operation, unless such increase would be prohibited under a federally enforceable permit condition; or
- II.A.23.d.(vii) Any change in ownership of a stationary source.
- II.A.23.d.(viii) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, if the project complies with:
- II.A.23.d.(viii)(A)The Colorado State Implementation Plan, and
- II.A.23.d.(viii)(B)Other requirements necessary to attain and maintain the National Ambient Air Quality Standards during the project and after it is terminated.
- II.A.23.d.(ix) For major stationary sources in attainment areas:
- II.A.23.d.(ix)(A) The installation or operation of a permanent clean coal technology demonstration project that constitutes re-powering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. The exemption shall apply on a pollutant-by-pollutant basis.
- II.A.23.d.(ix)(B) The reactivation of a very clean coal fired electric utility steam generating unit.
- II.A.23.d.(x) The reactivation of a very clean coal fired electric utility steam generating unit.
- II.A.23.e. This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under Section XV. of this Part D for a PAL for that pollutant. Instead, the definition in Section II.A.31. of this part shall apply.
- II.A.23.f. Emissions caused by indirect sources of pollution, emissions from internal combustion engines on any vehicle, and emissions resulting from temporary construction or exploration activities shall be excluded in determining whether a major modification will occur. Emissions from on-going construction are not considered to be temporary emissions, and are included in determining whether a major modification will occur. Fugitive emissions from the listed sources in Section II.A.25.a. and any other stationary source category that, as of August 7, 1980 was regulated under Sections 111 or 112 of the Federal Act (as adopted in Regulations Nos. 6, Part A, and 8, Parts A and E) shall, to the extent quantifiable, be considered in calculating the potential to emit of the modification.

II.A.24. Major Source Baseline Date

- II.A.24.a. In the case of PM10 and sulfur dioxide, January 6, 1975;
- II.A.24.b. In the case of nitrogen dioxide, February 8, 1988; and
- II.A.24.c. In the case of PM2.5, October 20, 2010.

II.A.25. Major Stationary Source

II.A.25.a. For the purpose of determining whether a source in an attainment or unclassifiable area is subject to the requirements of this Part D, major stationary source means:

II.A.25.a.(i) Any of the following stationary sources of air pollutants that emits, or has the potential to emit, one hundred tons per year or more of any regulated NSR pollutant:

II.A.25.a.(i)(A) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input

II.A.25.a.(i)(B) Coal cleaning plants (with thermal dryers)

II.A.25.a.(i)(C) Kraft pulp mills

II.A.25.a.(i)(D) Portland cement plants

II.A.25.a.(i)(E) Primary zinc smelters

II.A.25.a.(i)(F) Iron and steel mill plants

II.A.25.a.(i)(G) Primary aluminum ore reduction plants

II.A.25.a.(i)(H) Primary copper smelters

II.A.25.a.(i)(I) Municipal incinerators capable of charging more than 250 tons of refuse per day

II.A.25.a.(i)(J) Hydrofluoric, sulfuric, and nitric acid plants

II.A.25.a.(i)(K) Petroleum refineries

II.A.25.a.(i)(L) Lime plants

II.A.25.a.(i)(M) Phosphate rock processing plants

II.A.25.a.(i)(N) Coke oven batteries

II.A.25.a.(i)(O) Sulfur recovery plants

II.A.25.a.(i)(P) Carbon black plants (furnace process)

II.A.25.a.(i)(Q) Primary lead smelters

II.A.25.a.(i)(R) Fuel conversion plants



- II.A.25.a.(i)(S) Sintering plants
- II.A.25.a.(i)(T) Secondary metal production plants
- II.A.25.a.(i)(U) Chemical process plants
- II.A.25.a.(i)(V) Fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input
- II.A.25.a.(i)(W) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels
- II.A.25.a.(i)(X) Taconite ore processing plants
- II.A.25.a.(i)(Y) Glass fiber processing plants
- II.A.25.a.(i)(Z) Charcoal production plants
- II.A.25.a.(ii) Notwithstanding the stationary source size specified in Section II.A.25.a.(i), any stationary source that emits, or has the potential to emit, two hundred and fifty tons per year or more of any regulated NSR pollutant.
- II.A.25.b. For the purpose of determining whether a source in a nonattainment area is subject to the requirements of Section V. of this part, and whether a source in an attainment area affecting a nonattainment area is subject to the requirements of Section VI.D. of this part, major stationary source means any stationary source of air pollutants that emits, or has the potential to emit 100 tons per year or more of any regulated NSR pollutant for which the area is nonattainment, except where the lower emissions thresholds in Sections II.A.25.b.(i)-(vi) apply. Additionally, a source causing or contributing to a violation of a national ambient air quality standard for any pollutant regulated under Section 110 of the Federal Act shall be considered a major stationary source when it has the potential to emit one hundred tons per year or more of that pollutant. The source will be considered to cause or contribute to a violation where the source exceeds the significance levels in the table under Section VI.D.2. of this Part D. Such source is subject to the requirements of Section VI. of this Part D.
  - II.A.25.b.(i) Fifty tons per year or more of volatile organic compounds or nitrogen oxides in any serious ozone nonattainment area.
  - II.A.25.b.(ii) Fifty tons per year or more of volatile organic compounds in any ozone transport region, except for any severe or extreme ozone nonattainment area.
  - II.A.25.b.(iii) Twenty five tons per year or more of volatile organic compounds or nitrogen oxides in any severe ozone nonattainment area.
  - II.A.25.b.(iv) Ten tons per year or more of volatile organic compounds or nitrogen oxides in any extreme ozone nonattainment area.
  - II.A.25.b.(v) Fifty tons per year or more of carbon monoxide in any serious carbon monoxide nonattainment area, where stationary sources significantly contribute to carbon monoxide levels.

- II.A.25.b.(vi) Seventy tons per year or more of PM10 in any serious PM10 nonattainment area.
- II.A.25.c. Major stationary source includes any physical change that would occur at a stationary source not otherwise qualifying as a major stationary source under Sections II.A.25.a and II.A.25.b. of this part, if the change would constitute a major stationary source by itself.
- II.A.25.d. A major stationary source that is major for volatile organic compounds or NOx shall be considered major for ozone, except that emissions of negligibly reactive volatile organic compounds, as defined in the Common Provisions, shall not be included in the determination of major stationary source status for ozone.
- II.A.25.e. The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the categories of stationary sources listed in Section II.A.25.a.(i) or any other stationary source category which, as of August 7, 1980, is regulated under Section 111 or 112 of the Federal Act.
- II.A.25.f. Emissions caused by indirect air pollution sources (as defined in Section I.B.24. of Part A of this regulation), emissions from internal combustion engines on any vehicle, and emissions resulting from temporary activities, such as construction or exploration, shall be excluded in determining whether a source is a major stationary source. Emissions from ongoing construction are not considered to be temporary emissions and are included in determining whether a major modification will occur.
- II.A.25.g. A major stationary source in the Denver Metro PM10 attainment/maintenance area that is major for sulfur dioxide or nitrogen oxides shall be considered major for PM10.
- II.A.26. Minor Source Baseline Date
- II.A.26.a. The earliest date after the trigger date that a major stationary source or a major modification subject to the requirements of Section VI. of this Part D submits a complete application under the relevant regulations. The trigger date is:
- II.A.26.a.(i) In the case of PM10 and sulfur dioxide, August 7, 1977;
- II.A.26.a.(ii) In the case of nitrogen dioxide, February 8, 1988; and
- II.A.26.a.(iii) In the case of PM2.5, October 20, 2011.
- II.A.26.b. The baseline date is established for each pollutant for which increments or other equivalent measures have been established if:
- II.A.26.b.(i) The area in which the proposed source or modification would construct is designated as attainment or unclassifiable under Sections 107(d)(1)(A)(ii) or (iii) of the Federal Act for the pollutant on the date of its complete application under Section VI. of this part; and
- II.A.26.b.(ii) In the case of a major stationary source the pollutant would be emitted in significant amounts, or, in the case of a major modification, there would be a significant net emissions increase of the pollutant.

II.A.26.c. Any minor source baseline date established originally for the Total Suspended Particulates increments shall remain in effect and shall apply for purposes of determining the amount of available PM10 increments, except that the Division may rescind any such minor source baseline date where it can be shown, to the satisfaction of the Division, that the emissions increase from the major stationary source, or the net emissions increase from the major modification, responsible for triggering that date did not result in a significant amount of PM10 emissions.

II.A.27. Net Emissions Increase

II.A.27.a. With respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero:

II.A.27.a.(i) The increase in emissions from a particular physical change or change in the method of operation at a stationary source calculated pursuant to Sections I.A.2. through I.A.3., and I.B. of this Part D; and

II.A.27.a.(ii) Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this paragraph shall be determined as provided in the definition of baseline actual emissions, except that paragraphs II.A.4.a.(iii) and II.A.4.b.(iv) of this Part D shall not apply.

II.A.27.b. Contemporaneous - an increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs within five years prior to the date that the increase from the particular change occurs.

II.A.27.c. An increase or decrease in actual emissions is creditable only if:

II.A.27.c.(i) It occurs within five years before the date that the increase or decrease occurs; and

II.A.27.c.(ii) The Division has not relied on it in issuing a permit for the source under Regulation Number 3, Part D, or the U.S. EPA has not relied on it in issuing a permit under Title I, Part C of the Federal Act, which permit is in effect when the increase in actual emissions from the particular change occurs; and

II.A.27.c.(iii) In order to establish a baseline emissions rate, the owner or operator must submit an Air Pollutant Emission Notice to the Division prior to the increase or decrease indicating actual emissions (as defined in Section II.A.1. of this of part) and the owner or operator must submit a revised Air Pollutant Emission Notice to the Division within one year after the increase or decrease occurs, or

II.A.27.c.(iv) The owner or operator provides credible, demonstrable evidence to the Division of what actual emissions were before making the increase or decrease and what they were after making the increase or decrease.

- II.A.27.d. An increase or decrease in actual emissions of sulfur dioxide, particulate matter, or nitrogen oxides that occurs before the applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available. With respect to particulate matter, only PM10 emissions can be used to evaluate the net emissions increase for PM10 and only PM2.5 emissions can be used to evaluate the net emissions increase for PM2.5.
- II.A.27.e. An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- II.A.27.f. A decrease in actual emissions is creditable only to the extent that:
- II.A.27.f.(i) The Division has not relied on it in issuing any permit under this Part D, or has not relied on it in demonstrating attainment or reasonable further progress:
  - II.A.27.f.(ii) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;
  - II.A.27.f.(iii) It is enforceable as a practical matter at and after the time that actual construction on the particular change begins; and
  - II.A.27.f.(iv) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and
- II.A.27.g. An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed one hundred and eighty days.
- II.A.27.h. Section II.A.1.a. of this part shall not apply for determining creditable increases and decreases after a change.
- II.A.27.i. The organic compounds referenced in the common provisions definition of negligibly reactive volatile organic compounds are neither counted as reactive volatile organic compounds in determining significant ozone increases nor creditable against an increase in emissions of any volatile organic compound.
- II.A.27.j. Creditable Decreases for Fuel Switching.

Generally, for credit to be given for the emissions reduction in potential to emit or actual emissions resulting from a physical change or change in method of operation of a major stationary source occurring on or after the effective date of this rule, an Air Pollutant Emission Notice reporting such reduction must be filed within one year after the reduction occurs unless an extension is requested by the source and approved by the Division due to uncertainty as to the permanence of such reduction. At the time credit for any reduction is requested, such reduction must be enforceable. Such reductions must be enforceable through permit conditions or source specific state implementation plan revisions.

II.A.28. Nonattainment Major New Source Review (NSR) Program

A major stationary source preconstruction permit program that has been approved by the Administrator and incorporated into this Regulation Number 3, Part D. Any permit issued under the program is a major NSR permit.

II.A.29. PAL Effective Date

Generally means the date of issuance of the PAL permit. However, the PAL effective date for an increased PAL is the date any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

II.A.30. PAL Effective Period

The period beginning with the PAL effective date and ending ten years later.

II.A.31. PAL Major Modification

Notwithstanding Part A, Section I.B.44. and Part D Sections II.A.22 and II.A.26. (the definitions for subject to regulation, major modification, and net emissions increase), any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.

II.A.32. PAL Minor Source

Any stationary source that does not meet the definition of major stationary source in Part D, Section II.A.25. at the time the PAL is issued.

II.A.33. PAL Permit

The Operating Permit issued in accordance with this Part D that establishes a PAL for a major stationary source or a GHG-only source.

II.A.34. PAL Pollutant

The pollutant for which a PAL is established at a major stationary source or a GHG-only source. For a GHG-only source, the only available PAL pollutant is greenhouse gases.

II.A.35. Plant-wide Applicability Limitation (PAL)

An emission limitation expressed on a mass basis in tons per year, or expressed in tons per year CO<sub>2</sub>e for a CO<sub>2</sub>e-based GHG emission limitation, for a pollutant at a major stationary source or GHG-only source that is enforceable as a practical matter and established source-wide in accordance with Section XV. of this Part D.

II.A.36. Prevention of Significant Deterioration (PSD) Permit

Any permit that is issued in accordance with Section VI. of this Part D.

II.A.37. Project

A physical change in, or change in the method of operation of, an existing major stationary source.

II.A.38. Projected Actual Emissions

- II.A.38.a. The maximum annual rate, in tons per year, at which an existing emissions unit at a major stationary source is projected to emit a regulated NSR pollutant in any one of the five years (twelve-month period) following the date the unit resumes regular operation after the project, or in any one of the ten years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit of that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.
- II.A.38.b. In determining the projected actual emissions under Section II.A.38.a., above, before beginning actual construction, the owner or operator of the major stationary source:
- II.A.38.b.(i) Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans; and
- II.A.38.b.(ii) Shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions; and
- II.A.38.b.(iii) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive twenty-four month period used to establish the baseline actual emissions under Section II.A.4. of this part D and that are also unrelated to the particular project, including any increased utilization due to product demand growth; or,
- II.A.38.b.(iv) In lieu of using the method set out in Sections II.A.38.b.(i) through II.A.38.b.(iii), may elect to use the emissions unit's potential to emit, in tons per year, as defined in Section I.B.37. of Part A of this regulation.

II.A.39. Reactivation of Very Clean Coal-fired Electric Utility Steam Generating Unit

Any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

- II.A.39.a. Has not been in operation for the two year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of the enactment;
- II.A.39.b. Was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than eighty-five percent and a removal efficiency for particulates of no less than ninety-eight percent;
- II.A.39.c. Is equipped with low-nitrogen oxide burners prior to the time of commencement of operations following reactivation; and
- II.A.39.d. Is otherwise in compliance with the requirements of the Federal Act.

II.A.40. Regulated NSR Pollutant

- II.A.40.a. Nitrogen oxides or any volatile organic compound;
- II.A.40.b. Any pollutant for which a national ambient air quality standard has been promulgated;
- II.A.40.c. Any pollutant that is a constituent or precursor of a general pollutant listed under Sections II.A.40.a. or II.A.40.b., above, (e.g. volatile organic compounds and oxides of nitrogen are precursors for ozone) provided that such a constituent or precursor pollutant may only be regulated under NSR as part of regulation of the general pollutant. Precursors for the purposes of New Source Review are the following:
- II.A.40.c.(i) Nitrogen oxides or any volatile organic compound are precursors to ozone;
- II.A.40.c.(ii) Sulfur dioxide is a precursor to PM<sub>2.5</sub>;
- II.A.40.c.(iii) Nitrogen oxides are precursors to PM<sub>2.5</sub>.
- II.A.40.d. Any pollutant, except for GHG, that is subject to any standard promulgated under Section 111 of the Federal Act, (see II.A.40.e. for GHG);
- II.A.40.e. Any pollutant that otherwise is subject to regulation under the Federal Act as defined in Section I.B.44. or Part A;
- II.A.40.f. Notwithstanding Sections II.A.40.a. through II.A.40.e. of this Part D, the term regulated NSR pollutant shall not include any or all hazardous air pollutants either listed in Section 112 of the Federal Act (that have not been delisted pursuant to Section 112(b)(3) of the Federal Act) or Appendix B of this regulation, unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under Section 108 of the Federal Act.
- II.A.40.g. PM<sub>2.5</sub> emissions and PM<sub>10</sub> emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. On or after January 1, 2011, such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM<sub>2.5</sub> and PM<sub>10</sub> in PSD permits. Compliance with emission limitations for PM<sub>2.5</sub> and PM<sub>10</sub> issued prior to this date shall not be based on condensable particulate matter unless required by the terms and conditions of the permit or the applicable implementation plan. Applicability determinations made prior to this date without accounting for condensable particulate matter shall not be considered in violation of this section.

II.A.41. Replacement Unit

An emissions unit for which all the criteria listed in Sections II.A.41.a. through II.A.41.d. are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.

- II.A.41.a. The emissions unit is a reconstructed unit within the meaning of Code of Federal Regulations Title 40, Section 60.15(b)(1), or the emissions unit completely takes the place of an existing emissions unit.

- II.A.41.b. The emissions unit is identical to or functionally equivalent to the replaced emissions unit.
- II.A.41.c. The replacement does not alter the basic design parameters of the process unit.
- II.A.41.d. The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.

II.A.42. Repowering

- II.A.42.a. Replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.
- II.A.42.b. Repowering shall also include any oil and/or gas-fired unit that have been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

II.A.43. Secondary Emissions

Emissions that occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purpose of this Part D, secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification that causes the secondary emissions. Secondary emissions include emissions from any offsite support facility that would not otherwise be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions that come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

II.A.44. Significant

- II.A.44.a. Unless the context otherwise requires, a significant rate of emissions in tons per year is defined as a value that would equal or exceed any of the following:

Carbon monoxide: 100 tons per year
Nitrogen Oxides: 40 (nitric oxide + nitrogen dioxide) tons per year
Sulfur dioxide: 40 tons per year
Particulate matter: 25 tons per year particulate matter emissions or, 15 tons per year of PM10 emissions
PM10 - Precursors in the Denver Metropolitan PM10 attainment/maintenance area: 40 tons per year for each individual precursor (nitrogen oxides or sulfur oxides)



PM2.5: 10 tons per year of direct PM2.5 emissions; 40 tons per year of sulfur dioxide emissions; or 40 tons per year of nitrogen dioxide emissions
Ozone: 40 tons per year of volatile organic compounds or nitrogen oxides
Lead: 0.6 tons per year
Fluorides: 3 tons per year
Sulfuric acid mist: 7 tons per year
Hydrogen sulfide: 10 tons per year
Total reduced sulfur (including hydrogen sulfide): 10 tons per year
Reduced sulfur compounds (including hydrogen sulfide): 10 tons per year
Municipal Waste Combustor Organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans): 3.2 x 10 <sup>-6</sup> megagrams per year (3.5 x 10 <sup>-6</sup> tons per year)
Municipal Waste Combustor Metals (measured as particulate matter): 14 megagrams per year (15 tons per year)
Municipal Waste Combustor Acid Gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year)
Municipal Solid Waste Landfill Gases (measured as non-methane organic compounds): 45 megagrams per year (50 tons per year)
In a serious or severe ozone nonattainment area: 25 tons per year of volatile organic compounds or nitrogen oxides
In an extreme ozone nonattainment area: any increase of volatile organic compounds or nitrogen oxides

II.A.44.b. Significant means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that this definition does not list, any emissions rate, except that this definition shall not apply to hazardous air pollutants listed in or pursuant to Section 112 of the Federal Act.

II.A.44.c. Notwithstanding the significant emission rates above, significant means any emissions rate or any net emissions increase associated with a major stationary source or major modification, that would construct within ten kilometers of a Class I area, and have an impact on such area equal to or greater than one microgram/cubic meter ((g/m<sup>3</sup>) (twenty-four hour average).

#### II.A.45. Significant Emissions Increase

For a regulated NSR pollutant, an increase in emissions that is significant (as defined in Section II.A.44. of this Part D) for that pollutant.

#### II.A.46. Significant Emissions Unit

II.A.46.a. An emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in Section II.A.44. of this Part D or in the Federal Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit (as defined in Section II.A.22. of this part).

II.A.46.b. For a GHG PAL issued on a CO<sub>2</sub>e basis, significant emissions unit means any emissions unit that emits or has the potential to emit GHGs on a CO<sub>2</sub>e basis in amounts equal to or greater than the amount that would qualify the unit as small emissions unit as defined in Section II.A.47, but less than the amount that would qualify the unit as a major emissions unit as defined in Section II.A.22.

**II.A.47. Small Emissions Unit**

II.A.47.a. An emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant (as defined in Section II.A.34. of this Part D or in the Federal Act, whichever is lower).

II.A.47.b. For a GHG PAL issued on a CO<sub>2</sub>e basis, small emissions unit means an emissions unit less than the amount of GHGs on a CO<sub>2</sub>e basis defined as significant for the purposes of Part A, Section I.B.46.c. at the time the PAL permit is being issued.

**II.A.48. Temporary Clean Coal Technology Demonstration Project**

A clean coal technology demonstration project that is operated for a period of five years or less, and that complies with the state implementation plan and other requirements necessary to attain and maintain the National Ambient Air Quality Standards during the project and after it is terminated.

**III. Permit Review Procedures**

III.A. Major stationary sources subject to the requirements of this Part D must apply for and obtain a Construction Permit in accordance with the procedures and requirements in Part B or an Operating permit in accordance with the procedures and requirements in Part C.

III.B. The Division shall complete the processing of applications (including any requested public hearing) for sources subject Sections VI. and VII. of this Part D within twelve months of receipt of a complete application.

**IV. Public Comment and Hearing Requirements**

IV.A. When public comment is required, or when the Division determines that an application warrants public comment in accordance with Section III.C.3. of Part B of this regulation, the Division shall, within fifteen calendar days after the preparation of the preliminary analysis, cause public notice of the application to be published in a newspaper of general distribution in the area in which the proposed project or activity is or will be located, and by such other means as necessary to assure notice to the affected public, which may include posting of such notice on the publicly accessible portion of the Division's web site.

The Division will make available in at least one location in each region in which the proposed source would be constructed, a copy of all materials the applicant submitted, a copy of the preliminary determination, and a copy or summary of other materials, if any, considered in making the preliminary determination. This requirement may be met by making these materials available at a physical location or on a public web site identified by the Division. The Division shall send written or electronic notice to persons requesting a notice of permit applications. Electronic notice may include email notification to persons on an email list developed and maintained by the Division

IV.A.1. For sources subject to the provisions of Sections V. and VI., a copy of the written or electronic notice of public comment shall be sent to the applicant, the U.S. EPA Administrator, and to officials and agencies having cognizance over the location where the proposed construction would occur, including any other state or local air pollution control agencies and any state, Indian governing body or Federal Land Manager whose lands may be affected by emissions from the source or modification.

- IV.A.2. Additionally, for permit applications subject to the requirements of this Part D, the notice shall contain the following information:
- IV.A.2.a. That comments are solicited on an innovative technological system for pollution control if proposed by the applicant and that a hearing by the Commission will be held on such system if requested by any interested person;
  - IV.A.2.b. That comments are solicited on the air quality impacts of the source or modification;
  - IV.A.2.c. That comments are solicited on alternatives to the source or modification;
  - IV.A.2.d. That any interested person may submit a written request for a public comment hearing to be held pursuant to Section VII. of the Commission's Procedural Rules to receive comments regarding the foregoing concerns, the sufficiency of the preliminary analysis, and whether the Division should approve or deny the permit application; and
  - IV.A.2.e. The degree of increment consumption that is expected from the source or modification.
- IV.A.3. Within fifteen calendar days after the preparation of the preliminary analysis for those applications subject to the requirements of this Part D, the Division shall forward to the applicant written notice of the applicant's right to a public comment hearing with respect to the application pursuant to Section VII. of the Commission's Procedural Rules.
- IV.A.4. A hearing request pursuant to Section IV.A.2.a. of this Part D, regarding innovative control, must be transmitted by the Division to the Commission within twenty days after its receipt.
- IV.A.5. A hearing request pursuant to Section IV.A.2.d. of this Part D must be transmitted by the Division to the Commission, along with the complete permit application, the preliminary analysis, the draft permit, and any written comments received by the Division within five days after the end of the thirty-day comment period. At least thirty days prior to the date set for the public comment hearing, the notice of public comment hearing, the preliminary analysis and the draft permit shall be posted on the Division's web site. No substantive revisions shall be made to the draft permit during the thirty days prior to the public comment hearing.
- IV.A.6. The Commission shall hold a public comment hearing within sixty days of its receipt of the request for such hearing pursuant to Section IV.A.2. of this Part D (unless such greater time is agreed to by the applicant and the Division), but at least sixty days after receipt by any Federal Land Manager of notice and the permit application required pursuant to Section XIII.A. of this Part D. The Division shall appear at the public comment hearing in order to present the permit application. At least thirty days prior to such hearing, notice thereof shall be mailed by the Commission to the applicant, to any interested person who submitted a request for a public hearing and to any Federal Land Manager given notice pursuant to Section XIII.A., printed in a newspaper of general distribution in the area of the proposed source or modification, and submitted for public review with the county clerk for each county in which the source or modification is or will be located. Except as provided herein and in the notice, such hearings will be conducted pursuant to the Act, the Procedural Rules of the Air Quality Control Commission and the State Administrative Procedure Act, Colorado Revised Statutes, Section 24-4-101 et seq.

IV.A.7. Within fifteen days after the Division makes a final decision on an application subject to the requirements of this Part D, the Division shall make available for public inspection the decision and all public comments in accordance with the notification procedure in Part D, Section IV.A.

**V. Requirements Applicable to Nonattainment Areas**

V.A. Major Stationary Sources.

For any new major stationary source or major modification, the Division shall grant a permit if it determines that the following conditions in Sections V.A.1. through V.A.6., as well as those in Section III.D.1. of Part B of this regulation, will be met:

V.A.1. The proposed source will achieve the lowest achievable emission rate for the specific source category.

V.A.2. The applicant has certified that all other existing major stationary sources owned, operated, or controlled by the applicant (or any entity controlling, controlled by, or under the common control with the applicant) in Colorado are in compliance with the requirements of the State implementation plan and the federally approved state implementation plan, or are subject to and in compliance with an enforceable compliance schedule, or a federally enforceable compliance schedule.

V.A.3. Prior to the date of commencement of operations, the ratio of total actual emission reductions compared to the emissions increase (offsets) shall be at least one for one (1:1), unless an alternative ratio is provided for the applicable nonattainment area as identified in Section V.A.3.a., below.

V.A.3.a. Offset Ratios

V.A.3.a(i) For ozone nonattainment areas that are subject to subpart 2, part D, title I of the Federal Act, the offset ratio of total actual emission reductions of VOC to the emissions increase of VOC shall be as follows:

V.A.3.a(i)(a) In any marginal nonattainment area for ozone – at least 1.1:1;

V.A.3.a(i)(b) In any moderate nonattainment area for ozone – at least 1.15:1;

V.A.3.a(i)(c) In any serious nonattainment area for ozone – at least 1.2:1;

V.A.3.a(i)(d) In any severe nonattainment area for ozone – at least 1.3:1; or

V.A.3.a(i)(e) In any extreme nonattainment area for ozone – at least 1.5:1.

V.A.3.a(ii) For all areas within an ozone transport region that is subject to subpart 2, part D, title 1 of the Federal Act, and that are not designated as serious, severe or extreme and are subject to subpart 1, part D, title 1 of the Federal Act – at least 1.15:1.

- V.A.3.a.(iii) For ozone nonattainment areas that are subject to subpart 1, part D, title I of the Federal Act, including 8-hour ozone nonattainment areas subject to 40 CFR, Part 51, Section 51.902(b), the ratio of total actual emissions reductions of VOC to the emissions increase of VOC shall be at least 1:1.
- V.A.3.b. Offsets must be obtained from existing sources (whether or not under the same ownership) within the nonattainment area for each pollutant, or its precursors, for which the area is nonattainment. Offsets must represent reasonable further progress towards attainment of the National Ambient Air Quality Standards when considered in connection with other new and existing sources of emissions. In addition, offsets for PM<sub>10</sub>, PM<sub>2.5</sub>, sulfur oxides, and carbon monoxide must show, through atmospheric modeling, a positive net air quality benefit in the area affected by the emissions. Provided, however, that offsets meeting the requirements of this Section V.A.3. may also be obtained from existing sources outside the nonattainment area if the applicant demonstrates:
- V.A.3.b.(i) A greater air quality benefit may thus be achieved, or sufficient offsets are not available from sources within the nonattainment area; and
- V.A.3.b.(ii) The other area has an equal or higher nonattainment classification than the area in which the source is located; and
- V.A.3.b.(iii) Emissions from such other area contribute to a violation of the National Ambient Air Quality Standard in the nonattainment area in which the source is located.
- V.A.3.b.(iv) With respect to offsets obtained from outside the nonattainment area, the Division may increase the ratio of the required offsets to new emissions the greater the distance such offsets are from the new or modified source.
- V.A.3.c. Offsets must be for the same regulated NSR pollutant, except that offset requirements for direct PM<sub>2.5</sub> emissions or PM<sub>2.5</sub> precursors may be satisfied by offsetting reductions in direct PM<sub>2.5</sub> emissions or emissions of any PM<sub>2.5</sub> precursor identified under Section II.A.40. of Part D.
- V.A.4. The permit application shall include an analysis of alternative sites, sizes, production processes and environmental control techniques for such proposed source that demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.
- V.A.5. Offsets for which emission reduction credit is taken must be enforceable through permit conditions or source specific state implementation plan revisions.
- V.A.6. The applicant will demonstrate that emissions from the proposed source will not adversely impact visibility in a Class I area. This demonstration shall be reviewed by the Federal Land Manager and any determination made by the Federal Land Manager shall be considered in the Division's decision to grant the permit. If an adverse impact, as described in Section XIV.E., is predicted by the Division, the permit application will be denied. Federal Land Manager involvement shall follow the same procedures as stated in Section XIII.A. of this Part D. The demonstration will be performed using either techniques described in the latest version of the U.S. EPA document entitled "Workbook for Estimating Visibility Impairment" or other techniques approved by the Division.

V.A.7. Applicability of Certain Nonattainment Area Requirements

V.A.7.a. Any major stationary source in a nonattainment area is subject to the requirements of Section V.A. of this Part D.

V.A.7.b. The requirements of Section V.A. shall apply at such time that any stationary source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation that was established after August 7, 1980 on the capacity of the source or modification to otherwise emit a pollutant, such as a restriction on hours of operation.

V.A.7.c. The following provisions apply to projects at existing emissions units at a major stationary source (other than projects at a source with a PAL) in circumstances where there is a project that is not a part of a major modification and the owner or operator elects to use the method specified in Sections II.A.38.b.(i) through II.A.38.b.(iii) of this Part D for calculating projected actual emissions.

V.A.7.c.(i) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

V.A.7.c.(i)(A) A description of the project;

V.A.7.c.(i)(B) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and

V.A.7.c.(i)(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under Section II.A.38.b.(iii) of this part and an explanation for why such amount was excluded, and any netting calculations, if applicable.

V.A.7.c.(ii) If the emissions unit is an existing electric utility steam generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in Section V.A.7.c.(i) to the Division. Nothing in this Section V.A.7.c.(ii) shall be construed to require the owner or operator of such a unit to obtain any determination from the Division before beginning actual construction.

V.A.7.c.(iii) The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions units identified in Section V.A.7.c.(i)(B); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the change, or for a period of ten years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.

V.A.7.c.(iv) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the Division within sixty days after the end of each year during which records must be generated under Section V.A.7.c.(iii) setting out the unit's annual emissions during the calendar year that preceded submission of the report.

V.A.7.c.(v) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the Division if the annual emissions, in tons per year, from the project identified in Section V.A.7.c.(i), exceed the baseline actual emissions (as documented and maintained pursuant to Section V.A.7.c.(i)(C)) by a significant amount (as defined in Section II.A.44. of this part) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to Section V.A.7.c.(i)(C). Such report shall be submitted to the Division within sixty days after the end of such year. The report shall contain the following:

V.A.7.c.(v)(A) The name, address and telephone number of owner or operator of the major stationary source;

V.A.7.c.(v)(B) The annual emissions as calculated pursuant to Section V.A.7.c.(iii); and

V.A.7.c.(v)(C) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

V.A.7.d. The owner or operator of the source shall make the information required to be documented and maintained pursuant to Section V.A.7.c. available for review upon request for inspection by the Division or the general public.

V.A.8. Exemptions from certain nonattainment area requirements:

V.A.8.a. The following are exempt from the major stationary source criteria of Section V.A.3. of this part.

V.A.8.a.(i)(A) Portable sources that will relocate outside a nonattainment area in less than one year.

V.A.8.a.(i)(B) Each pilot plant that operates an aggregate of less than six months.

V.A.8.a.(i)(C) Construction phases of a new or modified building, facility, structure, or installation. These may, at the discretion of the Division, exceed a period of one year.

V.A.8.a.(i)(D) Other temporary processes or activities of less than one year in duration.

V.A.8.a.(i)(E) Sources undergoing fuel switches as required by federal order if the Division determines that:

V.A.8.a.i(E)(1) The applicant has used best efforts in seeking the required emission offsets but was unsuccessful;

V.A.8.a.i(E)(2) All available emission offsets were obtained; and,

V.A.8.a.i(E)(3) The applicant will continue to seek emission offsets as they become available.

**VI. Requirements applicable to attainment and unclassifiable areas and pollutants implemented under Section 110 of the Federal Act (Prevention of Significant Deterioration Program).**

VI.A. Major Stationary Sources and Major Modifications.

The requirements of this Section VI. shall apply to any major stationary source and any major modification with respect to each pollutant regulated under the Act and the Federal Act that it would emit, except as this Regulation Number 3 would otherwise allow.

For any new major stationary source or major modification proposing to construct in any area in Colorado designated under Section 107 (d) of the Federal Act as attainment or unclassifiable for any criteria pollutant as of the date of submittal of a complete application under this Regulation Number 3, or for pollutants implemented under Section 110 of the Federal Act, the Division shall grant a permit if it determines that the following requirements, in addition to those in Section III.D.1. of Part B of this regulation, have been or will be met:

VI.A.1. Control Technology Review.

VI.A.1.a. A new major stationary source shall apply Best Available Control Technology for each pollutant regulated under the Act or Federal Act that it would have the potential to emit in significant amounts.

VI.A.1.b. A major modification shall apply best available control technology for each pollutant regulated under the Act or Federal Act for which there would be a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation of the unit.

VI.A.1.c. For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than eighteen months prior to commencement of construction of each independent phase of the project. The review will be conducted in a timely manner that will allow the owner or operator to proceed with scheduled construction of the source. During the review, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source.

VI.A.2. Source Impact Analysis. The owner or operator of the proposed source or modification shall demonstrate to the Division that allowable emission increases from the proposed source or modification in conjunction with all other applicable emissions increases or reductions (including secondary emissions) will not cause or contribute to concentrations of air pollutants in the ambient air in violation of either Section VI.A.2.a. or b.

VI.A.2.a. Any state or national ambient air quality standard in any baseline area or air quality control region; or

VI.A.2.b. Any applicable maximum allowable increase over the baseline concentration in any area.

VI.A.2.c. Reserved

VI.A.3. Pre-construction Monitoring and Analysis



- VI.A.3.a. An analysis of ambient air quality in any area that would be affected by the proposed major stationary source or major modification shall be performed for each pollutant regulated under the Act or Federal Act that the source or modification would emit or have the potential to emit in a significant amount, or for which there would be a significant net emissions increase.
- VI.A.3.b. With respect to any such regulated pollutant for which no national ambient air quality standard exists and for which there is an acceptable method for the monitoring of that pollutant, the analysis shall contain such air quality monitoring data as the Division determines are necessary to assess ambient air quality for that pollutant in any area that emissions of that pollutant would affect.
- VI.A.3.c. With respect to any such pollutant for which a national ambient air quality standard does exist, the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the applicable standard or any maximum allowable increase.
- VI.A.3.d. In general, the continuous air quality monitoring data that are required under Section VI.A.3.c., or the pre-application monitoring of air quality related values required by Section XIII.B. of this part, shall have been gathered over a period of one year and shall represent the year preceding receipt of the application, except that, if the Division determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that are required shall have been gathered over at least that shorter period.
- VI.A.3.e. The owner or operator of a proposed major stationary source or major modification of volatile organic compounds who satisfies all conditions of the Code of Federal Regulations Title 40, Part 51, Appendix S, Section IV. (but not including conditions resulting from amendments after July 1, 1991 and not including Section IV. B. of Appendix S) may provide post-approval monitoring data for ozone in lieu of providing pre-construction data as required under Section VI.A.3.a. (Information on obtaining the Code of Federal Regulations Title 40, Part 51, Appendix S, Section IV. is available from the Director, Air Pollution Control Division, 4300 Cherry Creek Drive South, Denver, Colorado, 80246-1530.)

VI.A.4. Post-Construction Monitoring.

At its discretion, the Division may require that the owner or operator of a major stationary source or major modification conduct post-construction ambient monitoring for a period up to one year. The Division may also require additional monitoring beyond the one year period if such monitoring is necessary to determine the effect emissions from the stationary source or modification have, or may have, on air quality in any area. The monitoring of air quality related values or sensitive receptors required by Section XIII.B. of this part, shall be for such time as is necessary to determine the effect emissions from the source or modification will have on the air quality related values or sensitive receptors. Post-construction monitoring requirements will be permit conditions.

VI.A.5. Operation of Monitoring Stations.

The owner or operator of a major stationary source or major modification shall use the U.S. EPA accepted procedures for ambient monitoring as approved by the Division during the operation of monitoring stations for purposes of satisfying the requirements of Sections VI.A.3. and VI.A.4., above.

VI.A.6. Additional Impact Analysis.

For each pollutant that is regulated under the Act or the Federal Act, and for which the source or modification would emit in significant amounts (as defined in Section II.A.44. of this part) or for which there would be a significant net emissions increase, the owner or operator shall provide an analysis of the impairment to visibility, water, soils, and vegetation that would occur as a result of the emissions of such pollutant from the source or modification and general commercial, residential, industrial, and other growth associated with the source or modification.

The analysis of impairment to water will not be used in the determination of best available control technology. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value. The additional impact analysis will include the effects on air quality related values as stated in Section XIII.B. of this part, if applicable. The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the source or modification.

VI.B. Applicability of Certain PSD Requirements.

VI.B.1. The requirements of Section VI.A. do not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant:

VI.B.1.a. The source or modification is subject to Part 3 of the Act and Section V. of this part, and the source or modification would not impact any area designated as attainment or unclassifiable for that pollutant; or

VI.B.1.b. The emissions from the source or modification would not be significant;  
or

VI.B.1.c. The source or modification is a portable stationary source that has previously received a permit under requirements equivalent to those contained in Section VI.A. of this part if:

VI.B.1.c.(i) The source proposes to relocate and emissions of the source at the new location would be temporary;

VI.B.1.c.(ii) The emissions from the source would not exceed its allowable emissions;

VI.B.1.c.(iii) The emissions from the source would impact no Class I area and no area where an applicable increment is known to be violated; and

VI.B.1.c.(iv) Reasonable notice identifying the proposed new location and the probable duration of operation at the new location and a revised Air Pollutant Emission Notice is given to the Division prior to the relocation. Such notice and revised Air Pollutant Emission Notice shall be given to the Division not less than ten days in advance of the proposed relocation unless a different time duration is previously approved by the Division.

VI.B.2. The requirements contained in Sections VI.A.2. through VI.A.4. of this part do not apply:

- VI.B.2.a. To a proposed major stationary source or major modification with respect to a particular pollutant, if the emissions would be from a temporary source, modification or activity, such as construction or exploration, and would not have an impact on air quality in any Class I area or an area where an applicable increment is known to be violated; or
- VI.B.2.b. As they relate to any maximum allowable increase for a Class II area, to a modification of a major stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each pollutant subject to regulation, excluding GHG, under the Act from the modification after the application of best available control technology would be less than fifty tons per year.
- VI.B.3. The Division may exempt a proposed major stationary source or major modification from the requirements of Sections VI.A.3. through VI.A.5. of this part, with respect to monitoring for a particular pollutant if:
- VI.B.3.a. The emissions of the pollutant from the new stationary source or the net emissions increase of the pollutant from the modification would cause air quality impacts, in any area, less than the following:
- VI.B.3.a.(i) Carbon monoxide - 575  $\mu\text{g}/\text{m}^3$ , 8-hour average;
  - VI.B.3.a.(ii) Nitrogen dioxide - 14  $\mu\text{g}/\text{m}^3$ , annual average;
  - VI.B.3.a.(iii) Particulate Matter - PM10 -- 10  $\mu\text{g}/\text{m}^3$ , 24-hour average; PM2.5 – 0  $\mu\text{g}/\text{m}^3$ , 24-hour average;
  - VI.B.3.a.(iv) Sulfur dioxide - 13  $\mu\text{g}/\text{m}^3$ , 24-hour average;
  - VI.B.3.a.(v) Lead - 0.1  $\mu\text{g}/\text{m}^3$ , 3-month average;
  - VI.B.3.a.(vi) Fluorides - 0.25  $\mu\text{g}/\text{m}^3$ , 24-hour average;
  - VI.B.3.a.(vii) Total reduced sulfur - 10  $\mu\text{g}/\text{m}^3$ , 1-hour average;
  - VI.B.3.a.(viii) Hydrogen sulfide - 0.2  $\mu\text{g}/\text{m}^3$ , 1-hour average;
  - VI.B.3.a.(ix) Reduced sulfur compounds - 10  $\mu\text{g}/\text{m}^3$ , 1-hour average; or
- VI.B.3.b. The existing concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations listed in this section; or
- VI.B.3.c. For ozone, the emissions increase or net emissions increase of volatile organic compounds or nitrogen oxides from the source or modification would be less than 100 tons per year; or
- VI.B.3.d. The pollutant is not referred to in this Section VI.B.3.a.; or

- VI.B.3.e. The source or modification was subject to Section VI., with respect to PM<sub>2.5</sub>, as in effect before July 15, 2008, and the owner or operator submitted an application for a permit under this Section VI.A. of Part D before that date consistent with EPA recommendations to use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub>, and the Division subsequently determines that the application as submitted was complete with respect to the PM<sub>2.5</sub> requirements then in effect, as interpreted by EPA in the memorandum entitled "Interim Implementation of New Source Review Requirements for PM<sub>2.5</sub>" (October 23, 1997). Instead, the requirements of Section VI.A. of this Part D, as interpreted in the aforementioned memorandum, that was in effect before July 15, 2008 shall apply to such source or modification.
- VI.B.4. The requirements of this Part D shall apply at such time that any stationary source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation that was established after August 7, 1980, on the capacity of the source or modification to otherwise emit a pollutant such as a restriction on hours of operation.
- VI.B.5. The following provisions apply to projects at existing emissions units at a major stationary source (other than projects at a source with a PAL) in circumstances where there is a project that is not a part of a major modification and the owner or operator elects to use the method specified in Sections II.A.38.b.(i) through II.A.38.b.(iii) of this Part D for calculating projected actual emissions.
- VI.B.5.a. Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
- VI.B.5.a.(i) A description of the project;
  - VI.B.5.a.(ii) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
  - VI.B.5.a.(iii) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under Section II.A.38.b.(iii) of this part, and an explanation for why such amount was excluded, and any netting calculations, if applicable.
- VI.B.5.b. If the emissions unit is an existing electric utility steam-generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in Section VI.B.5.a. to the Division. Nothing in this Section VI.B.5.b. shall be construed to require the owner or operator of such a unit to obtain any determination from the Division before beginning actual construction.
- VI.B.5.c. The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in Section VI.B.5.a.(ii); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the change, or for a period of ten years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.

VI.B.5.d. If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the Division within sixty days after the end of each year during which records must be generated under Section VI.B.5.c. setting out the unit's annual emissions during the calendar year that preceded submission of the report.

VI.B.5.e. If the unit is an existing unit other than an electric utility steam-generating unit, the owner or operator shall submit a report to the Division if the annual emissions, in tons per year, from the project identified in Section VI.B.5.a. exceed the baseline actual emissions (as documented and maintained pursuant to Section VI.B.5.a.(iii)) by a significant amount (as defined in Section II.A.44. of this part) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to Section VI.B.5.a.(iii). Such report shall be submitted to the Division within sixty days after the end of such year. The report shall contain the following:

VI.B.5.e.(i) The name, address and telephone number of the major stationary source;

VI.B.5.e.(ii) The annual emissions as calculated pursuant to Section VI.B.5.c.; and

VI.B.5.e.(iii) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

VI.B.6. The owner or operator of the source shall make the information required to be documented and maintained pursuant to Section VI.B.5. available for review upon request for inspection by the Division or the general public.

VI.B.7. A stationary source or modification may apply the applicable maximum allowable increases for total suspended particulate matter as in effect on the date of the permit application, in meeting the requirements of Section VI.A.2. of this part, if the following requirements are met:

VI.B.7.a. The owner or operator of the source or modification submitted an application for a permit under Regulation Number 3 before the provisions for maximum allowable increases for PM10 took effect; and

VI.B.7.b. The Division determines that the application as submitted, before the date that the maximum allowable increases for PM10 took effect, was complete.

VI.C. Notice to the U.S. EPA.

The Division shall transmit to the Administrator of the U. S. EPA a copy of each permit application relating to a major stationary source or major modification subject to this regulation, and provide notice of every action related to the consideration of such permit.

VI.D. Major Stationary Sources in attainment areas affecting nonattainment areas.

VI.D.1. For any new major stationary source or major modification that is proposed to be constructed in an area designated under Section 107(d) of the Federal Act as attainment or unclassifiable for a particular pollutant and the emissions of such pollutant from which would significantly affect ambient air quality in an area designated as nonattainment for such pollutant, the Division shall grant a permit if it determines that one or both of the following conditions, as well as those in Section III.D.1. of Part B and Section VI.A. of this Part D will be met:

VI.D.1.a. The proposed source or modification will meet the requirements of Sections V.A.1. and V.A.2. of this part, and obtain sufficient emission reductions of such pollutant in the nonattainment area to offset that portion of its emissions of such pollutant that affect the nonattainment area. Offsets may be obtained from outside the nonattainment area as provided in Section V.A.3. of this part; or

VI.D.1.b. The proposed source or modification will achieve an emissions rate that will ensure that the emissions of such pollutant from the source or modification will not significantly affect ambient air quality in the nonattainment area.

VI.D.2. Ambient air quality will be deemed to be significantly affected if, but for any offsets, the applicable significance level set forth in the following table would be exceeded in the nonattainment area.

TABLE OF SIGNIFICANCE LEVELS

Pollutant	Averaging Time				
	Annual	24-Hour	8-Hour	3-Hour	1-Hour
SO <sub>2</sub>	1.0 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>		25 µg/m <sup>3</sup>	
PM10	1.0 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>			
PM2.5	0.3 µg/m <sup>3</sup>	1.2 µg/m <sup>3</sup>			
NO <sub>2</sub>	1.0 µg/m <sup>3</sup>				
CO			500 µg/m <sup>3</sup>		2000 µg/m <sup>3</sup>

VI.D.3. Any new major stationary source or major modification subject to this section that will emit or cause a net emissions increase in volatile organic compounds or oxides of nitrogen shall demonstrate to the satisfaction of the Division that its emissions will not affect any ozone nonattainment area or shall obtain offsets as required in Section VI.D.1., above.

VI.D.4. Emission offsets for PM10, sulfur dioxide, and carbon monoxide, must show, through air quality modeling, a positive net air quality benefit in the portion of the nonattainment area affected by emissions from the proposed source or modification.

## VII. Negligibly Reactive Volatile Organic Compounds (NRVOCs)

VII.A. The negligibly reactive volatile organic compounds referenced in the Common Provisions definition of negligibly reactive volatile organic compounds are considered to be of negligible photochemical reactivity and are neither counted as reactive volatile organic compounds in determining volatile organic compound emission contributions to an increase in ozone nor used as volatile organic compound emission offsets or other volatile organic compound emission trading credits against volatile organic compounds not listed in the common provisions negligibly reactive volatile organic compound definition.

VII.B. Negligibly reactive volatile organic compounds may be substituted for volatile organic compounds and the resulting decrease in volatile organic compound emissions, if otherwise creditable, may be used for offset, banking or other emission trading credit.

**VIII. Area Classifications**

VIII.A. The following areas in Colorado shall be Class I areas and may not be redesignated:

VIII.A.1. National Parks

VIII.A.1.a. Rocky Mountain

VIII.A.1.b. Mesa Verde

VIII.A.2. National Wilderness Areas

VIII.A.2.a. Black Canyon of the Gunnison

VIII.A.2.b. Eagle's Nest

VIII.A.2.c. Flattops

VIII.A.2.d. Great Sand Dunes

VIII.A.2.e. La Garita

VIII.A.2.f. Maroon Bells - Snowmass

VIII.A.2.g. Mount Zirkel

VIII.A.2.h. Rawah

VIII.A.2.i. Weminuche

VIII.A.2.j. West Elk

VIII.B. All other areas of Colorado, unless otherwise specified by Act of Congress or the Colorado legislature, or the Commission pursuant to Section IX. are designated Class II; provided, however that in the following areas as they existed on August 7, 1977 (maps available from the Division), the increase allowed in sulfur dioxide concentrations over the baseline concentration shall be the same as the increase established by Section 163(b) of the Federal Act for Class I areas, except that such allowable increases may not be allowed if a Federal Land Manager should make an adverse impact determination under Section XIII.C. with which the Division concurs and except that such allowable increases, may be exceeded by compliance with the provisions of Sections XIII.D., XIII.E., or XIII.F.:

VIII.B.1. National Monuments

VIII.B.1.a. Florissant Fossil Beds

VIII.B.1.b. Colorado

VIII.B.1.c. Dinosaur

VIII.B.1.d. Great Sand Dunes (those portions not included as National Wilderness Areas in Section VIII.A.2.)

VIII.B.2. Forest Service Primitive Areas

VIII.B.2.a. Uncompahgre Mountain

VIII.B.2.b. Wilson Mountain

VIII.B.3. Lands administered by the Federal Bureau of Land Management in the Gunnison Gorge Recreation Area as of October 27, 1977. All areas designated Class II under this section may be redesignated as provided in Section IX. of this part.

VIII.B.4. National Parks

Black Canyon of the Gunnison (those portions not included as National Wilderness Areas in Section VIII.A.2.)

VIII.C. The following areas may be redesignated only as Class I or II.

VIII.C.1. An area that exceeds ten thousand acres in size and is a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore; and

VIII.C.2. A national park or national wilderness area established after August 7, 1977, that exceeds ten thousand acres in size.

VIII.D. The Commission recognizes out of state Class I areas that have been listed in the Federal Register (44 Fed. Reg. 69124). Emissions from sources in Colorado shall not violate any standard in these areas.

## **IX. Redesignation**

IX.A. Except as otherwise provided in this section or Section VIII. of this part, the Commission may redesignate any area in Colorado as Class I, Class II or Class III as herein provided. The Commission will provide notice to the General Purpose Unit of local government in an area where the maximum allowable increase is being approached.

IX.B. The Commission shall review and consider a request for redesignation by any person.

IX.C. The Commission shall not set a hearing date on a proposed redesignation until the following have been completed:

IX.C.1. A complete description of the area proposed for redesignation;

IX.C.2. A detailed statement of the circumstances that support the proposed redesignation;

IX.C.3. A prediction of the costs and benefits for the affected population from the proposed redesignation;

IX.C.4. A technical analysis of expected impacts on ambient air quality in adjacent or nearby areas;

IX.C.5. Comments, or evidence of an opportunity for submission of comments, by all appropriate regional planning agencies and councils of government organizations, affected municipalities and other affected political subdivisions; and

IX.C.6. An analysis of the relationship of the proposed redesignation with applicable county or regional development plans, including but not limited to, comprehensive area wide plans and 208 water quality plans.



- IX.D. The Commission shall provide sixty day notice prior to a public hearing, including notice to other states, Indian governing bodies and Federal Land Managers whose lands may be affected by a proposed redesignation, of any proposed redesignation, and conduct public hearings on such proposed redesignation in or near areas within Colorado that may be affected by such proposed redesignation, including at least one public hearing within or as near as is practicable to the area to be redesignated. At least thirty days prior to any such public hearings, the Commission shall make available for public inspection a discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic, and societal and energy effects of the proposed redesignation. The notice announcing any public hearings shall contain appropriate notification of the availability of such discussion.
- IX.E. Prior to the issuance of notice respecting the proposed redesignation of an area that includes any federal lands, the Commission shall provide written notice to the appropriate Federal Land Manager and afford adequate opportunity (not in excess of sixty days) to confer with the Commission respecting the notice of proposed redesignation and to submit written comments and recommendations with respect to such notice of proposed redesignation. In redesignating any area with respect to which any Federal Land Manager had submitted written comments and recommendations, the Commission shall publish a list of any inconsistency between such redesignation and such comments and recommendations and an explanation of such inconsistency (together with the reasons for making such redesignation against the recommendation of the Federal Land Manager).
- IX.F. All redesignations, except any established by an Indian governing body, shall be specifically approved; (1) by the governor, after consultation with the appropriate committees of the legislature, if it is in session, or with the leadership of the legislature, if it is not in session, and (2) by resolutions or ordinances enacted by the general purpose units of local government representing a majority of the residents of the area to be redesignated.
- IX.G. No area may be redesignated if such redesignation would cause or contribute to concentrations of any air pollutant in any other area that exceed any maximum allowable increase or maximum allowable concentration permitted under the classification of such area.
- IX.H. Lands within the exterior boundaries of reservations of federally recognized Indian tribes may be redesignated only by the appropriate Indian governing body.
- IX.I. Any redesignation shall constitute a revision to the Colorado State Implementation Plan and shall be submitted for approval to the Administrator of the U.S. EPA.
- IX.J. Any redesignation or denial of a proper request for redesignation made pursuant to this Section IX. shall be subject to judicial review in accord with Colorado Revised Statute Section 25-7-120.
- IX.K. Any area other than an area to which Sections VIII.A. or VIII.C. refer to may be redesignated as Class III if any major stationary source or major modification could receive a permit only if the area in question were redesignated as Class III, and any material submitted as part of that application were available, insofar as was practicable, for public inspection prior to any public hearing on redesignation of any area as Class III.

**X. Air Quality Limitations**

**X.A. Ambient Air Increments**

- X.A.1. The maximum allowable increases over the baseline concentration for sulfur dioxide, PM<sub>10</sub>, PM<sub>2.5</sub> or nitrogen dioxide except as provided in Section VIII.B. of this part, are:

X.A.1.a. For any Class I area:

<b>PM2.5 (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	1
Twenty-four hour maximum	2
<b>PM10 (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	4
Twenty-four hour maximum	8
<b>Sulfur dioxide (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	2
Twenty-four hour maximum	5
Three hour maximum	25
<b>Nitrogen dioxide (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	2.5

X.A.1.b. For any Class II area:

<b>PM2.5 (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	4
Twenty-four hour maximum	9
<b>PM10 (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	17
Twenty-four hour maximum	30
<b>Sulfur dioxide (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	20
Twenty-four hour maximum	91
Three hour maximum	512
<b>Nitrogen dioxide (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	25

X.A.1.c. For any Class III area:

<b>PM2.5 (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	8
Twenty-four hour maximum	18
<b>PM10 (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	34
Twenty-four hour maximum	60
<b>Sulfur dioxide (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	40
Twenty-four hour maximum	182
Three hour maximum	700
<b>Nitrogen dioxide (<math>\mu\text{g}/\text{m}^3</math>)</b>	
Annual arithmetic mean	50

X.A.2. The maximum allowable increases over the baseline concentration for any other air pollutant shall be the same as those increases established pursuant to Section 165(a) of the Federal Act.

X.A.3. For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

X.A.4. Periodic Review

X.A.4.a. The Division shall, on a periodic basis, review the adequacy of this Regulation Number 3 for preventing significant deterioration of air quality. Within thirty days after any information becomes available and there is cause to believe that an applicable increment is being violated, the Division shall present the cause for such belief to the Commission.

X.A.4.b. If the Commission concurs that there is cause to believe that an increment is being violated, it shall hold a hearing to determine whether an increment violation exists. The hearing shall be held pursuant to the procedures of Colorado Revised Statute Section 25-7-119. Notice should be given by first class mail to permitted sources that can be reasonably identified as emitting the pollutant in violation and affecting the area of violation.

X.A.4.c. Should the Commission determine that an increment violation exists, the Division shall review all sources affecting the area of increment violation and ensure that all such sources comply with all applicable permit conditions, and state and local regulations. Within thirty days after completing such a review, the Division shall recommend revisions, if necessary, to the Commission to correct the violation. Upon receipt of recommended revisions from the Division, the Commission shall as soon as practicable act to revise this regulation as it deems necessary.

#### X.A.5. Increment Consumption Restriction

X.A.5.a. No new major stationary source or major modification shall individually consume more than seventy-five percent of an applicable increment.

X.A.5.a.(i) Applicants may request a hearing before the Commission to request a waiver of this restriction. The hearing shall be heard in accordance with the provisions of Colorado Revised Statute Sections 25-7-114 (4)(h), 25-7-119 (Colorado Air Pollution Prevention and Control Act), and Colorado Revised Statute 24-4-105 (State Administrative Procedure Act).

X.A.5.a.(i)(A) The Commission shall not set a hearing date for a waiver request until submittal of comments, or evidence of an opportunity for submittal of comments by all appropriate regional planning agencies and councils of government organizations, affected municipalities and other affected political subdivisions has occurred.

X.A.5.a.(i)(B) Ambient Air Limits. No concentrations of a pollutant shall exceed a national ambient air quality standard or a state ambient air standard where no national ambient air quality standard has been established.

## XI. Exclusions From Increment Consumption

XI.A. The following concentrations are excluded in determining compliance with a maximum allowable increase:

- XI.A.1. Concentrations attributable to the increase in emissions from stationary sources that have converted from the use of petroleum products, natural gas, or both by an order in effect under Sections 2(a) and (b) of the federal "Energy Supply and Environmental Coordination Act of 1974" (or any superseding legislation) over the emissions from such sources before the effective date of such an order, but not more than five years after the effective date of such an order.
- XI.A.2. Concentrations attributable to the increase in emissions from sources that have converted from using natural gas by reason of a natural gas curtailment plan in effect pursuant to the Federal "Power Act" over the emissions from such sources before the effective date of such plan, but not more than five years after the effective date of the plan.
- XI.A.3. Concentrations of particulate matter attributable to an increase in emissions from construction or other temporary emission-related activities of new or modified sources.
- XI.A.4. Concentrations attributable to the temporary increase in emissions of sulfur dioxide, or particulate matter, or nitrogen oxides from stationary sources that are affected by revisions of the Colorado State Implementation Plan that are approved by the Administrator of the U.S. EPA and that provide:
  - XI.A.4.a. The time period of such temporary increase in emissions is not renewable and may not exceed two years in duration, unless a longer time is approved by the Division and the U.S. EPA;
  - XI.A.4.b. Such temporary increase in emissions shall not impact a Class I area or an area where an applicable increment is known to be violated or cause or contribute to the violation of a national ambient air quality standard; and
  - XI.A.4.c. Emission limitations shall be in effect at the end of the time period specified in the plan revision that will ensure that the emissions levels from stationary sources affected by the plan revision will not exceed those levels occurring from such sources before the plan revision was approved by the U.S. EPA.

## **XII. Innovative Control Technology**

- XII.A. An owner or operator of a proposed major stationary source or major modification otherwise subject to the requirements of Section VI. of this Part D may request the Division to grant a waiver from the Best Available Control Technology requirements and to approve a system of innovative control technology, in order to encourage the use of such technology.
- XII.B. The Division or the Commission may, with the consent of the governor(s) of other affected states, grant a waiver from the Best Available Control Technology requirements of Section VI.A.1. of this part necessary for the employment of innovative control technology and determine that the source or modification may employ such system if:
  - XII.B.1. The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function;
  - XII.B.2. The owner or operator agrees to achieve a level of continuous emissions reduction greater than or equivalent to that, which would have been required under Section VI.A.1. by a date specified by the Division. Such date shall not be later than four years from the time of startup or seven years from permit issuance;

- XII.B.3. The source or modification would meet the requirements of Sections VI.A.1. and VI.A.2. based on the emissions rate that the stationary source employing the system of innovative control technology would be required to meet on the date specified by the Division;
- XII.B.4. The source or modification would not, before the date specified by the Division under Section XII.B.2., above;
- XII.B.4.a. Cause or contribute to any violation of an applicable national ambient air quality standard; or
- XII.B.4.a.(i) Impact any area where an applicable increment is known to be violated; or
- XII.B.5. All other applicable requirements including those for public participation have been met.
- XII.B.6. The provisions of Section VIII. of this part (relating to Class I areas) have been satisfied with respect to all periods during the life of the source or modification.
- XII.C. The Division shall withdraw any approval to employ a system of innovative control technology made under this section, if:
- XII.C.1. The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or
- XII.C.2. The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare, or safety; or
- XII.C.3. The Division decides at any time that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare, or safety.
- XII.D. If a source or modification fails to meet the required level of continuous emissions reduction within the specified time period, or if the approval is withdrawn in accordance with Section XII.C., above, the Division may allow the source or modification up to an additional three years to meet the requirement for the application of best available control technology through use of a demonstrated system of control.

**XIII. Federal Class I Areas**

- XIII.A. Within twenty days of receipt of a permit application for a new major stationary source or major modification that may affect visibility or air quality related values in any Federal Class I area, the Division shall transmit a copy of the application to all affected Federal Land Managers and consult with them as to its completeness in its analysis and monitoring (if required) of air quality related values. If the Division receives advance notification of a permit application of a source that may affect visibility or air quality related values, it will notify all affected Federal Land Managers within thirty days of such notification. The Division will consider any analysis performed by a Federal Land Manager that indicates there will be an adverse impact on visibility or air quality related values if such analysis is received within thirty days after the Federal Land Manager receives a copy of the complete application. If the Division disagrees with the Federal Land Manager, any notices for public comment or of a public hearing on the application will explain the disagreement or state where the explanation can be obtained.

- XIII.B. In addition to the general impact analysis required by Section VI.A.6. of this part, any source that will have or is likely to have an impact on any designated Class I area may be required to conduct monitoring to establish the condition of and the impact on air quality related values in such Class I area(s) both prior to completing an application for a permit to construct and during the construction and operation of such source.
- XIII.B.1. If monitoring is required, the source shall conduct a private monitoring program. However, if monitoring is being conducted by any other existing source or government agency, the new source may enter into a joint monitoring program with that source or agency. All monitoring programs must be approved in advance by the Division.
- XIII.B.2. Pre-application monitoring may include the monitoring of not more than three air quality related values or sensitive receptors of air quality related values specified by the Division after consultation with the Federal Land Manager. The air quality related values or sensitive receptor(s) selected must be important to the affected Class I area, and there must be cause to believe that monitoring of the air quality related values or sensitive receptors will provide a basis for evaluating effects to the relevant air quality related values.
- XIII.B.3. Monitoring during construction and operation may only be required for the sensitive receptors specified for pre-application monitoring, unless new information becomes available that demonstrates a significant economic or technological advantage of monitoring a different sensitive receptor, and it is acceptable to the source owner or operator.
- XIII.B.4. Monitoring of air quality related values or sensitive receptors of air quality related values may only be required if:
- XIII.B.4.a. Monitoring methods are reasonably available and research and development of monitoring methods are unnecessary;
- XIII.B.4.b. The major effect on the air quality related values or sensitive receptor would reasonably be predicted to be a result of the applicant's individual emissions or of the applicant's emissions in combination with any person's emissions with whom the applicant may be required to conduct joint monitoring; and
- XIII.B.4.c. It is economically reasonable for the source to conduct such monitoring.
- XIII.C. Sources Impacting Federal Class I Area - Additional Requirements. Federal Land Managers may present to the Division, after its preliminary analysis required under Section III.B. of Part B of this regulation, a demonstration that the emissions from the proposed source or modification would have an adverse impact on the air quality related values (including visibility) of any federal mandatory Class I lands, notwithstanding that the change in air quality resulting from emissions from such source or modification would not cause or contribute to concentrations that would exceed the maximum allowable increases for a Class I area. If the Division concurs with such demonstration, or in the event the Federal Land Manager fails to perform an adverse impact analysis and the Division determines that there is an adverse impact on visibility, or the Division determines that a demonstration of no adverse impact is in error, the Division shall not issue the permit.

XIII.D. Class I Variances. The owner or operator of a proposed major stationary source or major modification may demonstrate to the satisfaction of the Federal Land Manager that the emissions from such source or modification would not have an adverse impact on the air quality related values (including visibility) of Class I lands under the Federal Land Manager's jurisdiction, notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations that would exceed the maximum allowable increases for a Class I area. If the Federal Land Manager concurs with such demonstration and so certifies to the Division, the Division or the Commission may, provided that applicable requirements are otherwise met, issue the permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide, and PM10, PM2.5 and nitrogen oxides would not exceed the following maximum allowable increases over the minor source baseline concentration for such pollutants.

<b>Maximum allowable increase</b>	
Particulate matter	
PM2.5, Annual arithmetic mean	4 µg/m <sup>3</sup>
PM2.5, Twenty-four hour maximum	9 µg/m <sup>3</sup>
PM10, Annual arithmetic mean	17 µg/m <sup>3</sup>
PM10, Twenty-four hour maximum	30 µg/m <sup>3</sup>
Sulfur dioxide	
Annual arithmetic mean	20 µg/m <sup>3</sup>
Twenty-four hour maximum	91 µg/m <sup>3</sup>
Three hour maximum	325 µg/m <sup>3</sup>
Nitrogen dioxide	
Annual arithmetic mean	25 µg/m <sup>3</sup>

XIII.E. Sulfur Dioxide Variance by Governor

XIII.E.1. The owner or operator of a proposed major stationary source or major modification that cannot be approved under Section XIII.D., above, may demonstrate to the governor that the source or modification cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for periods of twenty-four hours or less, applicable to any Class I area and, in the case of the federal mandatory Class I areas, that a variance under this section would not have an adverse affect on the air quality related values of the area (including visibility).

XIII.E.2. The governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may grant, after notice and an opportunity for a public hearing, a variance from such maximum allowable increase.

XIII.E.3. If such variance is granted, the Division may issue a permit to such source or modification in accordance with Section XIII.G., below, if the applicable requirements of Regulation Number 3 are otherwise met.

XIII.F. Variance by the Governor with the President's Concurrence

XIII.F.1. The recommendations of the governor and the Federal Land Manager shall be transferred to the president in any case where the governor recommends a variance with which the Federal Land Manager does not concur.

XIII.F.2. If the president approves the variance, the Division may issue a permit in accordance with Section XIII.G., below, if the applicable requirements of Regulation Number 3 are otherwise met.

XIII.G. Emission Limitations for Presidential and Gubernatorial Variance. In the case of a permit to be issued under Sections XIII.E. and XIII.F., the source or modification shall comply with emission limitations as may be necessary to assure that emissions of sulfur dioxide from the source or modification would not (during any day on that the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations that would exceed the following maximum allowable increases over the baseline concentration assure that such emissions would not cause or contribute to concentrations that exceed the otherwise applicable maximum allowable increases for periods of exposure of twenty-four hours or less for more than eighteen days, not necessarily consecutive, during any annual period:

Maximum Allowable Increase ( $\mu\text{g}/\text{m}^3$ )

Period of Exposure	Terrain Areas	
	Low	High
24-hour maximum	36	62
3-hour maximum	130	221

**XIV. Visibility**

XIV.A. Purpose

This section assures reasonable progress towards the national goal of preventing future, and remedying existing, visibility impairment in Class I areas, where such impairment results from man-made air pollution.

XIV.B. Applicability

This section applies to all Class I areas and to sources in Colorado the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area (even if the area is in another state).

XIV.C. Definitions

For purposes of this Section XIV.

XIV.C.1. Adverse impact on visibility means for the purpose of Section XIV.E. visibility impairment that interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the Class I area. Any determination shall be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of visibility impairments, and how these factors correlate with times of visitor use of the Class I area, and the frequency and timing of natural conditions that reduce visibility.

XIV.C.2. Best Available Retrofit Technology means an emission limitation achievable through the application of the best system of continuous emission reduction for each pollutant that is emitted by an existing stationary facility. The emission limitation shall be established on a case-by-case basis taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility that may reasonably be anticipated to result from the use of such technology.



- XIV.C.3. Existing stationary facility means any of the stationary sources of air pollutants defined in Sections I.B.19., I.B.24. through I.B.27., I.B.36., and I.B.43. of Part A, Section I.A.1.(c) of Part C, and Section II.A.24. of Part D of this regulation, including any reconstructed source that was not in operation prior to August 7, 1962, and had commenced construction on or before August 7, 1977, and has the potential to emit two hundred and fifty tons per year or more of any air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable shall be counted.
- XIV.C.4. Long-term strategy means a ten to fifteen year plan for making reasonable progress toward the national goal specified in Section XIV.A. of this part.
- XIV.C.5. Natural conditions include naturally occurring phenomena that reduce visibility as measured in terms of visual range, contrast, or coloration.
- XIV.C.6. Reasonably attributable means attributable by visual observation or any other technique the state deems appropriate.
- XIV.C.7. Significant impairment means, for purposes of Section XIV.D.2.c., visibility impairment, that interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the Class I area.
- XIV.C.8. Visibility impairment means any humanly perceptible change in visibility (visual range, contrast, coloration) that would have existed under natural conditions.
- XIV.C.9. Class I area means an area listed in Section VIII.A. of this part and any area that may be redesignated to Class I in the future.
- XIV.D. Existing Impairment
- XIV.D.1. The Federal Land Manager or the Division may, at any time, certify to the Division director that visibility impairment exists in any Class I area. The Division may also certify that visibility impairment exists in any Class I area without the concurrence of the Federal Land Manager.
- XIV.D.2. Each existing stationary facility located in Colorado to which the cause of or contribution to visibility impairment in any Class I area is reasonably attributable, shall apply for and obtain from the Division a permit that requires the installation and operation of Best Available Retrofit Technology. The facility shall install and operate Best Available Retrofit Technology as expeditiously as practicable but in no case later than five years after permit issuance.
- XIV.D.2.a. For fossil-fuel fired generating plants having a total generating capacity in excess of 750 megawatts, Best Available Retrofit Technology shall be determined pursuant to "Guidelines for Determining Best Available Retrofit Technology for Coal-fired Power Plants and Other Existing Stationary Facilities" (U.S. EPA Publication Number 450/3-80-009b, 1980), and state of the art information available at the time of Best Available Retrofit Technology analysis. Pursuant to Colorado Revised Statute Section 24-4-103 (12.5), the document referenced in this section is available for public inspection during normal working hours, or copies are available for cost, from the technical secretary of the Commission, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. This Regulation Number 3 does not include later amendments to or editions of the referenced documents.

- XIV.D.2.b. Should technological or economic limitations make the application of Best Available Retrofit Technology as previously defined infeasible; the state may instead prescribe a design, equipment, work practice, or other operational standard, or combination thereof, as representing Best Available Retrofit Technology. Where a facility is subject to Section XIV.D.2.a., due to technological limitations, the facility shall install and operate Best Available Retrofit Technology as previously defined when new technology for control of the pollutant becomes reasonably available provided: 1) the pollutant is emitted by the existing facility; 2) controls representing Best Available Retrofit Technology for the pollutant have not previously been required under this section; and 3) the impairment of visibility in any Class I area is reasonably attributable to the emissions of that pollutant.
- XIV.D.2.c. Any existing stationary facility required to install and operate Best Available Retrofit Technology under this section may apply to the Division and the U.S. EPA Administrator for an exemption.
- XIV.D.2.c.(i) An application under this section must include all available documentation relevant to the impact of the source's emissions on visibility in any Class I area and a demonstration by the existing stationary facility that it does not or will not by itself or in combination with other sources, emit any air pollutant that may be reasonably anticipated to cause or contribute to a significant impairment of visibility in any Class I area.
- XIV.D.2.c.(ii) Any fossil fuel fired power plant with a total generating capacity of 750 megawatts or more may receive an exemption from Best Available Retrofit Technology only if the owner or operator of such power plant demonstrates to the satisfaction of the Division that such power plant is located at such a distance from all Class I areas that such power plant does not or will not by itself or in combination with other sources emit any air pollutant that may reasonably be anticipated to cause or contribute to significant impairment of visibility in any such Class I area.
- XIV.D.2.c.(iii) The existing stationary facility must give prior written notice to all affected Federal Land Managers of any application for exemption.
- XIV.D.2.c.(iv) The Federal Land Manager may provide an initial recommendation or comment on the disposition of such application. Such recommendation, where provided, must be part of the exemption application. This recommendation is not to be construed as the concurrence required under Section XIV.D.2.c.(iv).
- XIV.D.2.c.(v) After notice and opportunity for public hearing, before the Commission, the Division may grant or deny the exemption.
- XIV.D.2.c.(vi) An exemption granted by the Division under this section will be effective only upon concurrence by all affected Federal Land Managers.
- XIV.D.2.c.(vii) Any determination shall be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of the visibility impairment, and how these factors correlate with time of visitor use of the Class I area, and the frequency and timing of natural conditions that reduce visibility.

XIV.D.2.d. The Division shall process any application for a permit required by Section XIV.D.2., above, or any application for exemption under Section XIV.D.2.b., according to the time constraints stated in Part B, Section III.B. of this regulation. All applications for permits or exemptions will be subject to public notice and public hearing requirements applicable to sources subject to the provisions of Section VI. of this part. Processing fees will be charged to the applicant to recover actual costs incurred by the Division as stated in Section VI. of Part A of this Regulation Number 3.

XIV.E. New Source Review

Applicants for new major stationary sources and major modifications shall demonstrate that the proposed source will not have an adverse impact on visibility in a Class I area as required by Sections V.A.6., VI.A.6., and XIII. of this part.

XIV.F. Long-term Strategy

XIV.F.1. The Commission shall review and revise, if appropriate, the long-term strategy every five years.

XIV.F.1.a. During the long-term strategy development and review process, the Commission shall consult with the Federal Land Managers.

XIV.F.1.b. A public hearing shall be held upon request of any interested person. The state shall provide written notification to each affected Federal Land Manager and other affected states at least sixty days prior to holding any public hearing.

XIV.F.1.c. The Division shall prepare a report for the Commission on any progress made toward the national visibility goal since the last long-term strategy revisions. The report will be made available on September 1, at least every fifth year following the submittal of the previous report and consistent with the federal five-year Regional Haze reporting schedule. The report shall include an assessment of:

XIV.F.1.c.(i) The progress achieved in remedying existing impairment of visibility in any Class I area;

XIV.F.1.c.(ii) The ability of the long-term strategy to prevent future impairment of visibility in any Class I area;

XIV.F.1.c.(iii) Any change in visibility since the last such report, or in the case of the first report, since plan approval, including an assessment of existing conditions;

XIV.F.1.c.(iv) Additional measures, including the need for state implementation plan revisions, that may be necessary to assure reasonable progress toward the national visibility goal;

XIV.F.1.c.(v) The progress achieved in implementing Best Available Retrofit Technology and meeting other schedules set forth in the long-term strategy;

XIV.F.1.c.(vi) The impact of any exemption granted under Section XIV.D.2.c.; and,

XIV.F.1.c.(vii) The need for Best Available Retrofit Technology to remedy existing impairment in an integral vista declared since plan approval.

XIV.G. Public Land Emission Inventories

XIV.G.1. Federal Public Lands

XIV.G.1.a. For the purposes of this Section XIV.G., federal land management agency means a federal agency that owns and manages at least 50,000 acres of federal land in Colorado.

XIV.G.1.b. Federal land management agencies shall submit to the Commission emission inventories by December 31, 2001 and no less frequently than every five years thereafter.

XIV.G.1.c. The inventory shall include the sources listed in Section XIV.G.3.b. of this regulation and emissions of criteria pollutants, including surrogates or precursors for such pollutants, from activities in Colorado or other states that may affect any mandatory class I federal area in Colorado by reducing visibility in such area.

XIV.G.2. Colorado State Public lands

XIV.G.2.a. The Division shall submit to the Commission emission inventories for all state land management agencies including the State Land Board, the Department of Agriculture, and the Department of Natural Resources by July 1, 2002 and no less frequently than every five years thereafter.

XIV.G.2.b. The inventory shall include the sources listed in Section XIV.G.3.b. of this regulation and emissions of criteria pollutants, including surrogates or precursors for such pollutants, from activities in Colorado that may affect any mandatory Class I federal area in Colorado by reducing visibility in such area.

XIV.G.3. Public Land Emission Inventory Requirements

XIV.G.3.a. The inventory shall include both current emissions and projected future emissions, over at least a five-year period.

XIV.G.3.b. The following sources on public lands shall be included in the inventory:

XIV.G.3.b.(i) Stationary source emissions, based on existing air pollution emission notices filed with the Division;

XIV.G.3.b.(ii) Mobile sources utilizing state lands, excluding state and federal highways;

XIV.G.3.b.(iii) Paved and unpaved roads;

XIV.G.3.b.(iv) Fires on public lands from all sources; and

XIV.G.3.b.(v) Biogenic sources, including emissions from flora and fauna.

XIV.G.4. Public Hearings

Not later than December 31, 2002, and no less frequently than every five years thereafter, a public hearing before the Commission shall be conducted to approve the public land emission inventories.

**XV. Actuals PALs**

XV.A. Applicability.

XV.A.1. At the request of an owner or operator, the Division may approve the use of an actuals PAL, including for GHGs on either a mass basis or a CO<sub>2</sub>e basis, in a Title V permit for any existing major stationary source or any existing GHG-only source that has operated for at least two years if the PAL meets the requirements in Sections XV.A. through XV.L. The term "PAL" shall mean "actuals PAL" throughout Section XV. of this part.

XV.A.2. Any physical change in or change in the method of operation of a major stationary source or a GHG-only source that maintains its total source-wide emissions below the PAL level, meets the requirements in Sections XV.A. through XV.L., and complies with the PAL permit:

XV.A.2.a. Is not a major modification for the PAL pollutant;

XV.A.2.b. Is not subject to the major NSR review procedures in Sections I.B., V., and VI. of this part;

XV.A.2.c. Is not subject to the provisions in Section V.A.5.b. of this part (restrictions on relaxing enforceable emission limitations that the major stationary source used to avoid applicability of the major NSR program); and

XV.A.2.d. Does not make GHGs subject to regulation as defined in Part A, Section I.B.44.

XV.A.3. Except as provided under Section XV.A.2.c. above, a major stationary source or a GHG-only source shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.

XV.B. Permit application requirements.

As part of a permit application requesting a PAL, the owner or operator of a major stationary or a GHG-only source shall submit the following information to the Division for approval (in addition to the information required by Part C of this Regulation):

XV.B.1. A list of all emissions units at the source designated as small (as defined in Section II.A.47. of this part), significant (as defined in Section II.A.46. of this part), and major (as defined in Section II.A.22. of this part) based on their potential to emit, and identifying each as such. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations or work practices apply to each unit.

XV.B.2. Calculations of the baseline actual emissions for each emissions unit listed in Section XV.B.1. above (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup, shutdown and malfunction.

- XV.B.3. The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring data to monthly emissions and annual emissions based on a twelve-month rolling total for each month as required by Section XV.M.1.
- XV.B.4. As part of a permit application requesting a GHG PAL, the owner or operator of a major stationary source or a GHG-only source shall submit a statement by the source owner or operator that clarifies whether the source is an existing major source as defined in Sections II.A.24.a. and II.A.24.b. or a GHG-only source as defined in Section XV.P.1.
- XV.C. General requirements for establishing PALs.
- XV.C.1. A PAL may be established at a major stationary source or a GHG-only source, provided that, at a minimum, the requirements in Sections XV.C.1.a. through XV.C.1.g. below are met.
- XV.C.1.a. The PAL shall impose an annual emission limitation expressed on a mass basis in tons per year, or expressed in tons per year CO<sub>2</sub>e, that is enforceable as a practical matter, for the entire major stationary source or GHG-only source. For each month during the PAL effective period after the first twelve months of establishing a PAL, the major stationary source or GHG-only source owner or operator shall demonstrate that the sum of the monthly emissions of the PAL pollutant from each emissions unit under the PAL for the previous twelve consecutive months is less than the PAL (a rolling twelve-month total). For each month during the first eleven months from the PAL effective date, the major stationary source or GHG-only source owner or operator shall demonstrate that the sum of the preceding monthly emissions of the PAL pollutant for each emissions unit under the PAL is less than the PAL.
- XV.C.1.b. The PAL shall be established in a PAL permit section of an operating permit issued pursuant to Part C of this regulation that meets the public participation requirements in Section XV.D.
- XV.C.1.c. The PAL permit shall contain all the requirements of Section XV.F.
- XV.C.1.d. The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major stationary source or GHG-only source.
- XV.C.1.e. Each PAL shall regulate emissions of only one pollutant.
- XV.C.1.f. Each PAL shall have a PAL effective period of ten years.
- XV.C.1.g. The owner or operator of the major stationary source or GHG-only source with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in Sections XV.K. through XV.N. for each emissions unit under the PAL throughout the PAL effective period.
- XV.C.2. At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant, which occur during the PAL effective period, creditable as decreases for purposes of offsets under Section V. unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.

XV.D. Public participation requirement for PALs.

PALs for existing major stationary sources or GHG-only sources shall be established, renewed, or increased in accordance with the significant modification provisions set forth in Section I.A.7. of Part C of this regulation. The Division shall provide the public with notice of the proposed approval of a PAL permit and a thirty-day period for submittal of public comment.

XV.E. Setting the ten-year actuals PAL level.

XV.E.1. Except as provided in Sections XV.E.4. and XV.E.6., the actuals PAL level for a major stationary source or GHG-only source shall be established as the sum of the baseline actual emissions (as defined in Section II.A.4. of this Part D or, for GHGs in Section XV.P.2.) of the PAL pollutant for each emissions unit at the source, plus an amount equal to the applicable significant level for the PAL pollutant under Section II.A.44. of this part, or under the Federal Act, whichever is lower.

XV.E.2. When establishing the actuals PAL level for a PAL pollutant, only one consecutive twenty-four month period may be used to determine the baseline actual emissions for all existing emissions units. However, a different consecutive twenty-four month period may be used for each different PAL pollutant.

XV.E.3. Emissions associated with units that were permanently shut down after this twenty-four month period must be subtracted from the PAL level.

XV.E.4. For newly constructed units (which do not include modifications to existing units) on which actual construction began after the twenty-four month period, in lieu of adding the baseline actual emissions as specified in Section XV.E.1., above, the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

XV.E.5. The Division shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the Division is aware of prior to issuance of the PAL permit. For instance, if the source owner or operator will be required to reduce emissions from industrial boilers in half from baseline emissions of 60 ppm NO<sub>x</sub> to a new rule limit of 30 ppm, then the permit shall contain a future effective PAL level that is equal to the current PAL level reduced by half of the original baseline emissions of such unit(s).

XV.E.6. For CO<sub>2</sub>e based GHG PAL, the actuals PAL level shall be established as the sum of the GHGs baseline actual emissions (as defined in Section XV.P.2.) of GHGs for each emissions unit at the source, plus an amount equal to the amount defined as "significant" on a CO<sub>2</sub>e basis for the purposes of Part A, Section I.B.44.c. at the time the PAL permit is being issued.

XV.E.6.a. When establishing the actuals PAL level for a CO<sub>2</sub>e-based PAL, only one consecutive 24-month period must be used to determine the baseline actual emissions units.

XV.E.6.b. Emissions associated with units that were permanently shut down after this 24-month period must be subtracted from the PAL level.

XV.E.6.c. The Division shall specify a reduced PAL level in tons per year CO<sub>2</sub>e in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or state regulatory requirement(s) that the Division is aware of prior to issuance of the PAL permit.

XV.F. Contents of the PAL permit.

The PAL permit shall contain, at a minimum, the information in Sections XV.F.1. through XV.F.11.

XV.F.1. The PAL pollutant and the applicable source-wide emission limitation in tons per year CO<sub>2</sub>e.

XV.F.2. The PAL permit effective date and the expiration date of the PAL (PAL effective period).

XV.F.3. Specification in the PAL permit that if a major stationary source or a GHG-only source owner or operator applies to renew a PAL in accordance with Section XV.I. before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the Division.

XV.F.4. A requirement that emission calculations for compliance determination purposes include emissions from startups, shutdowns and malfunctions.

XV.F.5. A requirement that, once the PAL expires, the major stationary source or GHG-only source is subject to the requirements of Section XV.H.

XV.F.6. The calculation procedures that the major stationary source or GHG-only source owner or operator shall use to convert the monitoring data to monthly emissions and annual emissions based on a twelve-month rolling total for each month as required by Section XV.M.1.

XV.F.7. A requirement that the major stationary source or GHG-only source owner or operator monitors all emissions units in accordance with the provisions under Section XV.K.

XV.F.8. A requirement to retain the records required under Section XV.M. on site. Such records may be retained in an electronic format.

XV.F.9. A requirement to submit the reports required under Section XV.N. by the required deadlines.

XV.F.10. Any other requirements that the Division deems necessary to implement and enforce the PAL.

XV.F.11. A permit for a GHG PAL issued to a GHG-only source shall also include a statement denoting that GHG emissions at the source will not be subject to regulation under Part A, Section I.B.44. as long as the source complies with the PAL.

XV.G. Reopening of the PAL permit.

XV.G.1. During the PAL effective period, the Division shall reopen the PAL permit to:

XV.G.1.a. Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL.

XV.G.1.b. Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under Section V.A.3. of this Part D.

XV.G.1.c. Revise the PAL to reflect an increase in the PAL as provided under Section XV.J.



XV.G.2. The Division has discretion to reopen the PAL permit to:

- XV.G.2.a. Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date.
- XV.G.2.b. Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and that the Division may impose on the major stationary source or GHG-only source.
- XV.G.2.c. Reduce the PAL if the Division determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.

XV.G.3. Except for the permit reopening in Section XV.G.1.a. for the correction of typographical/calculation errors that do not increase the PAL level, all other reopenings shall be carried out in accordance with the public participation requirements of Section XV.D.

XV.H. Expiration of a PAL.

Any PAL that is not renewed in accordance with the procedures in Section XV.I. shall expire at the end of the PAL effective period, and the requirements in Sections XV.H.1. through XV.H.5. shall apply.

XV.H.1. Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the procedures in Sections XV.H.1. through XV.H.5. of this part.

XV.H.1.a. Within the time frame specified for PAL renewals in Section XV.I.2., the major stationary source or GHG-only source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as determined by the Division) by distributing the PAL allowable emissions for the major stationary source or GHG-only source among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under Section XV.I.5., such distribution shall be made as if the PAL had been adjusted.

XV.H.1.b. The Division shall determine whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Division determines is appropriate.

XV.H.2. Each emissions unit(s) shall comply with the allowable emission limitation on a twelve-month rolling total basis. The Division may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS or CPMS to demonstrate compliance with the allowable emission limitation.

XV.H.3. Until the Division issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under Section XV.H.1.a., the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.

XV.H.4. Any physical change or change in the method of operation at the major stationary source or GHG-only source will be subject to the major NSR requirements if such change meets the definition of major modification in Section II.A.23. of this Part D.

XV.H.5. The major stationary source or GHG-only source owner or operator shall continue to comply with any State or Federal applicable requirements that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to Sections V.A.7.b. and VI.B.4. of this part, but were eliminated by the PAL in accordance with the provisions in Section XV.A.2.c.

XV.I. Renewal of a PAL.

XV.I.1. The Division shall follow the procedures specified in Section XV.D. in approving any request to renew a PAL for a major stationary source or GHG-only source, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the Division.

XV.I.2. Application deadline.

A major stationary source or GHG-only source owner or operator shall submit a timely application to the Division to request renewal of a PAL. A timely application is one that is submitted at least twelve months prior to, but not earlier than eighteen months from, the date of PAL permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source or GHG-only source submits a complete application, including any additional information requested by the Division, to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.

XV.I.3. Application requirements.

The application to renew a PAL permit shall contain the information required in Sections XV.I.3.a. through XV.I.3.d., below.

XV.I.3.a. The information required in Sections XV.B.1. through XV.B.3. of this part.

XV.I.3.b. A proposed PAL level.

XV.I.3.c. The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).

XV.I.3.d. Any other information the owner or operator wishes the Division to consider in determining the appropriate level for renewing the PAL.

XV.I.4. PAL adjustment.

In determining whether and how to adjust the PAL, the Division shall consider the options outlined in Sections XV.I.4.a. and XV.I.4.b. However, in no case may any such adjustment fail to comply with Section XV.I.4.c.

- XV.I.4.a. If the emissions level calculated in accordance with Section XV.E. is equal to or greater than eighty percent of the PAL level, the Division may renew the PAL at the same level without considering the factors set forth in Section XV.I.4.b.; or
- XV.I.4.b. The Division may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the Division in its preliminary analysis or technical review document.
- XV.I.4.c. Notwithstanding Sections XV.I.4.a. and XV.I.4.b. above,
- XV.I.4.c.(i) If the potential to emit of the major stationary source or GHG-only source is less than the PAL, the Division shall adjust the PAL to a level no greater than the potential to emit of the source; and
- XV.I.4.c.(ii) The Division shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source or GHG-only source has complied with the provisions of Section XV.J. (increasing a PAL).
- XV.I.5. If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the Division has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or Title V permit renewal, whichever occurs first.
- XV.J. Increasing a PAL during the PAL effective period.
- XV.J.1. The Division may increase a PAL emission limitation only if the major stationary source or GHG-only source complies with the provisions in Sections XV.J.1.a. through XV.J.1.d. below.
- XV.J.1.a. The owner or operator of the major stationary source or GHG-only source shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary or GHG-only source's emissions to equal or exceed its PAL.
- XV.J.1.b. As part of this application, the major stationary source or GHG-only source owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s) exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding ten years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.

XV.J.1.c. The owner or operator obtains a major NSR permit for all emissions unit(s) identified in Section XV.J.1.a., regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the major NSR process (for example, BACT or LAER), even though they have also become subject to the PAL or continue to be subject to the PAL.

XV.J.1.d. The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

XV.J.2. The Division shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with Section XV.J.1.b.), plus the sum of the baseline actual emissions of the small emissions units.

XV.J.3. The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of Section XV.D. of this part.

XV.K. Monitoring requirements for PALs.

XV.K.1. General Requirements.

XV.K.1.a. Each PAL permit shall contain enforceable requirements for the monitoring system that accurately determines plant-wide emissions of the PAL pollutant in terms of mass per unit of time or CO<sub>2</sub>e per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.

XV.K.1.b. The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in Sections XV.K.2.a. through XV.K.2.d. and must be approved by the Division.

XV.K.1.c. Notwithstanding Section XV.K.1.b., you may also employ an alternative monitoring approach that meets the requirements of Section XV.K.1.a. if approved by the Division.

XV.K.1.d. Failure to use a monitoring system that meets the requirements of this Section renders the PAL invalid.

XV.K.2. Minimum Performance Requirements for Approved Monitoring Approaches.

The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in Sections XV.K.3. through XV.K.9:

XV.K.2.a. Mass balance calculations for activities using coatings or solvents;

XV.K.2.b. CEMS (as defined in Section I.B.14. of Part A);

XV.K.2.c. CPMS or PEMS (as defined in Sections I.B.16. and I.B.38., respectively, of Part A); and

XV.K.2.d. Published, verifiable emission factors

XV.K.3. Mass Balance Calculations.

An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:

XV.K.3.a. Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;

XV.K.3.b. Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and

XV.K.3.c. Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Division determines there is site-specific data or a site-specific monitoring program to support another content within the range.

XV.K.4. CEMS.

An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:

XV.K.4.a. CEMS must comply with applicable Performance Specifications found in the Code of Federal Regulations Title 40, Part 60, Appendix B, and Part 75; and

XV.K.4.b. CEMS must sample, analyze and record data at least every fifteen minutes while the emissions unit is operating.

XV.K.5. CPMS or PEMS.

An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:

XV.K.5.a. The CPMS or the PEMS must be based on current site specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and

XV.K.5.b. Each CPMS or PEMS must sample, analyze, and record data at least every fifteen minutes, or at another less frequent interval approved by the Division, while the emissions unit is operating.

XV.K.6. Emission factors.

An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:

XV.K.6.a. All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;

XV.K.6.b. The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and

XV.K.6.c. If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within six months of PAL permit issuance, unless the Division determines that testing is not required.

XV.K.7. A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.

XV.K.8. Notwithstanding the requirements in Sections XV.K.3. through XV.K.7., where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the Division shall, at the time of permit issuance:

XV.K.8.a. Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or

XV.K.8.b. Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.

XV.L. Re-validation.

All data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the Division. Such testing must occur at least once every five years after issuance of the PAL.

XV.M. Recordkeeping requirements.

XV.M.1. The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of Section XV. of this part and of the PAL, including a determination of each emissions unit's twelve-month rolling total emissions, for five years from the date of such record.

XV.M.2. The PAL permit shall require an owner or operator to retain a copy of the following records for the duration of the PAL effective period plus five years:

XV.M.2.a. A copy of the PAL permit application and any applications for revisions to the PAL; and

XV.M.2.b. Each annual certification of compliance pursuant to Part C of this regulation, and the data relied on in certifying the compliance.

XV.N. Reporting and notification requirements.

The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the Division in accordance with the requirements of the applicable Title V permit and Section V.C.7. of Part C of this regulation. The reports shall meet the requirements in Sections XV.K.11.a. through XV.K.11.c. below.

XV.N.1. Semi-Annual Report.

The semi-annual report shall be submitted to the Division within thirty days of the end of each reporting period. This report shall contain the information required by the Title V permit, Section V.C.7.a. of Part C of this regulation, and Sections XV.N.1.a. through XV.N.1.g. below.

- XV.N.1.a. The identification of owner and operator and the permit number.
- XV.N.1.b. Total annual emissions (expressed on a mass-basis in tons per year, or expressed in tons per year CO<sub>2</sub>e) based on a twelve-month rolling total for each month in the reporting period recorded pursuant to Section XV.K.10.a.
- XV.N.1.c. All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions shall be made available upon request by the Division.
- XV.N.1.d. A list of any emissions units modified or added to the major stationary source or GHG-only source during the preceding six-month period.
- XV.N.1.e. The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.
- XV.N.1.f. A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, whether the emissions unit(s) monitored by the monitoring system continued to operate, and calculations of emissions from those units as provided by Section XV.K.7. of this part.
- XV.N.1.g. A signed statement by the responsible official (as defined in Section I.B.40. of Part A of this regulation) certifying the truth, accuracy, and completeness of the information provided in the report.

XV.N.2. Deviation report.

The major stationary source or GHG-only source owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to Section V.C.7.b. of Part C of this regulation shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed by Section V.C.7.b. of Part C. The reports shall contain the following information:

- XV.N.2.a. The identification of owner and operator and the permit number;
- XV.N.2.b. The PAL requirement that experienced the deviation or that was exceeded;
- XV.N.2.c. Emissions resulting from the deviation or the exceedance; and
- XV.N.2.d. A signed statement by the responsible official (as defined in Section I.B.40. of Part A of this regulation) certifying the truth, accuracy, and completeness of the information provided in the report.

XV.N.3. Re-validation results

The owner or operator shall submit to the Division the results of any revalidation test or method within three months after completion of such test or method.

XV.O. If any provision of this Section, or the application of such provision to any person or circumstance, is held invalid, the remainder of this Section, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

**~~PART E      RESERVED FOR ENVIRONMENTAL MANAGEMENT SYSTEMS~~**

~~Reserved for Environmental Management Systems~~



**PART F REGIONAL HAZE LIMITS - BEST AVAILABLE RETROFIT TECHNOLOGY (BART)  
AND REASONABLE PROGRESS (RP)**

The provisions of Section VI (Regional Haze Determinations) and VII (MRR) of Regulation 3, Part F shall be incorporated into Colorado's Regional Haze State Implementation Plan. All other Sections of Regulation 3, Part F are State-Only.

The provisions of Part 51, Appendix Y, Title 40, of the Code of Federal Regulations (CFR), promulgated by the U.S. Environmental Protection Agency listed in this Section are hereby incorporated by reference by the Air Quality Control Commission and made a part of the Colorado Air Quality Control Commission Regulations as modified by the following Regulation Number 3, Part F. Materials incorporated by reference are those in existence as July 6, 2005 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. The material incorporated by reference is also available through the United States Government Printing Office, online at [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys). Parties wishing to inspect these materials should contact the Technical Secretary of the Commission, located at the Office of the Commission.

**VI. Regional Haze Determinations**

**VI.A. BART Determinations**

VI. A.1. The provisions of this Section VI.A of Regulation Number 3, Part F shall be incorporated into Colorado's Regional Haze State Implementation Plan.

VI.A.2. The sources listed below shall not emit or cause to be emitted nitrogen oxides (NOx), sulfur dioxide (SO<sub>2</sub>), or particulate in excess of the following limits:

<b>BART Determinations for Colorado Sources</b>			
<b>Unit</b>	<b>NOx Emission Limit</b>	<b>SO<sub>2</sub> Emission Limit</b>	<b>Particulate Emission Limit</b>
CENC Unit 4	0.37 lb/MMBtu (30-day rolling average) or 0.26 lb/MMBtu Combined Average for Units 4 and 5 (30-day rolling average)	1.0 lb/MMBtu (30-day rolling average)	0.07 lb/MMBtu
CENC Unit 5	0.19 lb/MMBtu (30-day rolling average) or 0.26 lb/MMBtu Combined Average for Units 4 and 5 (30-day rolling average)	1.0lb/MMBtu (30-day rolling average)	0.07 lb/MMBtu
Craig Unit 1	0.07 lb/MMBtu (30-day rolling average) by 8/31/2021	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Craig Unit 2	0.08 lb/MMBtu (30-day rolling average)*	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu

Unit	NOx Emission Limit	SO2 Emission Limit	Particulate Emission Limit
Comanche Unit 1	0.20 lb/MMBtu (30-day rolling average) 0.15 lb/MMBtu (combined annual average for units 1 & 2)	0.12 lb/MMBtu (individual unit 30-day rolling average) 0.10 lb/MMBtu (combined annual average for units 1 & 2)	0.03 lb/MMBtu
Comanche Unit 2	0.20 lb/MMBtu (30-day rolling average) 0.15 lb/MMBtu (combined annual average for units 1 & 2)	0.12 lb/MMBtu (individual unit 30-day rolling average) 0.10 lb/MMBtu (combined annual average for units 1 & 2)	0.03 lb/MMBtu
Hayden Unit 1	0.08lb/MMBtu (30-day rolling average)	0.13 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Hayden Unit 2	0.07 lb/MMBtu (30-day rolling average)	0.13 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Martin Drake Unit 5	0.31 lb/MMBtu (30-day rolling average)	0.26 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Martin Drake Unit 6	0.31lb/MMBtu (30-day rolling average)	0.13lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
Martin Drake Unit 7	0.29 lb/MMBtu (30-day rolling average)	0.13lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
CEMEX –Lyons Kiln	255.3 lbs/hr (30-day rolling average) 901.0 tons/year (12-month rolling average)	25.3 lbs/hr (12-month rolling average) 95.0 tons/yr (12-month rolling average)	0.275 lb/ton of dry feed 20% opacity
CEMEX – Lyons Dryer	13.9 tons/yr	36.7 tons/yr	22.8 tons/yr 10% opacity

VI.A.3. Each source listed in the above tables must comply with the above limits and averaging times as expeditiously as practicable, but in no event later than five years after EPA approval of Colorado’s state implementation plan for regional haze, or relevant component thereof. Each source listed in the above tables must maintain control equipment or operational practices required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment or operational practices are properly operated and maintained.

VI.A.4. Except concerning the Craig Unit 1 NOx emission limit, the sources shall submit to the Division a proposed compliance schedule within sixty days after EPA approves the BART portion of the Regional Haze SIP. Craig Unit 1 must comply with the above NOx limit and averaging time no later than August 31, 2021. The Division shall publish these proposed schedules and provide for a thirty-day public comment period following publication. The Division shall publish its final determinations regarding the proposed schedules for compliance within sixty days after the close of the public comment period and will respond to all public comments received.

VI.B. Reasonable Progress Determinations

VI.B.1. The provisions of this Section VI.B of Regulation Number 3, Part F shall be incorporated into Colorado’s Regional Haze State Implementation Plan.

VI.B.2. The sources listed below shall not emit or cause to be emitted nitrogen oxides (NOx), sulfur dioxide (SO<sub>2</sub>), or particulate in excess of the following limits:

RP Determinations for Colorado Sources			
Emission Unit	NOx Emission Limit	SO <sub>2</sub> Emission Limit	Particulate Emission Limit
<b>Rawhide</b> Unit 101	0.145 lb/MMBtu (30-day rolling average)	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
<b>CENC</b> Unit 3	246 tons per year (12-month rolling total)	1.2 lb/MMBtu	0.07 lb/MMBtu
<b>Nixon</b>	0.21 lb/MMBtu (30-day rolling average)	0.11 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu
<b>Clark</b> Units 1 & 2 Shutdown 12/31/2013	Shutdown 12/31/2013	Shutdown 12/31/2013	Shutdown 12/31/2013
<b>Holcim - Florence</b> Kiln	2.73 lbs/ton clinker (30-day rolling average) 2,086.8 tons/year	1.30 lbs/ton clinker (30-day rolling average) 721.4 tons/year	246.3 tons/year
<b>Nucla</b>	0.5 lb/MMBtu (30-day rolling average)	0.4 lb/MMBtu (30-day rolling average)	0.03 lb/MMBtu

RP Determinations for Colorado Sources			
Emission Unit	NOx Emission Limit	SO <sub>2</sub> Emission Limit	Particulate Emission Limit
<b>Craig</b> Unit 3	0.28 lb/MMBtu (30-day rolling average)	0.15 lb/MMBtu (30-day rolling average)	0.013 lb/MMBtu filterable PM 0.012 lb/MMBtu filterable PM <sub>10</sub>
<b>Cameo</b> Shutdown 12/31/2011	Shutdown 12/31/2011	Shutdown 12/31/2011	Shutdown 12/31/2011

VI.B.3. Each source listed in the above table must comply with the above limits and averaging times as expeditiously as practicable, but in no event later than December 31, 2017. Each source listed in the above table must maintain control equipment or operational practices required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment or operational practices are properly operated and maintained.

VI.B.4. The sources shall submit to the Division a proposed compliance schedule within sixty days after EPA approves the RP portion of the Regional Haze SIP. The Division shall publish these proposed schedules and provide for a thirty-day public comment period following publication. The Division shall publish its final determinations regarding the proposed schedules for compliance within sixty days after the close of the public comment period and will respond to all public comments received.

VI.C. Public Service Company of Colorado (PSCo) BART Alternative Program

VI.C.1. The provisions of this Section VI.C of Regulation Number 3, Part F (with the exception of the SO<sub>2</sub> cap of subsection VI.C.4) shall be incorporated into Colorado's Regional Haze State Implementation Plan.

VI.C.2. The sources listed below shall not emit or cause to be emitted nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), or particulate in excess of the following limits, after the following compliance dates:

<b>BART Alternative Program Determinations for PSCo Sources</b>			
<b>Emission Unit</b>	<b>NO<sub>x</sub> Emission Limit</b>	<b>SO<sub>2</sub> Emission Limit</b>	<b>Particulate Emission Limit</b>
<b>Cherokee *</b> Unit 1 Shutdown No later than 7/1/2012	0 Shutdown No later than 7/1/2012	0 Shutdown No later than 7/1/2012	0 Shutdown No later than 7/1/2012
<b>Cherokee</b> Unit 2 Shutdown 12/31/2011	0 Shutdown 12/31/2011	0 Shutdown 12/31/2011	0 Shutdown 12/31/2011
<b>Cherokee</b> Unit 3 Shutdown No later than 12/31/2016	0 Shutdown No later than 12/31/2016	0 Shutdown No later than 12/31/2016	0 Shutdown No later than 12/31/2016
<b>Cherokee</b> Unit 4	0.12 lb/MMBTU (30-day rolling average) by 12/31/2017 Natural Gas Operation 12/31/2017	7.81 tpy (rolling 12 month average) Natural Gas Operation 12/31/2017	0.03 lbs/MMBtu Natural Gas Operation 12/31/2017
<b>Valmont</b> Unit 5 Shutdown 12/31/2017	0 Shutdown 12/31/2017	0 Shutdown 12/31/2017	0 Shutdown 12/31/2017
<b>Pawnee</b>	0.07 lb/MMBTU (30-day rolling average) by 12/31/2014	0.12 lbs/MMBtu (30-day rolling average) by 12/31/2014	0.03 lbs/MMBtu
<b>Arapahoe**</b> Unit 3 Shutdown 12/31/2013	0 Shutdown 12/31/2013	0 Shutdown 12/31/2013	0 Shutdown 12/31/2013
<b>Arapahoe</b> Unit 4	600 tpy on (rolling 12 month average) Natural Gas operation 12/31/2014	1.28 tpy (rolling 12 month average) Natural Gas operation 12/31/2014	0.03 lbs/MMBtu Natural Gas operation 12/31/2014

\* 500 tpy NO<sub>x</sub> will be reserved from Cherokee Station for netting or offsets

\*\* 300 tpy NO<sub>x</sub> will be reserved from Arapahoe Station for netting or offsets for additional natural gas generation

VI.C.3. Each source listed in the above table must either shut down or comply with the above limits and averaging times no later than the compliance date set forth in the above table. Each source listed in the above table must maintain any applicable control equipment required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment is properly operated and maintained.

VI.C.4. In addition to the above listed emission limits and compliance dates, between 1/1/2013 and 12/31/2015, Cherokee Units 3 and 4 and Valmont, considered as a whole, shall not emit in excess of 4,200 tons of SO<sub>2</sub> per year as determined on a calendar year annual basis. Between 1/1/2016 and 12/31/2017 Cherokee Unit 4 and Valmont considered as a whole, shall not emit in excess of 3,450 tons of SO<sub>2</sub> per year as determined on a calendar year annual basis.

## **VII. Monitoring, Recordkeeping, and Reporting for Regional Haze Limits**

The provisions of this Section VII of Regulation 3, Part F shall be incorporated into Colorado's Regional Haze State Implementation Plan.

### **Federal Regulations Adopted by Reference**

The following regulations promulgated by the United States Environmental Protection Agency (EPA) were previously adopted by the Colorado Air Quality Control Commission and are thereby already incorporated by reference:

40 CFR Part 60 and Appendices (As incorporated by reference within Commission Regulation Number 6, 5 CCR 1001-8)

40 CFR Part 63, Subpart A - National Emission Standards for Hazardous Air Pollutants General Provisions and Subpart LLL - National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (As incorporated by reference within Commission Regulation Number 8, Part A, 5 CCR 1001-10).

40 CFR Part 64 (As incorporated by reference within Commission Regulation Number 3, Part C Section XIV., 5 CCR 1001-5)

40 CFR Part 75 including Performance Specifications and Appendices (As incorporated by reference within Commission Regulation Number 6, 5 CCR 1001-8)

### **VII.A. Definitions**

VII.A.1. "BART alternative program unit" means any unit subject to a Regional Haze emission limit contained in the Table in Regulation Number 3, Part F, Section VI.C.

VII.A.2. "BART unit" means any unit subject to a Regional Haze emission limit contained in the Table in Regulation Number 3, Part F, Section VI.A.

VII.A.3. "Continuous emission monitoring system" or "CEMS" means the equipment required by Regulation Number 3, Part F, Section VII, to sample, analyze, measure, and provide (using an automated data acquisition and handling system (DAHS)), a permanent record of SO<sub>2</sub> or NO<sub>x</sub> emissions, other pollutant emissions, diluents, or stack gas volumetric flow rate.

VII.A.4. "Operating day" means any twenty-four-hour period between midnight and the following midnight during which any fuel is combusted at any time in a BART unit, BART alternative program unit, or Reasonable Progress unit.

VII.A.5. "Reasonable Progress unit" or "RP unit" means any unit subject to a Regional Haze emission limit contained in the Table in Regulation Number 3, Part F, Section VI.B.

VII.A.6. "Regional Haze emission limit" means any of the emission limits specified in the Tables contained in Regulation Number 3, Part F, Section VI.

VII.B. Monitoring/Compliance Determination: SO<sub>2</sub> and NO<sub>x</sub> Regional Haze Limits

VII.B.1. BART, RP, and BART alternative program units with SO<sub>2</sub> and NO<sub>x</sub> CEMS.

VII.B.1.a. All Boilers, except CENC and Clark boilers.

The owner or operator of a boiler subject to this section shall comply with the Part 75 monitoring and recordkeeping requirements as incorporated by reference into this regulation with the exception of the continuous emission monitoring system (CEMS) data substitution and bias adjustment requirements.

At all times after the compliance deadline specified in Regulation Number 3, Part F, Section VI.A.3., VI.B.3. or VI.C.3., the owner/operator of each BART, RP, or BART alternative program unit shall maintain, calibrate, and operate a CEMS, in full compliance with the requirements found at 40 CFR Part 75 not excluded above, to accurately measure from such unit SO<sub>2</sub>, NO<sub>x</sub>, diluents, and stack gas volumetric flow rate as such parameters are relevant to the applicable emission limit. The CEMS shall be used to determine compliance with the SO<sub>2</sub> and NO<sub>x</sub> Regional Haze emission limits for each such unit. Such limits are expressed in units of pounds per million Btu. The owner/operator shall calculate emissions in the applicable units.

In determining compliance with the SO<sub>2</sub> and NO<sub>x</sub> Regional Haze limits, all periods of emissions shall be included, including startups, shutdowns, emergencies, and malfunctions.

VII.B.1.a.(i). Pounds Per Million Btu Regional Haze Limits

For any hour in which fuel is combusted in the BART, RP, or BART alternative program unit, owner/operator shall calculate hourly average SO<sub>2</sub> and NO<sub>x</sub> concentrations in pounds per million Btu at the CEMS in accordance with the requirements of 40 CFR Part 75 except for Part 75 requirements excluded by Section VII. B.1.a. These hourly averages shall then be used to determine compliance in accordance with the particular limit's averaging period, as follows:

VII.B.1.a.(i).(1). Regional Haze limits with a 3-hour averaging period:

Emissions shall be calculated on a 3-hour rolling average basis.

At the end of each operating hour, the owner/operator shall calculate and record a new 3-hour average emission rate in lb/MMBtu from the arithmetic average of the valid hourly emission rates from the CEMS for the previous three operating hours. (An operating hour is any hour in which fuel is combusted for any time in the unit.)

VII.B.1.a.(i).(2). Regional Haze limits with a 30-day averaging period:

Before the end of each operating day, the owner/operator shall calculate and record the 30-day rolling average emission rate in lb/MMBtu from all valid hourly emission values from the CEMS for the previous 30 operating days.

VII.B.1.a.(i).(3). Regional Haze limits with a 90-day averaging period: Before the end of each operating day, the owner/operator shall calculate and record the 90-day rolling average emission rate in lb/MMBtu from all valid hourly emission values from the CEMS for the previous 90 operating days.

VII.B.1.a.(i).(4). Regional Haze limits with a 12-month averaging period: Before the end of each month, the owner/operator shall calculate and record the 12-month rolling average emission rate in lb/MMBtu from all valid hourly emission values from the CEMS for the previous 12 months.

VII.B.1.a.(i).(5). Regional Haze limits with an annual calendar averaging period: Emissions shall be calculated on a calendar year basis. Within 30 days after the end of each calendar year, the owner/operator shall calculate and record a new emission rate in lb/MMBtu from the arithmetic average of all valid hourly emission rates from the CEMS for the preceding year.

VII.B.1.a.(i).(6). Comanche Units 1 and 2 Regional Haze combined annual average limits. The combined annual limitations for NOX and SO2 are on a 365-operating day rolling average. Before the end of each operating day, the owner/operator shall calculate and record an annual rolling average using data from the previous 365 operating days in accordance with the following equation.

$$\text{Combined emission rate (lb/MMBtu)} = [(ER1)(HI1) + (ER2)(HI2)] / (HI1 + HI2)$$

Where: ER1 = average emission rate over the 365 operating day period. This is an average of all valid hours within the 365 operating day period for Unit 1.

HI1 = total heat input over the 365 operating day period for Unit 1.

ER2 = average emission rate over the 365 operating day period. This is an average of all valid hours within the 365 operating day period for Unit 2.

HI2 = total heat input over the 365 operating day period for Unit 2.

VII.B.1.b. Portland Cement Kilns and CENC and Clark Boilers: At all times after the compliance deadline specified in Regulation Number 3, Part F, Section VI.A.3., or VI.B.3., the owner/operator of each BART or RP unit shall maintain, calibrate and operate a CEMS in full compliance with the requirements in 40 CFR Part 60 Section 60.13 and Part 60 Appendices A, B and F to accurately measure SO2, NOX and diluents, if diluent is required. The CEMS shall be used to determine compliance with the SO2 and NOX Regional Haze emission limits for each such unit. For particular units, such limits are expressed in units of pounds per hour, tons per year, pounds per ton clinker or pounds per million Btu. The owner/operator shall calculate emissions in the applicable units. In determining compliance with the SO2 and NOX Regional Haze limits, all periods of emissions shall be included, including startups, shutdowns, emergencies and malfunctions.

VII.B.1.b.(i). Pounds per Hour and Tons per Year Regional Haze Limits and Pounds per Million Btu Regional Haze Limits.

For any hour in which fuel is combusted in the BART or RP unit, the owner/operator shall calculate hourly NO<sub>x</sub> and SO<sub>2</sub> emissions in the appropriate units (lbs/hr) or (lbs/MMBtu) in accordance with the provisions in 40 CFR Part 60. These hourly values shall be used to determine compliance in accordance with the particular limits averaging time, as follows:

VII.B.1.b.(i).(1). Pounds per Hour or Pounds per Million Btu Regional Haze Limits on a 30-day rolling average. Before the end of each operating day, the owner/operator shall calculate and record the 30-day rolling average emission rate in lb/MMBtu or lb/hr from all valid hourly emission values from the CEMS for the previous 30 operating days.

VII.B.1.b.i.(2). Pounds per Hour on a 12-month rolling average. Before the end of each month, the owner/operator shall calculate and record the 12-month rolling average emission rate in lb/hr from all valid hourly emission values from the CEMS for the previous 12 months.

VII.B.1.b.i.(3). Tons per year Regional Haze Limits on a 12-month rolling average. Before the end of each month, the owner/operator shall calculate and record the total emissions in tons/yr from all valid hourly emission values from the CEMS for the previous 12 months.

VII.B.1.b.(ii). 30-Day Rolling Average Pounds per Ton Clinker Regional Haze Limits. Hourly clinker production shall be determined in accordance with the requirements in 40 CFR Part 60 Subpart F Section 60.63(b). An operating day includes all valid data obtained in any daily 24-hour period during which the kiln operates and excludes any measurements made during the daily 24-hour period when the kiln was not operating. The 30-operating day rolling emission rate of NO<sub>x</sub> and SO<sub>x</sub> shall be calculated and recorded as the total of all hourly emissions data for a cement kiln in the preceding 30 operating days, divided by the total tons of clinker produced in that kiln during the same 30-day operating period in accordance with the equation in 40 CFR Part 60 Subpart F Section 60.64(c).

VII.B.1.b.(iii). CENC Units 4 and 5 NO<sub>x</sub> Regional Haze limits:

For any hour in which fuel is combusted in CENC Unit 4 or Unit 5, the owner/operator shall calculate hourly NO<sub>x</sub> emissions in the appropriate units (lbs/MMBtu) in accordance with the provisions in 40 CFR Part 60. These hourly values shall be used to determine compliance with the Regional Haze limits, as follows:

VII.B.1.b.(iii).(1). Individual unit pound per Million Btu on a 30-day rolling average Regional Haze Limit: Before the end of each operating day, the owner/operator shall calculate and record the 30-day rolling average emission rate in lb/MMBtu from all valid hourly emission values from the CEMS for the previous 30 operating days, OR



VII.B.1.b.(iii).(2). Combined units 4 and 5 lbs/MMbtu 30-day rolling average Regional Haze Limit: Before the end of each operating day, the owner/operator shall calculate and record a 30-day rolling average using data from the previous 30 operating days in accordance with the following equation:

$$\text{Average ER} = [(ER4)(HI4)+(ER5)(HI5)] / [(HI4)+(HI5)]$$

Where:

ER4 = average NOX emission rate, in pounds per MMBtu over the 30 day period. This is an average of all valid hours within the 30 operating day period for Unit 4.

ER5 = average NOX emission rate, in pounds per MMBtu over the 30 day period. This is an average of all valid hours within the 30 operating day period for Unit 5.

HI4 = Total heat input over the 30 operating day period for Unit 4.

HI5 = Total heat input over the 30 operating day period for Unit 5.

VII.B.1.b.(iii).(3). The owner or operator shall indicate in the excess emission reports required by Section VII.E of this Part F, which compliance demonstration method has been followed for the reporting period.

VII.B.2. BART and RP Units without NOX and SO2 CEMS.

VII.B.2.a. CENC Unit 3. Compliance with the SO2 limitations shall be determined by sampling and analyzing each shipment of coal for the sulfur and heat content using the appropriate ASTM Methods. In lieu of sampling, vendor receipts may be used provided the sampling and analysis was conducted in accordance with the appropriate ASTM Method. Each sample or vendor receipt must indicate compliance with the SO2 limitation. Compliance with the annual NOx limits shall be monitored by recording fuel consumption and calculating emissions monthly using the appropriate AP-42 emission factor. Monthly emissions shall be calculated by the end of the subsequent month and shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous 12 months data. [\*Note: CENC Unit 3 is not subject to annual SO2 limits.]

VII.B.2.b. CEMEX Dryer. Unless performance tests were completed within the previous 6 months, within 60 days of the compliance deadline specified in Regulation Number 3, Part F Section VI.A.3, the owner/operator shall conduct a stack test to measure NOX and SO2 emissions in accordance with the appropriate EPA test methods. Frequency of testing thereafter shall be every five years. Each test shall consist of three test runs, with each run at least 60 minutes in duration.

In addition to the stack tests described above, compliance with the annual NO<sub>x</sub> and SO<sub>2</sub> limits shall be monitored by calculating emissions monthly using the emission factors (in lb/hr) determined from the most recent Division-approved stack test and hours of operation for the month. Monthly emissions shall be calculated by the end of the subsequent month and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous 12 months' data.

VII.C. Monitoring/Compliance Determination: Particulate Regional Haze Limits

VII.C.1. Particulate Regional Haze Limits for all boilers except CENC and Clark boilers

Unless particulate compliance testing was completed within the previous 6 months, within 60 days of the compliance deadline specified in Regulation Number 3, Part F, Section VI.A.3., VI.B.3., or VI.C.3., the owner/operator shall conduct a stack test to measure particulate emissions in accordance with the requirements and procedures set forth in EPA Test Method 5 as set forth in 40 CFR Part 60, Appendix A. Stack testing for particulate matter shall be performed annually, except that: (1) if any test results indicate emissions are less than or equal to 50% of the emission limit, another test is required within five years; (2) if any test results indicate emissions are more than 50%, but less than or equal to 75% of the emission limit, another test is required within three years; and (3) if any test results indicate emissions are greater than 75% of the emission limit, an annual test is required until the provisions of (1) or (2) are met. A test run shall consist of three test runs, with each run at least 120 minutes in duration. Test results shall be converted to the applicable units and compliance will be based on the average of the three test runs.

In addition, to the stack tests described above, the owner/operator shall monitor compliance with the particulate matter limits in accordance with the applicable compliance assurance monitoring plan developed and approved in accordance with 40 CFR Part 64.

VII.C.2. Portland Cement Plant Particulate Regional Haze Limits.

VII.C.2.a. Kilns. Compliance with the particulate matter limitations shall be monitored using a PM CEMS that meets the requirements in 40 CFR Part 63 Subpart LLL. The owner or operator shall calculate emissions in the applicable units. If a PM CEMS is used to monitor compliance with the PM limits, the opacity limits specified in this Part F do not apply.

In the event that the provisions in 40 CFR Part 63 Subpart LLL are revised, stayed or vacated, such that a PM CEMS is not required, compliance with the PM limitations shall be monitored by conducting stack tests in accordance with the requirements of Section VII.C.3. except that the results of the test shall be converted to the appropriate units (lb/ton clinker or lb/ton dry feed) and compliance will be based on the average of three test runs.

In addition, if no PM CEMS is required, as discussed in the above paragraph, the opacity limits specified in this Part F do apply. In order to monitor compliance with the opacity limit, the owner or operator shall install, calibrate, maintain, and continuously operate a COM located at the outlet of the PM control device to continuously monitor opacity. The COM shall be installed, maintained, calibrated, and operated as required by 40 CFR Part 63, Subpart A, and according to PS-1 of 40 CFR Part 60, Appendix B

VII.C.2.b. Dryers. Performance tests shall be conducted in accordance with the requirements in Section VII.C.3. Opacity monitoring shall be conducted in accordance with the requirements in 40 CFR Part 63 Subpart LLL.

VII.C.3. Particulate Regional Haze Limits for the CENC and Clark boilers and the CEMEX dryer. Within 60 days of the compliance deadline specified in Regulation Number 3, Part F, Section VI.A.3. or VI.B.3., the owner/operator shall conduct a stack test to measure particulate emissions in accordance with the requirements and procedures set forth in EPA Test Method 5, 5B, 5D or 17, as appropriate, as set forth in 40 CFR Part 60, Appendix A. Stack testing for particulate matter shall be performed annually, except that: (1) if any test results indicate emissions are less than or equal to 50% of the emission limit, another test is required within five years; (2) if any test results indicate emissions are more than 50%, but less than or equal to 75% of the emission limit, another test is required within three years; and (3) if any test results indicate emissions are greater than 75% of the emission limit, an annual test is required until the provisions of (1) or (2) are met. Each test shall consist of three test runs, with each run at least 60 minutes in duration.

In addition, to the stack tests described above, compliance with the annual limitations (ton/yr limits) applicable to the Clark boilers and CEMEX dryer shall be monitored by calculating emissions monthly using the emission factors (in lb/hr) determined from the most recent Division-approved stack test and hours of operation for the month. Monthly emissions shall be calculated by the end of the subsequent month and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous 12 months' data.

In addition to the stack tests described above, the owner/operator shall monitor compliance with the particulate matter limits in accordance with the applicable compliance assurance monitoring plan developed and approved in accordance with 40 CFR Part 64.

#### VII.D. Recordkeeping

Owner/operator shall maintain the following records for at least five years:

VII.D.1. All CEMS data as required in the applicable regulation, stack test data, and data collected pursuant to the CAM plan, including the date, place, and time of sampling, measurement, or testing; parameters sampled, measured, or tested and results; the company, entity, or person that performed the testing, if applicable; and any field data sheets from testing.

VII.D.2. Records of quality assurance and quality control activities for emissions measuring systems including, but not limited to, any records required by 40 CFR Part 60, 63, or 75.

VII.D.3. Any other records required by 40 CFR parts 60, Subpart F, Section 60.65, 63, Subpart LLL, 64 or 75.

#### VII.E. Reporting requirements

The owner/operator of a BART, RP or BART alternative program unit shall submit semi-annual excess emissions reports no later than the 30th day following the end of each semi-annual period unless more frequent reporting is required. Excess emissions means emissions that exceed the Regional Haze emissions limits. Excess emission reports shall include the information specified in 40 CFR Part 60, Section 60.7(c).

The owner/operator of a BART, RP or BART alternative program unit shall submit reports of any required performance stack tests for particulate matter, to the Division within 60 calendar days after completion of the test.

The owner/operator shall also submit semi-annual reports of any excursions under the approved compliance assurance monitoring plan in accordance with the schedule specified in the source's Title V permit.



## DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

### Air Quality Control Commission

#### REGULATION NUMBER 4

#### SALE AND INSTALLATION OF WOOD-BURNING APPLIANCES AND THE USE OF CERTAIN WOOD BURNING APPLIANCES DURING HIGH POLLUTION DAYS

#### 5 CCR 1001-6

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### I. DEFINITIONS

A. Unless otherwise required by the context, as used in this Regulation:

1. “Accredited Laboratory” means an independent testing laboratory that has obtained accreditation pursuant to the Federal Regulations 40 CFR Part 60 Subpart AAA (2015).
2. ~~(State Only) “Approved Masonry Heater” means a masonry heater as defined in Section I.A.12 that has complied with all requirements of Section IV.~~
3. “Approved Pellet Stove” means a pellet stove as defined in Section I.A.18, that has complied with all the requirements of Section III.
4. “Boiler” means a domestic solid wood-burning appliance used primarily for heating space where the appliance is located, by the distribution through pipes of a gas or fluid heated in the appliance. This appliance must be tested and listed as a boiler under accepted U.S. or Canadian safety testing codes.
5. “Burn down time” shall mean that period of time not to exceed three hours following the declaration of a high pollution day required for the cessation of combustion within any wood-burning stove, pellet stove, masonry heater or wood-burning fireplace pursuant to this Regulation.
6. REPEALED.
7. “Cookstove” means a domestic wood-burning appliance that is designed primarily for cooking food and that has the following characteristics:
  - a. An oven, with a volume of 1 cubic foot or greater, and an oven rack;
  - b. A device for measuring oven temperatures;
  - c. A flame path that is routed around the oven;
  - d. A shaker grate;
  - e. An ash pan;
  - f. An ash clean-out door below the oven; and

- g. The absence of a fan or heat channels to dissipate heat from the appliance.
8. "Dealer" means a person who sells wood-burning stoves, pellet stoves, wood-burning fireplaces or masonry heaters on a regular basis.
- 8.5 "Exempt device" means a wood-burning device that does not meet the definition of a wood-burning stove by EPA standards (as contained in 40 CFR Part 60 Subpart AAA (2015)) and is not a fireplace, masonry heater, nor pellet stove as defined in this regulation.
9. "Furnace" means a domestic solid wood-burning appliance that is designed to be located outside of ordinary living areas and is used for heating spaces other than the space where the appliance is located by the distribution through ducts of air heated in the appliance. The appliance must be tested and listed as a furnace under accepted U.S. or Canadian safety testing codes.
10. "High pollution day" means those periods of time declared by Colorado Department of Public Health and Environment as provided for in Section 25-7-106.3(1), C.R.S.
11. "Manufacturer" means a person who constructs a wood-burning stove or pellet stove or is engaged in the business of designing and constructing masonry heaters or wood-burning fireplaces.
12. ~~(State Only) "Masonry Heater" means an appliance designed for or capable of burning wood, capable of and intended for domestic space heating or domestic water heating, which meets the following criteria:~~
13. "Method 5G" and "Method 5H" are test methods for determination of particulate emissions from wood-burning heaters from dilution tunnel sampling and stack locations as described in 40 CFR, Part 60, Subpart AAA, Appendix A (2004).
14. "Method 28" is a test method designed to establish certification test conditions and the particulate matter weighted emission values, as described in 40 CFR Part 60 Subpart AAA, Appendix A (2004).
15. "Method 28A" is a test method to measure air to fuel ratios and minimum achievable burn rates as described in 40 CFR, Part 60 Subpart AAA, Appendix A (2004).
16. "Model" means a group of wood stoves, pellet stoves, wood-burning fireplaces or masonry heaters that are identical to one another regarding design, emissions, and heating performance.
17. "New wood stove" means any wood-burning stove other than one which was sold to an individual for personal use prior to January 1, 1987.
18. "Pellet Stove" means a heater which meets the following criteria: (1) the manufacturer makes no reference to burning cordwood in advertising or other literature, (2) the unit is safety listed for pellet fuel only, (3) the unit's operating and instruction manual must state the use of cordwood is prohibited by federal law, and (4) the unit must be manufactured and sold including a hopper and auger combination as integral parts.
19. "Phase III Certified wood-burning stove" means a wood-burning stove that meets the emission standards set forth in Section II.A.
20. "Primary source of heat" shall mean one or more residential wood-burning stoves, pellet stoves, masonry heaters or wood-burning fireplaces that provide more than half the annual heating demands for the residence.
21. "Standard method" means the applicable testing procedures and criteria set forth in the Federal Regulations 40 CFR Part 60 Subpart AAA, Appendix A (2004).

- 21.5 “Wood-burning appliance” means any stove, fireplace, masonry heater, furnace, fire pit, fixture or device used, or intended for use, to burn only clean, dry, untreated wood.
22. “Wood-burning fireplace” means an appliance with an open hearth (i.e. devoid of wood-burning inserts, gas logs, or electric devices), is not a masonry hearer, may or may not be equipped with air-controlling doors, is primarily constructed of masonry materials (brick, stone or ceramic) and is installed in a dwelling or building for purpose of burning wood.
23. “Wood-burning stove” means an appliance, primarily constructed of metal, designed for or capable of burning wood, including a fireplace insert, capable of and intended for domestic space heating or domestic water heating.

## **II. LIMITATION ON THE SALE AND INSTALLATION OF WOOD-BURNING STOVES**

- A. No person shall advertise to sell, offer to sell, sell, or install a new wood-burning stove in Colorado unless it has been tested, certified, and labeled for emission performance in accordance with applicable criteria and procedures specified in 40 CFR Part 60, Subpart AAA and meets the following emission standards.
1. On or after July 1, 1988, no person shall advertise to sell, offer to sell, sell, or install a new wood-burning stove in Colorado unless it meets the emission standards set forth in 40 CFR Part 60, Section 60.532(b)(1) or (2) (1988).
  2. On or after May 15, 2015, no person shall advertise to sell, offer to sell, sell, or install a new wood-burning stove in Colorado unless it meets the emission standards set forth in 40 CFR Part 60, Section 60.532(a) (2015).
  3. (State Only) On or after May 15, 2020, no person shall advertise to sell, offer to sell, sell, or install a new wood-burning stove in Colorado unless it meets the emission standards set forth in 40 CFR Part 60, Section 60.532(b) or (c) (2015).
- B. The certification requirement shall apply to:
1. Advertisements for sale and offers for sale communicated by any means to any person in Colorado, including, but not limited to, offers to sell or advertisements for sale that are mailed to any person in Colorado.
  2. Any sale occurring in Colorado, including, but not limited to, sales in which a new wood-burning stove is shipped, delivered, or transported to any person in Colorado by a person located either inside or outside Colorado and to both the initial sale and any subsequent resale of a new wood-burning stove.
- C. Exemptions
1. Exempt Devices, as defined in Section I.A.8.5 of this regulation.
  2. Boilers
  3. Furnaces
  4. Cookstoves
- D. On and after January 1, 1993 no person shall sell or install a used wood-burning device within those portions of the counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson which are located in the AIR program area, as such area is defined in Section 42-4-304(20)(a) (2006), C.R.S., unless it meets the requirements set forth in Section II.A.

**III. APPROVAL PROCEDURE FOR PELLETT STOVES**

- A. Before December 31, 2015, no person shall advertise to sell, offer to sell, sell, or install a pellet stove unless it has been designated as an approved pellet stove in accordance with this Sections III.A. through III.F.
- B. On or after August 1, 1992, a manufacturer of a pellet stove who wishes to have a particular model line designated as an approved pellet stove, shall submit to the Division for their review, the following information:
1. test results showing an air to fuel ratio of 35:1 or greater, using Method 28A.
  2. test results using Method 5H, or Method 5G corrected to 5H, that have been conducted under minimum burn conditions, (category 1), Method 28.
  3. a one page letter signed by the laboratory president, verifying the information required in III.B.1. and 2.
- C. All tests conducted under II.B shall be performed by an accredited laboratory.
- D. Within twenty (20) working days after receipt of an application for approval, the Division shall notify the applicant if the application is complete. Within thirty (30) working days after receipt of a complete application, the Division shall notify the applicant whether the application satisfies all requirements for approval.
- E. If the Division denies approval, the Division shall notify the applicant in writing of the opportunity for a hearing before the Commission pursuant to Section 24-4-104(9), C.R.S.
- F. The Division shall grant approval if all information required by Section III A. is submitted and the test results in Section III.B.2. demonstrate particulate emissions do not exceed 4.1 grams per hour.
- G. On or after December 31, 2015, no person shall advertise to sell, offer to sell, sell, or install a pellet stove in Colorado unless it has been tested, certified, and labeled for emission performance in accordance with criteria and procedures specified in 40 CFR Part 60, Subpart AAA (2015) and meets the following emission standards:
1. Until May 15, 2020, pellet stoves must continue to demonstrate that particulate emissions do not exceed 4.1 grams per hour.

**V. ENFORCEMENT**

- A. The Division may enter and inspect the property or premises of any manufacturer, or dealer, for the purpose of investigating any actual, suspected, or potential violation of this regulation; and may, at reasonable times, have access to and copy any document, inspect any wood-burning stove, wood-burning stove component, pellet stove, wood-burning fireplace or testing equipment, or test the emissions of any wood-burning stove, wood-burning fireplace, or pellet stove possessed by any manufacturer, or dealer, for the purpose of ascertaining compliance or noncompliance with this regulation.
- B. The Division shall also enforce the provisions of this regulation through all means authorized by Part 1 Title 25, C.R.S.



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**VI. LIST OF APPROVED WOOD-BURNING APPLIANCES**

The Division shall request each dealer to make available to consumers a list of certified wood-burning stoves, exempt devices, approved pellet stoves and approved masonry heaters to be compiled by the Division.

**VII. HIGH POLLUTION DAYS**

**A. Applicability**

Limitations on the use of wood burning appliances shall be applicable only in those portions of the counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson are located in the AIR program area, as such area is defined in Section 42-4-304(20)(a) (2006), C.R.S. but not including those areas above seven thousand feet elevation.

**B. Provisions of this section may be enforced by the appropriate local agency. Local agencies are encouraged to develop suitable enforcement programs and enter into an agreement with the State to promote more effective enforcement of this regulation. Approval of a wood-burning stove, or pellet stove model pursuant to this regulation does not constitute authorization not to comply with requirements of any local ordinance or resolution relating to the installation or use of any wood-burning appliance.**

**C. This section shall not apply within any municipality that had an ordinance mandating restricted use of wood-burning stoves, pellet stoves, and wood-burning fireplaces on high pollution days in effect on January 1, 1990.**

1. All such exempt areas shall be required to submit a yearly report to the Commission no later than June 30, providing information concerning the enforcement actions pursuant to their ordinance for the previous heating season.

**D. Prohibitions of use**

No person shall operate a stove, fireplace, furnace, fire pit, fixture or device used, or intended for use, to burn only clean, dry, untreated wood during a high pollution day unless the appliance is exempt pursuant to Section VII.E. A burn down time shall be allowed for the burn down of existing fires prior to the initiation of enforcement action. The use of any fuel other than clean, dry, untreated wood in any stove, fireplace, fire pit, fixture or device used, or intended for use, to burn only clean, dry, untreated wood shall not constitute grounds for allowing its usage on a high pollution day.

**E. Exemptions**

1. Persons utilizing their wood-burning stove, pellet stove, or wood-burning fireplace as a primary source of heat.
2. Persons operating a certified wood-burning stove or wood-burning fireplace insert that meets the requirements in Section II.
3. Persons operating an approved or certified pellet stove or pellet-burning fireplace insert that meets the requirements in Section III.

**VIII. REQUIREMENTS FOR INSTALLATION OF FIREPLACES**

- A. On and after the January 1, 1993, no person shall install any fireplace in any dwelling in the area defined in Section VII.A. unless it is one of the following:
1. a gas appliance.
  2. an electric device.
  3. a fireplace insert that meets the requirements set forth in Section II.A.
  4. an approved pellet burning fireplace insert that meets the requirements set forth in Section III.
  5. any other clean burning device approved by the Commission which meets the emission standard set forth in Section II.A.
- B. This section shall not apply to any municipality or a county, which has a provision in effect on January 1, 1993, which is substantially equivalent of this section as determined by the Commission.

**IX. IMPLEMENTATION OF LOCAL CONTROL STRATEGIES**

The local jurisdictions listed below shall implement and enforce the indicated ordinances and resolutions, as they exist on January 1, 1993. This ordinance limits wood-burning on high pollution days as determined by the Colorado Department of Public Health and Environment. In addition, each shall implement and enforce any ordinance adopted in accordance with this regulation. The indicated ordinances or resolutions may be amended in the sole discretion of the respective governing body, provided that they shall be submitted immediately to the Colorado Air Quality Control Commission and the United States Environmental Protection Agency as revisions to the State Implementation Plan. The listed ordinances and resolutions shall remain in full force and effect until such time as the jurisdiction obtains full approval of a State Implementation Plan revision.

<b>Community</b>	<b>HPD Ordinance Number</b>	<b>Date Enacted</b>	<b>Construction Ordinance</b>	<b>Date Enacted</b>
Arvada	2451	11/87		
Aurora	87-118	4/86	92/47	5/92
Boulder	5007	10/86	5445	4/92
Broomfield	794	11/88		
Denver	Chapter 4.24	10/86	Chapter 4.24	5/90
Douglas County			R-991-128	11/91
Englewood	31	9/92	39	10/92
Federal Heights	565	1/88		
Glendale	2	1/88	15	10/92
Greenwood Village	17	6/88	9	3/92
Jefferson County	R-CC89-873	12/89	R-CC90-617	1/91
Lafayette	24	11/88		7/93
Lakewood	113	12/86	61	10/92
Littleton	17	12/88	26	8/92
Longmont	1	1/89		
Mountain View	5	1/91		
Sheridan	22	11/88	1	1/93
Thornton	2120	10/91	2194	10/92
Westminster	6/14	11/87	20	12/92

**X. REFERENCES**

Written statements of the basis and purpose of this regulation and revisions as well as all other material referenced in this Regulation is hereby incorporated by reference by the Air Quality Control Commission and made a part of the Colorado Air Quality Control Commission Regulations. Materials incorporated by reference are those referenced 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. Parties wishing to inspect these materials should contact the Technical Secretary of the Commission, located at the Office of the Commission. The material incorporated by reference is also available through the United States Government Printing Office, online at [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys).

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Arvada - Ordinance 2451

**Rule Title** -

**State Effective Date** 11/02/1987

**State Adoption Date**

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 2451 - Arvada.pdf](#)

As amended 10-19-87 on 2nd reading

COUNCIL BILL NO. 87-67  
ORDINANCE NO. 2451

AN ORDINANCE AMENDING CHAPTER 21, OFFENSES - MISCELLANEOUS,  
OF THE ARVADA CITY CODE BY ADDING A NEW ARTICLE V THAT  
RESTRICTS WOODBURNING ON POLLUTION ALERT DAYS.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. Chapter 21, Offenses - Miscellaneous, of the Arvada City Code is hereby amended by adding a new Article V entitled "Woodburning Restrictions," which shall read as follows:

"ARTICLE V. WOODBURNING RESTRICTIONS

S 21-75. Short title.

This article shall be known and may be cited as the "Arvada Woodburning Restrictions Ordinance."

S 21-76. Definitions.

When not clearly otherwise indicated by the context, the following words and phrases as used in this article shall have the following meanings:

- (1) "Barbecue devices" means devices that are utilized solely for the purpose of cooking food.
- (2) "Building" means a structure designed, built, or occupied as a shelter or roofed enclosure for persons, animals, or property.
- (3) "Fireplace" means a hearth, fire chamber or similarly prepared place, and a chimney.
- (4) "High pollution day" means a period of time designated as a high pollution day by the Colorado Department of Health; provided, however, that a high pollution day shall not include Saturdays, Sundays, or legal holidays, which are holidays designated by CRS S 24-11-101.
- (5) "Sole source of heat" means one or more solid fuel burning devices that constitute the only source of heat in a building. No solid fuel burning device or devices shall be considered the sole source of heat if the dwelling is equipped with a permanently installed furnace or heating system utilizing oil, natural gas, electricity, or propane.
- (6) "Solid fuel burning device" means a device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel burning stoves, including coal burning stoves, fireplaces or wood stoves of any nature, solid fuel burning cooking stoves, combination fuel furnaces or boilers which burn solid fuel, or any other device used for the burning of solid combustible

material. Solid fuel burning devices do not include barbecue devices or natural gas fired fireplace logs.

**S 21-77. Woodburning restriction.**

- (a) It shall be unlawful for any person to operate a solid fuel burning device during a high pollution day, unless an exemption has been granted as hereinafter provided. It shall be the duty of all persons owning or operating a solid fuel burning device to be aware of a declaration by the Colorado Department of Health of a high pollution day.
- (b) At the time of a declaration of a high pollution day by the Colorado Department of Health, the city manager shall allow three hours for the burndown of existing fires in solid fuelburning devices prior to commencement of enforcement of this article.

**S 21-78. Exemptions.**

- (a) The city manager, or a designee thereof, shall grant an exemption to the enforcement of S 21-77(a) hereof to any person who relies on a solid fuelburning device as a sole source of heat; provided, however, such solid fuelburning device was installed in the building prior to November 1, 1987. As a condition of granting an exemption, any person applying for an exemption shall be required to sign an affidavit stating reliance on a solid fuelburning device installed prior to November 1, 1987, as the sole source of heat. An exemption granted by the city manager shall be effective for one year from the date it is granted.
- (b) There shall be an exemption from enforcement of this article for heating or cooking by a solid fuel burning device in the event of the interruption of either a heating or cooking source to a building.

**S 21-79. Inspections.**

The city does hereby find, determine, and declare that any violation of this article violates the public peace, health, safety, and welfare of the city. The city, by and through its inspectors, is authorized to make inspections of solid fuelburning devices that are burning on high pollution days. If any person refuses or restricts the entry and free access by a city inspector to any part of a building or premises, or refuses inspection or sampling of any device, the facility, or process where inspection is sought by the city, city inspectors are hereby authorized to seek issuance of a search warrant from the municipal court in the manner provided for search and seizure in the Colorado Municipal Court Rules of Procedure.

**S 21-80. Penalty.**

Penalty for violation of any provision of this article shall be a fine of not less than \$25.00 nor more than \$500.00. Each day of a continuing violation shall be deemed to be a separate violation.

Section 2. This ordinance shall take effect five days after publication following final passage.

INTRODUCED, READ AND ORDERED PUBLISHED this 5th day of  
October, 1987.

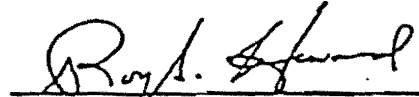
PASSED, ADOPTED AND APPROVED this 19th day of October 1987.

  
\_\_\_\_\_  
Mayor

ATTEST:

  
\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM:

  
\_\_\_\_\_  
City Attorney

Publication Dates: October 7, 1987 .  
October 28, 1987 .

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Aurora - Ordinance 87-118

**Rule Title** -

**State Effective Date** 05/22/1987

**State Adoption Date** 06/24/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 87-118 - Aurora.pdf](#)



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ARCHIVIST

ORDINANCE NO. 87-118

A BILL

FOR AN ORDINANCE AMENDING CHAPTER 41 OF THE CITY CODE OF THE CITY OF AURORA, COLORADO, REGARDING WOODBURNING RESTRICTIONS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AURORA, COLORADO:

Section 1. That the City Code of the City of Aurora, Colorado, is hereby amended by adding a Section to be numbered 41-728, which Section reads as follows:

SEC. 41-728. BURNING RESTRICTIONS.

(a) DEFINITIONS:

"BARBEQUE DEVICES" MEANS DEVICES THAT ARE UTILIZED SOLELY FOR THE PURPOSE OF COOKING FOOD.

"HIGH POLLUTION DAY" MEANS THAT PERIOD OF TIME DECLARED TO BE A HIGH POLLUTION DAY BY THE COLORADO DEPARTMENT OF HEALTH.

"PERSON" MEANS AN INDIVIDUAL, PARTNERSHIP, CORPORATION, COMPANY, OR OTHER ASSOCIATION.

"SOLE SOURCE OF HEAT" MEANS ONE OR MORE RESIDENTIAL SOLID FUEL-FIRED HEATING DEVICES WHICH CONSTITUTE THE ONLY SOURCE OF HEAT IN A PRIVATE RESIDENCE FOR PURPOSES OF SPACE HEATING. A RESIDENTIAL SOLID FUEL-FIRED HEATING DEVICE OR DEVICES SHALL BE CONSIDERED TO BE THE SOLE SOURCE OF HEAT IF THE PRIVATE RESIDENCE IS EQUIPPED WITH A PERMANENTLY INSTALLED FURNACE OR HEATING SYSTEM, DESIGNED TO HEAT THE RESIDENCE, BUT IS DISCONNECTED FROM ITS ENERGY SOURCE, E.G. HEATING OIL, NATURAL GAS, ELECTRICITY, OR PROPANE.

"SOLID FUEL-FIRED HEATING DEVICE" MEANS A DEVICE DESIGNED FOR SOLID FUEL COMBUSTION SO THAT USABLE HEAT IS DERIVED FOR THE INTERIOR OF A BUILDING, AND INCLUDES SOLID FUEL-FIRED STOVES, FIREPLACES, SOLID FUEL-FIRED COOKING STOVES, AND COMBINATION FUEL FURNACES OR BOILERS WHICH BURN SOLID FUEL. SOLID FUEL-FIRED HEATING DEVICES DO NOT INCLUDE BARBEQUE DEVICES OR NATURAL GAS FIRED FIREPLACE LOGS.



(b) HIGH POLLUTION PROHIBITION:

(1) AFTER THE EFFECTIVE DATE OF THIS ORDINANCE, NO PERSON MAY OPERATE A SOLID FUEL-FIRED HEATING DEVICE DURING A HIGH POLLUTION DAY UNLESS AN EXEMPTION HAS BEEN GRANTED PURSUANT TO SECTION (c) BELOW. IT SHALL BE THE DUTY OF ALL PERSONS OWNING OR OPERATING A SOLID FUEL-FIRED DEVICE TO BE AWARE OF ANY DECLARATION OF A HIGH POLLUTION DAY BY THE COLORADO DEPARTMENT OF HEALTH.

(2) AT THE TIME OF THE DECLARATION OF A HIGH POLLUTION DAY, THE CITY MANAGER SHALL ALLOW THREE (3) HOURS FOR THE BURNDOWN OF EXISTING FIRES IN SOLID FUEL BURNING DEVICES PRIOR TO THE INITIATION OF ENFORCEMENT.

(c) EXEMPTION FOR SOLE HEAT SOURCE:

(1) A PERSON WHO RELIES ON A SOLID FUEL-FIRED HEATING DEVICE AS HIS SOLE SOURCE OF HEAT MAY APPLY TO THE CITY MANAGER OR HIS DESIGNEE FOR A TEMPORARY EXEMPTION FROM SECTION (b) ABOVE.

(2) A PERSON APPLYING FOR AN EXEMPTION MUST SIGN A SWORN STATEMENT THAT HE RELIES ON A SOLID FUEL-FIRED HEATING DEVICE AS HIS SOLE SOURCE OF HEAT.

(3) AN EXEMPTION OBTAINED UNDER THIS SECTION SHALL BE EFFECTIVE FOR TWELVE (12) MONTHS FROM THE DATE IT IS GRANTED.

(d) NON-OWNER OCCUPIED DWELLING UNITS:

IT SHALL BE UNLAWFUL FOR A SOLID FUEL-FIRED HEATING DEVICE TO BE THE SOLE SOURCE OF HEAT IN ANY NON-OWNER OCCUPIED DWELLING UNIT. ANY VIOLATION OF SECTION (b) ABOVE BY THE TENANT OF SUCH A DWELLING UNIT SHALL BE CONSIDERED A VIOLATION BY THE OWNER OF THE DWELLING UNIT IF A SOLID FUEL-FIRED HEATING DEVICE IS THE TENANT'S SOLE SOURCE OF HEAT. IN SUCH A CASE, THE OWNER, AND NOT THE TENANT, SHALL BE LIABLE FOR ANY PENALTY IMPOSED.

(e) INSPECTIONS:

FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH THE PROVISIONS OF THIS CHAPTER, THE CITY MANAGER, THROUGH AUTHORIZED REPRESENTATIVES, IS HEREBY AUTHORIZED TO MAKE INSPECTIONS OF SOLID FUEL-FIRED HEATING DEVICES WHICH ARE BEING OPERATED ON HIGH POLLUTION DAYS. IF ANY PERSON REFUSES OR RESTRICTS ENTRY AND FREE ACCESS TO ANY PART OF A PREMISE, OR REFUSES INSPECTION OR SAMPLING OF ANY DEVICE, FACILITY OR PROCESS WHERE INSPECTION IS SOUGHT, THE CITY MANAGER, THROUGH AUTHORIZED REPRESENTATIVES,

SHALL SEEK FROM THE MUNICIPAL COURT A WARRANT FOR INSPECTION AND ORDER THAT SUCH PERSON REFUSING INSPECTION BE REQUIRED TO PERMIT AN INSPECTION AT A REASONABLE TIME, WITHOUT INTERFERENCE, RESTRICTION, OR OBSTRUCTION. THE COURT SHALL HAVE FULL POWER, JURISDICTION, AND AUTHORITY TO ENFORCE ALL ORDERS ISSUED UNDER THE PROVISIONS OF THIS CHAPTER.

(f) ENFORCEMENT:

ANY PERSON VIOLATING ANY PROVISION OF THIS ORDINANCE SHALL BE PUNISHED BY THE PENALTIES SET FORTH IN SECTION 1-14 OF THE CITY CODE.

(g) ONE YEAR REVIEW:

THIS ORDINANCE SHALL BE AUTOMATICALLY REPEALED ON MAY 1, 1988 UNLESS RE-ADOPTED BY THE CITY COUNCIL. - *re-adopted 5/23/88*

Section 2. That all ordinances or parts of ordinances of the City Code of the City of Aurora, Colorado, in conflict herewith are expressly repealed.

Section 3. That pursuant to Section 5-5 of the Charter of the City of Aurora, Colorado, the second publication of this ordinance shall be by reference, utilizing the ordinance title.

INTRODUCED, READ AND ORDERED PUBLISHED this 25rd day of March, A.D. 1986.

PASSED AND ORDERED PUBLISHED BY REFERENCE this 13th day of April, A.D. 1986.

*Dennis Champine*  
DENNIS CHAMPINE, Mayor

ATTEST:

*Donna L. Young*  
DONNA L. YOUNG, Deputy City Clerk

APPROVED AS TO FORM: *[Signature]* CA

First Publication:	<u>4-1-87</u>
Final Publication:	<u>4-22-87</u>
Effective Date:	<u>5-22-87</u>

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**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Aurora - Ordinance 92-14

**Rule Title** .

**State Effective Date** 05/22/1992

**State Adoption Date** 05/22/1992

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 92-14 - Aurora.pdf](#)

EFFECTIVE DATE: 5-23-92

ORDINANCE NO. 92-14

A BILL

FOR AN ORDINANCE AMENDING CHAPTER 9  
OF THE CITY CODE OF THE CITY OF AURORA, COLORADO,  
BY THE ADDITION OF A NEW SECTION 9-40  
REGARDING SOLID FUEL BURNING FIREPLACES

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AURORA,  
COLORADO:

Section 1. That Chapter 9 of the City Code of the City of  
Aurora, Colorado, is hereby amended by adding a section to be  
numbered 9-40, which Section reads as follows:

SEC. 9-40. SOLID FUEL BURNING FIREPLACES.

(A) SECTION 3705(A) OF THE UBC SHALL BE AMENDED BY THE  
ADDITION OF THE FOLLOWING:

EVERY NEW SOLID FUEL BURNING FACTORY-BUILT FIREPLACE  
SHALL HAVE PERMANENTLY INSTALLED EITHER:

- (1) APPROVED GAS LOGS;
- (2) OTHER APPROVED GAS OR ALCOHOL SPECIFIC APPLIANCES;
- (3) A PHASE III CERTIFIED DEVICE AS DEFINED IN SECTION  
41-728 OR OTHER SOLID FUEL BURNING DEVICE MEETING  
THE MOST STRINGENT EMISSION STANDARDS FOR WOOD  
STOVES ESTABLISHED UNDER STATE STATUTE AND/OR  
REGULATIONS PROMULGATED BY THE COLORADO AIR  
QUALITY CONTROL COMMISSION EXISTING AT THE TIME OF  
INSTALLATION OF THE FIREPLACE, AS DEMONSTRATED BY  
A TEST BY AN E.P.A. ACCREDITED LABORATORY, AND  
WHICH IS SAFETY TESTED TO UNDERWRITER'S LABORATORY  
STANDARDS.

(B) SECTION 3707(A) OF THE UBC SHALL BE AMENDED BY THE  
ADDITION OF THE FOLLOWING:

EVERY NEW MASONRY FIREPLACE SHALL HAVE PERMANENTLY  
INSTALLED EITHER:

- (1) APPROVED GAS LOGS;


- (2) OTHER APPROVED GAS OR ALCOHOL SPECIFIC APPLIANCES;
- (3) A PHASE III CERTIFIED DEVICE AS DEFINED IN SECTION 41-728 OR OTHER SOLID FUEL BURNING DEVICE MEETING THE MOST STRINGENT EMISSION STANDARDS FOR WOOD STOVES ESTABLISHED UNDER STATE STATUTE AND/OR REGULATIONS PROMULGATED BY THE COLORADO AIR QUALITY CONTROL COMMISSION EXISTING AT THE TIME OF INSTALLATION OF THE FIREPLACE, AS DEMONSTRATED BY A TEST BY AN E.P.A. ACCREDITED LABORATORY, AND WHICH IS SAFETY TESTED TO UNDERWRITER'S LABORATORY STANDARDS.

Section 2. That all ordinances or parts of ordinances of the City Code of the City of Aurora, Colorado, in conflict herewith are expressly repealed..

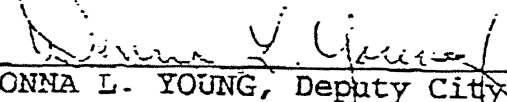
Section 3. That pursuant to Section 5-5 of the Charter of the City of Aurora, Colorado, the second publication of this ordinance shall be by reference, utilizing the ordinance title.

INTRODUCED, READ AND ORDERED PUBLISHED this 25rd day of March, A.D. 1992.

PASSED AND ORDERED PUBLISHED BY REFERENCE this 15th day of April, A.D. 1992.

  
 PAUL E. TAUER, Mayor

**ATTEST!**

  
 DONNA L. YOUNG, Deputy City Clerk

APPROVED AS TO FORM: Bob Rogers

[sfbf]

First Publication:	4-1-92
Final Publication:	4-22-92
Effective Date:	5-22-92

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Boulder - Ordinance 5007

**Rule Title** .

**State Effective Date** 11/25/1986

**State Adoption Date** 11/25/1986

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 5007 - Boulder.pdf](#)

ORDINANCE NO. 5007

AN EMERGENCY ORDINANCE ENACTING A NEW CHAPTER 6-9 AND ADDING A NEW SECTION 10-3-13, B.R.C. 1981, FOR THE PROTECTION OF THE QUALITY OF THE AIR IN THE CITY OF BOULDER.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOULDER,  
COLORADO:

Section 1. Chapter 6-9 is enacted to read:

TITLE 6 HEALTH, SAFETY, AND SANITATION

Chapter 9 Air Quality

6-9-1 Legislative Intent.

- (a) It is the intent of the city council to regulate activities contributing to the degradation of the air quality within the city limits in order to preserve the health, safety, and welfare of its inhabitants.
- (b) The city council finds that air pollution presents a threat to the health of the inhabitants of the city. As of March 3, 1978, the city was classified as a nonattainment area in carbon monoxide, ozone, and particulates. Federal standards must be met or various federal funding programs may be cut back. It is the intent of the city council to implement requirements that will enable the city to meet federal standards by reducing the total amount of hazardous materials in the atmosphere. The city council finds that there now exist woodstoves which have emissions that are ninety-five percent less than the emissions of conventional devices.
- (c) It is the intent of city council to preserve and improve visibility, particularly scenic vistas.
- (d) It is the intent of city council to allow low income persons to heat their homes if wood is the primary source of heat for their homes.
- (e) The city council finds that there are federal and state laws that regulate certain activities that affect the quality of the air, but those laws do not exclude local government regulation, if such local regulation is not inconsistent therewith. The city council further finds that the provisions of this chapter address the city's local concerns, including, without limitation, certain limitations on activities that have an impact on the quality of the air and the implementation of effective enforcement. The city council finds that the provisions of this chapter are not inconsistent with federal and state law.

6-9-2 Definitions.

- (a) The following words and phrases have the following meanings unless the context clearly indicates otherwise:



- (1) "Barbeque device" means a device that is used solely for the purpose of cooking food.
- (2) "Fireplace" means a hearth, fire chamber, or similarly prepared place and a chimney.
- (3) "Phase I certified device" means an airtight woodstove, including without limitation a fireplace insert, which the user can verify to a reasonable scientific certainty has particulate emissions that do not exceed the following standards:
  - (i) Prior to July 1, 1988, no woodstove with a minimum heat output of 40,000 Btu per hour or less shall be certified unless the stove meets the following standards:
    - (A) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6, the stove shall emit particulates at a rate of 30 grams per hour or less and carbon monoxide at a rate of 400 grams per hour or less.
    - (B) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-5, the stove shall emit particulates at a rate of 22 grams per hour or less and carbon monoxide at a rate of 400 grams per hour or less.
  - (ii) Prior to July 1, 1988, no woodstove with a minimum heat output of more than 40,000 Btu per hour, shall be certified unless the stove meets the following standards:
    - (A) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6, with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 37, and 1 gram per hour for each 1000 Btu per hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 800, and 10 grams per hour for each 1,000 Btu per hour heat output.

- (B) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6, with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 30, and 0.7 grams per hour for each 1000 Btu per hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 800, and 10 grams per hour for each 1,000 Btu per hour heat output.
  - (iii) And stoves with a minimum long life catalyst, a thermometer for reading the temperature of the catalyst, and a thermometer for reading the temperature of the stove.
- (4) "Phase II certified device" means an airtight woodstove, including without limitation a fireplace insert, which the user can demonstrate to a reasonable scientific certainty has particulate emissions that do not exceed the following standards:
- (i) On or after July 1, 1988, no woodstove with a minimum heat output of 40,000 Btu per hour or less, shall be certified unless the stove meets the following standards:
    - (A) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6, the stove shall emit particulates at a rate of 12 grams per hour or less and carbon monoxide at a rate of 200 grams per hour or less.
    - (B) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6, the stove shall emit particulates at a rate of 8.5 grams per hour or less and carbon monoxide at a rate of 200 grams per hour or less.
  - (ii) On or after July 1, 1988, no woodstove with a minimum heat output of more than 40,000 Btu per hour shall be certified unless the stove meets the following emissions standards:
    - (A) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6,

with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 15, and 0.4 grams per hour for each 1000 Btu per hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 400, and 5 grams per hour for each 1,000 Btu per hour heat output.

(B) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6, with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 12, and 0.3 grams per hour for each 1000 Btu per hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 400, and 5 grams per hour for each 1,000 Btu per hour heat output.

(iii) And stoves with a minimum long life catalyst, a thermometer for reading the temperature of the catalyst, and a thermometer for reading the temperature of the stove.

(5) "Primary source of heat" means that source of heat which heats more than fifty percent of the space heating load in any building.

(6) "Sole source of heat" means one or more woodstoves which constitute the only source of heating in a building. No woodstove shall be considered to be the sole source of heat if the building is equipped with a permanently installed furnace or heating system utilizing oil, natural gas, electricity, or propane, whether connected or disconnected from its energy source.

(7) "Woodstove" means a solid fuel burning device designed for solid fuel combustion so that useable heat is derived for the interior of a building, and includes, without limitation, solid fuel-fired stoves, woodstoves of any nature, solid fuel-fired cooking stoves, combination fuel furnaces or boilers which burn solid fuel, or any other device used for the burning of solid combustible material. Woodstoves do not include fireplaces, barbeque devices, or natural gas-fired fireplaces.

(d) Words defined in Chapter 1-2, B.R.C. 1981, have the meanings there expressed if not differently defined by this chapter.

6-9-3 No-Burn Days

- (a) The city manager may designate no-burn days when monitoring indicates violations within the city of air quality standards established by either the United States Environmental Protection Agency or the Colorado Department of Health, or when meteorological conditions warrant such designation.
- (b) No person shall use any woodstove or fireplace during a no-burn day unless an exemption has been granted pursuant to subsection (e) below.
- (c) No-burn days shall last for a 24-hour period. Such days may be declared to be over at any time during that period. Such days may be renewed at the end of that 24-hour period if violations still exist, or if meteorological conditions are such that it is likely that violations will continue to occur.
- (d) At the time of the declaration of a no-burn day, the city manager shall allow three hours for the burndown of existing fires prior to the initiation of enforcement.
- (e) It is a specific defense to a charge of burning on a no-burn day that:
  - (1) For offenses between January 1, 1987, and July 1, 1992, the burning occurred in a Phase II certified device; or
  - (2) The person had obtained a temporary exemption demonstrating both an economic need to burn solid fuel for building space heating purposes and a reliance on a woodstove as the primary source of heat. The city manager may grant such exemptions according to the following standards:
    - (i) A person applying for an exemption shall demonstrate economic need by certifying eligibility for energy assistance according to economic guidelines established by the United States Office of Management and Budget under the Low-income Energy Assistance Program (L.E.A.P.), as administered by Boulder County.
    - (ii) A person applying for an exemption must sign a verified affidavit demonstrating reliance on a woodstove as the primary source of heat.
    - (iii) An exemption obtained under this section shall be effective for one year from the date it is granted; or
  - (3) A power outage, interruption of natural gas supply, or temporary equipment failure existed at the time and location of the violation that did not result from any action of the person charged with the violation.

6-9-4 Woodstove Installation and Retrofit.

- (a) No person shall repair, alter, move, or install a woodstove without having first obtained a building permit in accordance with Title 10, B.R.C. 1981. No person shall replace a woodstove which is substantially destroyed, demolished, or in need of replacement, except with a Phase I or Phase II certified device as set forth in subsections (b) and (c) below. Woodstoves lawfully existing and installed as of the date of enactment of this ordinance may be repaired to the extent that such repair, in the reasonable judgment of the city manager, is necessary to prevent the existence of an unsafe condition.
- (b) As of January 1, 1987, no person shall install a woodstove in any building unless it is a Phase I or Phase II certified device.
- (c) As of July 1, 1988, no one shall install a woodstove in any building unless it is a Phase II certified device.

6-9-5 Limit on Coal Burning.

- (a) No person shall burn coal or any substance other than wood or wood products in a woodstove or a fireplace.
- (b) Between January 1, 1987, and January 1, 1988, it is a specific defense to a charge of burning coal that the woodstove or fireplace burns only coal and is the primary source of heat for that building.

6-9-6 Non-Owner Occupied Dwelling Units.

No person shall rent a building if a woodstove or fireplace is the sole source of heat. In such a case, the owner, and not the tenant, shall be liable for any penalty imposed.

6-9-7 Enforcement.

- (a) Every person convicted of a violation of any provision of this chapter shall pay a fine according to the following schedule:
  - (1) first conviction, no more than one hundred dollars;
  - (2) second conviction, no more than two hundred dollars; and
  - (3) third conviction, no more than three hundred dollars.
- (b) The date when the actual violation occurred will control regardless of the date of conviction.
- (c) The record of the violator for two years prior to the date of the current violation will be considered.
- (d) No fines shall be assessed for violations of Sections 6-9-3 and 6-9-5, B.R.C. 1981, until November 15, 1987.

Section 2. A new Section 10-3-13, B.R.C. 1981, is added to read:

10-3-13 Stove as Sole Source of Heat Prohibited.

No owner of a dwelling unit required to be licensed under this chapter shall permit a woodstove or fireplace, as defined in Section 6-9-2, B.R.C. 1981, to be the sole source of heat for such dwelling.

Section 3. This ordinance is necessary to protect the public health, safety, and welfare of the residents of the city and covers matters of local concern.

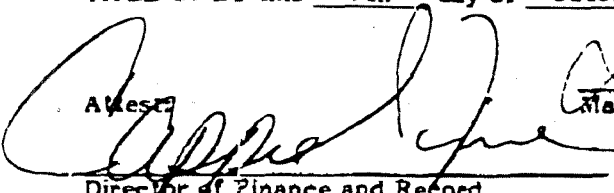
Section 4. The council deems it appropriate that this ordinance be published by title only and orders that copies of this ordinance be made available in the office of the city clerk for public inspection and acquisition.

Section 5. The council finds that an emergency exists due to the fact that the Better Air Program and high pollution season have already begun. Accordingly, the council finds that an emergency exists, and this ordinance shall take effect immediately upon its passage.

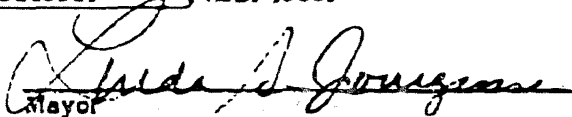
INTRODUCED, READ ON FIRST READING, AND ORDERED PUBLISHED BY

TITLE ONLY this 7th day of October, A.D. 1986.

Attest:

  
Director of Finance and Record  
Ex-Officio City Clerk

Mayor

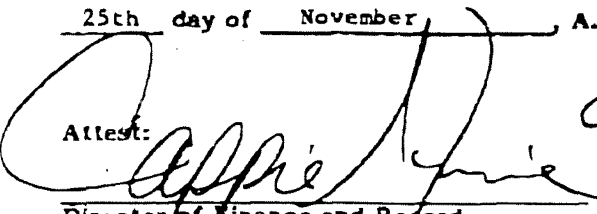


READ ON SECOND READING, AMENDED, PASSED BY A TWO-THIRDS VOTE,

ADOPTED BY EMERGENCY, AND ORDERED PUBLISHED BY TITLE ONLY this

25th day of November, A.D. 1986

Attest:

  
Director of Finance and Record  
Ex-Officio City Clerk

Mayor



PL EN DKS

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Boulder - Ordinance 5445

**Rule Title** .

**State Effective Date** 04/21/1992

**State Adoption Date** 04/21/1992

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 5445 - Boulder.pdf](#)

ORDINANCE NO. 5445

AN ORDINANCE AMENDING SECTIONS 1 THROUGH 7 OF CHAPTER 6-9, B.R.C. 1981, AND ENACTING SECTION 6-9-5, NEW CONSTRUCTION FIREPLACE INSTALLATION, B.R.C. 1981, TO LIMIT THE TYPES OF FIREPLACES ALLOWED IN NEW CONSTRUCTION, AND SETTING FORTH DETAILS IN RELATION THERETO.

the stove shall emit particulates at a rate of 30 grams per hour or less and carbon monoxide at a rate of 100 grams per hour or less.

(ii) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-5, the stove shall emit particulates at a rate of 23 grams per hour or less and carbon monoxide at a rate of 100 grams per hour or less.

(B) Prior to July 1, 1988, no woodstove with a minimum heat output of more than 40,000 Btu per hour, shall be certified unless the stove meets the following standards:

(i) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-6, with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 37, and 1 gram per hour for each 1000 Btu per hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 800, and 10 grams per hour for each 1,000 Btu per hour heat output.

(ii) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-6, with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 30, and 0.7 grams per hour for each 1000 Btu per hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 800, and 10 grams per hour for each 1,000 Btu per hour heat output.

(C) All stoves with a minimum long-life catalyst, a thermometer for reading the temperature of the catalyst, and a thermometer for reading the temperature of the stove.

(43) "Phase II certified device" means a solid fuel burning device which meets the following standards set forth in Subsection 11, Article 18, Regulation No. 4, Colorado Air Quality Control Commission, 5 CCR 1001-6, for wood stoves an airtight woodstove, including without limitation a fireplace insert, which the user can demonstrate to a reasonable scientific certainty has particulate emissions that do not exceed the following standards:

(A) On or after July 1, 1988, no woodstove with a minimum heat output of

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOULDER, COLORADO:

Section 1. Section 6-9-1, B.R.C. 1981, is amended by the addition of a new subsection (e) to read as follows, and subsequent subsections are renumbered accordingly:

(e) City council finds that the burning of solid fuel has been determined to be a cause of air pollution and that regulations concerning the installation of solid fuel burning devices are necessary for the protection of the health, safety, and welfare of its inhabitants.

Section 2. Subsection 6-9-2(a), B.R.C. 1981, is amended to read as follows:

6-9-2 Definitions.

(a) The following words and phrases have the following meanings unless the context clearly indicates otherwise:

(1) "Barbecue device" means a device that is used solely for the purpose of cooking food.

(2) "Fireplace" means a hearth, fire chamber, or similarly prepared place and a chimney.

(3) "Phase I certified device" means an airtight woodstove, including without limitation a fireplace insert, which the user can verify to a reasonable scientific certainty has particulate emissions that do not exceed the following standards:

(A) Prior to July 1, 1988, no woodstove with a minimum heat output of 40,000 Btu per hour or less shall be certified unless the stove meets the following standards:

(i) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-6,

FEB 10 1988 10:31 AM CITY

Post-It<sup>®</sup> brand fax transmittal memo 7871 # of pages 2

To	Tom Mittal	From	APeters
Co.	RACE	Co.	
Dept.	5813	Phone #	441-1277
Fax #	679-5872	Fax #	



40,000 Btu-per-hour or less, shall be certified unless the stove meets the following standards:

(i) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-6, the stove shall emit particulates at a rate of 12 grams per hour or less and carbon monoxide at a rate of 200 grams per hour or less.

(ii) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-6, the stove shall emit particulates at a rate of 8.5 grams per hour or less and carbon monoxide at a rate of 200 grams per hour or less.

(H) On or after July 1, 1988, no woodstove with a minimum heat output of more than 40,000 Btu-per-hour shall be certified unless the stove meets the following emissions standards:

(i) For stoves tested in accordance with Appendix A, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-6, with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 15, and 0.4 grams per hour for each 1,000 Btu-per-hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 400, and 5 grams per hour for each 1,000 Btu-per-hour heat output.

(ii) For stoves tested in accordance with Appendix B, Colorado Air Quality Control Commission, Regulation No. 4, 5 CCR 1001-6, with respect to particulates, the number of grams per hour emitted shall be less than or equal to the sum of 12, and 0.3 grams per hour for each 1,000 Btu-per-hour heat output; with respect to carbon monoxide, the number of grams per hour emitted shall be less than or equal to the sum of 400, and 5 grams per hour for each 1,000 Btu-per-hour heat output.

(E) And stoves with a minimum long-life catalyst, a thermometer for reading the temperature of the catalyst, and a thermometer for reading the temperature of the stove.

(4) "Phase III certified device" means a solid fuel burning device which meets the emission standards set forth in Section 11, Paragraph B of Regulation No. 4, Colorado Air Quality Control Commission, 5 CCR 1001-6, for wood stoves.

(5) "Primary source of heat" means that source of heat which heats more than fifty percent of the space heating load in any building.

(6) "Sole source of heat" means one or more wood stoves which constitute the only source of heating in a building. No wood stove shall be considered to be the sole source of heat if the building is equipped with a permanently installed furnace or heating system utilizing oil, natural gas, electricity, or propane, whether connected or disconnected from its energy source.

(7) "Woodstove Solid Fuel Burning Device" means a solid-fuel-burning device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel-fired stoves, wood stoves of any nature, fireplaces, pellet stoves, solid fuel-fired cooking stoves, combination fuel furnaces or boilers which burn solid fuel, or any other device used for the burning of solid combustible material. Woodstoves Solid Fuel Burning Devices do not include fireplaces, barbecue devices, or natural gas-fired fireplaces, or electrical appliances.

Section 1. Section 6-9-3, B.R.C. 1981, is amended to read as follows:

#### 6-9-3 No-Burn Days

(a) No-burn days shall be in effect on such days as the Colorado Department of Health designates no-burn days for the Denver Metropolitan area.

(b) In addition, the city manager may designate no-burn days when monitoring indicates actual or potential violations within the city of air quality standards established by either the United States Environmental Protection Agency (EPA) or the Colorado Department of Health, or when meteorological conditions warrant such designation.

(c) No person shall use any woodstove or fireplace solid fuel burning device during a no-burn day unless an exemption has been granted pursuant to subsection (e) below except as provided in subsection (f) below.

(d) No-burn days shall last for a 24-hour period. Such days may be declared to be over at any time during that period. Such days may be renewed at the end of that 24-hour period if violations still exist, or if meteorological conditions are such that it is likely that violations will continue to occur.

(e) At the time of the declaration of a no-burn day, the city manager shall allow three hours for the burn-down of existing fires prior to the initiation of enforcement.

(f) It is a specific defense to a charge of burning on a no-burn day that:

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- (1) For offenses between January 1, 1987, and July 1, 1992, the burning occurred in a Phase II certified device; or
- (2) The burning occurred in a Phase III certified device or in a solid fuel burning device that meets the same emission standards as are required for a Phase III certified wood stove and is tested by an EPA accredited laboratory; or
- (23) The person had obtained a temporary exemption demonstrating both an economic need to burn solid fuel for building space heating purposes and a reliance on a woodstove-solid fuel burning device as the primary source of heat. The city manager may grant such exemptions according to the following standards:
  - (A) A person applying for an exemption shall demonstrate economic need by certifying eligibility for energy assistance according to economic guidelines established by the United States Office of Management and Budget under the Low-income Energy Assistance Program (L.E.A.P.), as administered by Boulder County.
  - (B) A person applying for an exemption must sign a verified affidavit demonstrating reliance on a woodstove-solid fuel burning device as the primary source of heat.
  - (C) An exemption obtained under this section shall be effective for one year from the date it is granted; or
- (34) A power outage, interruption of natural gas supply, or temporary equipment failure existed at the time and location of the violation that did not result from any action of the person charged with the violation.

Section 4. Section 6-9-4, B.R.C. 1981, is amended to read as follows:

6-9-4 Woodstove-Solid Fuel Burning Device Installation and Retrofit.

- (a) No person shall repair, alter, move, or install a woodstove-solid fuel burning device without having first obtained a building permit in accordance with Title 10, B.R.C. 1981.
- (b) No person shall replace a woodstove-solid fuel burning device which is substantially destroyed, demolished, or in need of replacement, except with a Phase I or Phase II certified device as set forth in subsections (b) and (c) below. Woodstoves-solid fuel burning devices lawfully existing and installed as of the date of enactment of this ordinance may be repaired to the extent that such repair, in the reasonable judgment of the city

manager, is necessary to prevent the existence of an unsafe condition.

- (b) ~~As of January 1, 1987, no person shall install a woodstove-solid fuel burning device in any building unless it is a Phase I or Phase II certified device. If the installation it meets the most stringent emission standards for that particular device established by the Colorado Air Quality Control Commission in effect as of such date. If there are no standards established for that device, then it shall meet the most stringent emission standards in effect as of such date for wood stoves demonstrated by testing at an EPA accredited laboratory.~~
- (c) ~~As of July 1, 1988, no one shall install a woodstove in any building unless it is a Phase II certified device.~~

Section 5. Section 6-9-5, B.R.C. 1981, is amended to read as follows:

6-9-5 Limit on Coal Burning.

- (a) ~~No person shall burn coal or any substance other than wood or wood products in a woodstove or a fireplace-solid fuel burning device.~~
- (b) ~~Between January 1, 1987, and January 1, 1988, it is a specific defense to a charge of burning coal that the woodstove or fireplace burns only coal and is the primary source of heat for that building.~~

Section 6. Section 6-9-6, B.R.C. 1981, is amended to read as follows:

6-9-6 Non-Owner Occupied Dwelling Units.

No person shall rent a building if a woodstove or fireplace-solid fuel burning device is sole source of heat. In such a case, the owner, and not the tenant, shall be liable for penalty imposed.

Section 7. Section 6-9-7, B.R.C. 1981, is amended to read as follows:

6-9-7 Enforcement.


- (a) Every person convicted of a violation of any provision of this chapter shall pay a fine according to the following schedule:
  - (1) first conviction, no more than one hundred dollars;
  - (2) second conviction, no more than two hundred dollars; and
  - (3) third conviction, no more than three hundred dollars.


- (b) The date when the actual violation occurred will control regardless of the date of conviction.
- (c) The record of the violator for two years prior to the date of the current violation will be considered.
- (d) ~~No fines shall be assessed for violations of Sections 6-9-3 and 6-9-5, B.H.C. 1981, until November 15, 1987.~~

Section 8. This ordinance is necessary to protect the public health, safety, and welfare of the residents of the city, and covers matters of local concern.

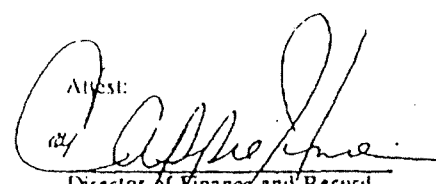
Section 9. The council deems it appropriate that this ordinance be published by title only and orders that copies of this ordinance be made available in the office of the city clerk for public inspection and acquisition.

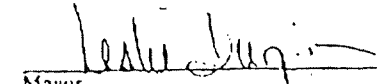
INTRODUCTION AND MOTION TO PUBLISH BY TITLE ONLY this 21st day of January, 1992.

Attest:  
BY   
Director of Finance and Record  
Ex-Officio City Clerk

  
Mayor

READ ON SECOND READING, PASSED, ADOPTED, AND ORDER  
PUBLISHED BY TITLE ONLY this 21st day of April, 1992.

Attest:  
BY   
Director of Finance and Record  
Ex-Officio City Clerk  
  
CM EN GBK

  
Mayor

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Broomfield - Ordinance 794

**Rule Title** .

**State Effective Date** 11/24/1988

**State Adoption Date** 06/24/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 794 - Broomfield.pdf](#)

~~ORDINANCE NO. 794~~

ORDINANCE NO. 794

AN ORDINANCE ADDING A NEW CHAPTER 8.15 TO THE  
BROOMFIELD MUNICIPAL CODE REGARDING RESTRICTIONS ON  
WOOD BURNING

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BROOMFIELD,  
COLORADO:

Section 1: A new chapter 8.15 is added to the Broomfield Municipal Code to read as follows:

CHAPTER 8.15  
BURNING RESTRICTIONS

Sections:

- 8.15.010 Definitions
- 8.15.020 High pollution prohibition
- 8.15.030 Exemptions
- 8.15.040 Defense
- 8.15.050 Rental dwelling units
- 8.15.050 Inspections

8.15.010 Definitions: The following words and phrases shall have the indicated meanings:

A. "High pollution day" means that period of time declared to be a high pollution day by the Colorado Department of Health.

B. "Sole source of heat" means one or more solid fuel-fired heating devices which constitute the only source of heat in a private residence for purposes of space heating. If there is a furnace or heating system designed to heat the residence, a solid fuel-fired heating device or devices shall be considered to be the sole source of heat only if the furnace or heating system is disconnected from its energy source, e.g. heating oil, natural gas, electricity, or propane.

C. "Solid fuel-fired heating device" means a device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes solid fuel-fired stoves, fireplaces and furnaces or boilers. "Solid fuel-fired heating device" does not include a barbecue device used solely for the cooking of food or natural gas-fired fireplace logs.

8.15.020 High pollution prohibition.

A. It shall be unlawful for any person to operate a solid fuel-fired heating device during a high pollution day unless that person has an exemption granted pursuant to section 8.15.030 below. It shall be the duty of all persons owning or operating a solid fuel-fired device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

B. At the time of the declaration of a high pollution day, the City shall allow three (3) hours for the burndown of existing fires in solid fuel-burning devices prior to the initiation of enforcement.

8.15.030 Exemptions

A. A person may operate a solid fuel-fired heating device during a high pollution day if he has previously obtained an exemption from the city manager or his designee. An exemption may be granted if the applicant submits a sworn statement either (1) that he relies on a solid fuel-burning device as his sole source of heat and that said device was installed prior to the effective date of the ordinance codified herein, or (2) that he relies on an electrical heating system as his primary source of heat and that said system was installed prior to the effective date of the ordinance codified herein.

B. An exemption obtained under this section shall be effective for one year from the date it is granted and may be renewed upon submission of a new sworn statement as provided in subsection A above.

8.15.040 Defense. It shall be an affirmative defense to a charge of burning on a high pollution day under section 8.15.020 above that a power outage, interruption of natural gas supply or temporary equipment failure existed at the time and location of the violation, which did not result from any action of the person charged with the violation.

8.15.050 Rental dwelling units. It shall be unlawful for a solid fuel-fired heating device to be the sole source of heat in any rental dwelling unit. Any violation of section 8.15.020 above by the tenant of such a dwelling unit shall be construed to be a violation by the owner of the dwelling unit if a solid fuel-fired heating device is the tenant's sole source of heat. In such a case, the owner, and not the tenant, shall be liable for any penalty imposed.

8.15.060 Inspections. For the purpose of determining compliance with the provisions of this Chapter, the Director of Public Safety, a City police officer, or a Community Services Officer is authorized to make inspections to determine whether solid fuel-fired heating devices are being operated on high pollution days. If any person refuses or restricts entry or free access to any part of the premises, or refuses inspection of any device, the Director of the Public Safety, a City police officer, or a Community Services Officer may seek from the Municipal Court a warrant for inspection and order that such person refusing inspection be required to permit an inspection at a reasonable time, without interference, restriction, or obstruction. The Court shall have full power, jurisdiction, and authority to enforce all orders issued under the provisions of this Chapter.

Section 2. Penalty clause. The penalties for violation of this ordinance shall be as prescribed in Chapter 1.12 of the Broomfield Municipal Code.

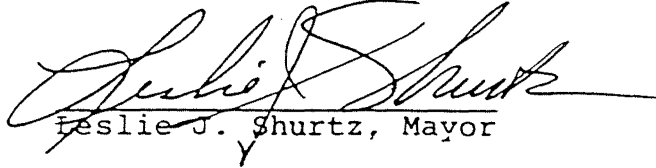
Section 3. Severance clause. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of the ordinance. The city council hereby declares that it would have passed this ordinance and each part or parts

thereof, irrespective of the fact that any one part or parts be declared invalid or unconstitutional.

Section 4. Effective date. This ordinance shall become effective seven (7) days after public notice following final passage.

INTRODUCED, READ AND ADOPTED on first reading and ordered published in full this 25th day of October, 1988.

FINALLY ADOPTED AND ORDERED FINALLY PUBLISHED by title only this 8<sup>th</sup> day of November, 1988.

  
Leslie J. Shurtz, Mayor

ATTEST:

Dicki Marcy  
Vicki Marcy, City Clerk

APPROVED AS TO FORM:

  
Matthew D. Gasser  
City Attorney

Effective Date: November 24, 1988

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Denver - Ordinance 293

**Rule Title** .

**State Effective Date** 05/30/1990

**State Adoption Date** 05/30/1990

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 293 - Denver.pdf](#)



BY AUTHORITY

ORDINANCE NO. 293

COUNCIL BILL NO. 282

SERIES OF 1990  
AS AMENDED 05-29-90

COMMITTEE OF REFERENCE:  
HEALTH HOUSING  
HUMAN SERVICES

A B I L L

FOR AN ORDINANCE AMENDING THE DENVER REVISED MUNICIPAL CODE BY ADDING A NEW ARTICLE III TO CHAPTER 4 ENTITLED "STATIONARY SOURCES" TO PRESERVE AND IMPROVE AIR QUALITY IN THE CITY AND COUNTY OF DENVER.

WHEREAS, the geographic location and atmospheric conditions of the City and County of Denver are conducive to the formation and retention of air pollution from industrial sources, motor vehicle emissions, and solid fuel burning devices; and

WHEREAS, the 1987-88 Metro Denver Brown Cloud Study found that up to 50% of the cloud results from mobile sources and 24% is due to woodburning; and

WHEREAS, emissions from fireplaces contribute four times more carbon monoxide and three times more particulates than the Phase III solid fuel-fired heating device required by Denver for burning on high pollution days; and

WHEREAS, burning unclean and damp solid fuel or improper burning of appropriate solid fuel may result in excessive levels of visible emissions; and

WHEREAS, reducing emissions from solid fuel-fired heating devices will enhance air quality and protect sensitive populations from related health effects; and

WHEREAS, air pollution from industrial sources may have a cumulative impact on Denver residents, even though individual facilities may satisfy applicable emission standards; and

WHEREAS, the Council finds that reduction in emissions from industrial sources, and solid fuel burning devices will enhance the quality of life for those who live and work in Denver and will protect sensitive populations from harmful health effects of air pollution; and

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(3) A new or existing industrial facility emits a hazardous air pollutant and a human health risk assessment has determined that the cumulative impact of existing sources of said pollutant, in the case of an existing industrial facility, or the cumulative impact of existing sources together with the projected incremental impact of the new source, in the case of a new facility, will result in an estimated risk of human cancer of at least one case per million population.

(b) The board shall promulgate regulations governing the nature and extent of the offsets that may be required and the methods by which they may be achieved; provided, however, that no offset will be required that exceeds 150 percent of the

(2) The board may by regulation narrow the list of industrial categories included within the definition of industrial facility if it finds that industrial plants or facilities within a category do not adversely affect air quality.

(d) Fees.

(1) The board shall prescribe, by regulation,

(b) Permits For Existing Industrial Facilities. Owners or Operators of all existing industrial facilities shall obtain an air quality permit for each existing industrial facility. To obtain an

WHEREAS, the City has previously adopted ordinances to

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this article, such right shall be specifically limited by the rights herein reserved to the city, and no subsequent legislative or administrative action or inaction by the city shall be deemed to constitute any impairment of contract or obligation, taking of property, or other impairment of such rights.

- (2) Subsection (1) shall be deemed an integral part of this section 4-22(c), and in the event that any portion of shall be finally declared by a court of competent jurisdiction to be unconstitutional or otherwise unlawful, then it is the expressed intent of the council of the city that this entire Section 4-22(c) shall be declared void ab initio.

**Sec. 4-23 Opacity (a) Emissions from stationary sources.**

It shall be unlawful for any person to emit any air contaminants from stationary sources, including solid fuel-fired heating devices, which exceed twenty (20) per cent opacity, provided, however, that the provisions of this subsection shall not apply to:

- (1) Gasoline- or diesel-powered engines for which standards are provided in Article IV of this Chapter, or
- (2) Emissions from noncommercial barbecues, or
- (3) Boiler emissions from soot blowing or fuel changing operations which do not exceed six (6) minutes in any sixty (60) consecutive minutes.

(b) Solid Fuel-Fired Heating Devices. It shall be unlawful for any person to emit any air contaminants from solid fuel-fired heating devices which exceed forty (40) percent opacity for ten (10) consecutive minutes.

**Sec. 4-24. Combustion.**

(a) Open Burning

- (1) It shall be unlawful for any person to engage in or allow open burning within the city unless and until a written permit has been issued by the department,

provided however, that permits will not be required for fires used for noncommercial cooking of food for human beings nor for smokeless or safety flares used for the combustion of gases or used to indicate some danger to the public.

- (2) When a person applies for an open burning permit, as required by subsection (a), the department will issue or deny the same based upon one or more of the following considerations: practical alternatives for the disposal of material to be burned; approval or disapproval of the fire department; the location of the proposed burning to buildings; the potential contribution of the proposed burning to the total air pollution in the area; the climatic conditions and the amount and characteristics of the air pollution existing on the date of burning; the probability that the applicant will comply with fire and safety standards and permit restrictions. Each open burning permit is issued upon the condition that it may be summarily revoked by the department.
- (3) It shall be unlawful for any person to disregard or violate any requirement or restriction contained in an open burning permit or to engage in open burning after a permit has been revoked by the department.

(b) Incinerator burning.

It shall be unlawful for any person to burn any material in any incinerator within the city unless such incinerator is of the multiple chamber type or the domestic auxiliary fuel-fired type which has been approved by both the building department and the department of health and hospitals prior to its use and which meets the air pollution emission standards of this chapter.

(c) Solid fuel burning.

- (1) High pollution prohibition. It shall be unlawful for any person to operate a solid fuel-fired heating

device during a high pollution day unless an exemption has been granted pursuant to this section. It shall be the duty of all persons owning or operating a fuel-fired device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

- (2) Exemptions for sole source of heat. The manager shall grant an exemption from section 4-21(c)(1), of this chapter to any person who relies on a solid fuel-fired heating device as his or her sole source of heat. The board may formulate regulations regarding these exemptions.
- a. A person applying for an exemption must document that a nonfireplace solid fuel-fired heating device is the only source of heat for at least twenty (20) percent of the gross floor area of his or her residence.
- b. An exemption obtained under this section shall be effective for one year from the date it is granted.
- (3) Exemption for defective heating system. The manager shall grant an exemption from section 4-21(c)(1), of this chapter to any person who submits proof from a licensed HVAC contractor that the heating system in his/her residence is defective. An exemption obtained under this subsection shall be effective for thirty (30) days from the date it is granted.
- (4) Exemption for new technology stoves. The manager shall grant an exemption from section 4-21(c)(1), of this chapter to any person who has a PHASE III solid fuel-fired heating device.
- (5) All new solid fuel-fired heating devices installed in Denver shall be Phase III solid fuel-fired heating devices. This provision shall apply to woodstoves installed on or after July 1, 1990, and to fireplaces installed on or after July 1, 1994.

- (6) Only one (1) solid fuel-fired heating device may be installed in a single unit dwelling, as defined in Section 59-2(131) of the Revised Municipal Code, which is constructed or added to after the effective date of this section.
- (7) Multiple unit dwellings, as defined in Section 59-2(88) of the Revised Municipal Code, constructed or added to after the effective date of this section shall be limited to one (1) solid fuel-fired heating device for every 7,000 square feet of lot area multiplied by the number of floors in the unit; e.g., a three (3) story multi-family residential unit located on a 7,000 square foot lot or parcel of land could have three (3) solid fuel-fired heating devices.

**Sec. 4-24. Particulate emission.**

(a) Stationary fuel-burning equipment. It shall be unlawful for any person to emit particulate matter from any stationary fuel-burning equipment which exceeds the following standards:

- (1) Fuel-burning equipment having one million or less Btu total input per hour shall not emit particulate matter in excess of 0.5 pounds for each million Btu's per hour utilized;
- (2) Fuel-burning equipment having between one million and five hundred million Btu total input per hour shall not emit particulate matter in excess of that amount calculated from the following formula:

$$PE=K(FI)^x$$

where PE equals the particulate emissions in pounds per million Btu's utilized;

K equals the constant 0.5;

FI equals the fuel input in million Btu's per hour;

x equals the power of minus 0.26.

- (3) Fuel-burning equipment having more than five hundred million Btu total input per hour shall not emit

particulate matter in excess of 0.1 pounds for each million Btu's per hour utilized.

(b) Solid waste burning equipment. It shall be unlawful for any person to emit particulate matter from any solid waste burning equipment which exceeds the following standards:

- (1) Solid waste burning equipment having a rating of less than two hundred (200) pounds of solid wastes per hour shall not emit particulate matter in excess of 0.15 grains per cubic foot;
- (2) Solid waste burning equipment having a rating of two hundred (200) or more pounds of solid wastes per hour shall not emit particulate matter in excess of 0.10 grains per cubic foot;
- (3) Grains per cubic foot for purposes of this section shall be corrected to standard conditions and dry flue gas corrected to twelve (12) percent carbon dioxide (CO<sub>2</sub>).

(c) Manufacturing unit process. It shall be unlawful for any person to emit particulate matter from any process unit of manufacturing which exceeds the amount of particulate emission as calculated in the following formula:

$$PE=K(PW)^x$$

where PE equals the particulate emissions in pounds per hour;

K equals a constant;

PW equals the process weight in tons per hour;

x equals a power as specified below.

- (1) When the process weight (PW) of a manufacturing process is thirty (30) or less tons per hour, the formula expressed herein shall be used and the particulate emission, (PE) shall not exceed in pounds per hour, an amount greater than the constant (K) 3.59 times the process weight (PW) in tons per hours taken to the power of 0.62;  
or,  $PE=3.59(PW)^{0.62}$ .

(2) When the process weight (PW) of a manufacturing process is greater than thirty (30) tons per hour, the formula expressed herein shall be used and the particulate emission (PE) shall not exceed in pounds per hour, an amount greater than the constant (K) 17.31 times the process weight (PW) taken to the power of 0.16; or,  $PE=17.31(PW)^{0.16}$ .

(d) Standard for particulate emissions measurement. For the purpose of this section, emission rates shall be measured according to the American Society of Mechanical Engineer's Power Test Code, (PTC)27, dated 1957, and entitled "Determining Dust Concentrations in a Gas Stream" or any equivalent method accepted by the department.

(e) Evaluation of units separately. For the purpose of this section, when two (2) or more fuel-burning units are connected to a single stack, each unit shall be evaluated separately and the maximum particulate emission allowed shall be based on the sum of the individual units. When more than one stack is used for one fuel-burning unit, the maximum particulate emissions from the combined total of all stacks shall not exceed the limitation as specified in this section.

**Sec. 4-25. Sulfur dioxide emission.**

(a) Stack emission concentration. It shall be unlawful for any person to emit from any single source, a concentration of sulfur dioxide in excess of five hundred (500) parts per million based on volume.

(b) Ground level concentrations. It shall be unlawful for any person to emit sulfur dioxide which causes a ground level concentration on any adjacent premise to exceed:

- (1) 0.25 parts per million or more (by volume) for a period of five (5) or more continuous minutes;
- (2) 0.1 part per million or more (by volume) for a period of sixty (60) or more continuous minutes;
- (3) 0.05 parts per million or more (by volume) for a period of twenty-four (24) or more continuous hours.

(c) Method of measurement:



(1) To determine the concentration of sulfur dioxide in stack emissions, measurements shall be made by one of the following methods:

- a. "Rapid Microtitration of Sulfate," James S. Fritz and Stanley S. Yansaura, *Analytical Chemistry*, Vol. 27, No. 9, pages 1461-1464, September 1955;
- b. "Determination of Sulfur Oxides in Stack Gases," Edwin B. Siedman, *Analytical Chemistry*, Vol. 30, No. 10, pages 1680-1682, October 1958;
- c. Any equivalent method which has been approved by the department.

(2) To determine the ground level concentration of sulfur dioxide, measurements shall be made by one of the following methods:

- a. "Tentative Method of Analysis for Sulfur Dioxide Content of the Atmosphere (Colorimetric)," 42401-01-69T Intersociety Committee for a Manual of Methods for Ambient Air Sampling and Analysis, *Health Laboratory Science*, Volume 7, (1) pages 4-12, (1970);
- b. Any equivalent method which has been approved by the department.

(d) Oxidized forms. For purposes of this section, all oxidized forms of sulfur, including but not limited to, sulfur trioxide (SO<sub>3</sub>), sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) and thionyl chloride (SOCl<sub>2</sub>) shall be considered as sulfur dioxide (SO<sub>2</sub>).

**Sec. 4-26. Storage of petroleum products.**

It shall be unlawful for any person to place, store or hold in any stationary tank, reservoir or other container with more than forty thousand (40,000) gallons capacity, any gasoline or any petroleum distillate having a vapor pressure of one and five-tenths (1.5) pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir or other container is a pressure tank maintaining working pressures sufficient

at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is designed and equipped with a vapor loss control device approved by the department which is properly installed and in good working order.

Sec. 4-27. Asbestos.

(a) Allowable limits. No person shall emit into the atmosphere any asbestos fibers from any stationary source, manufacturing process, demolition, renovation, or construction activity in excess of the standards for the type of asbestos specified in Table A. Special precautions and handling methods are also required to limit asbestos exposure to workers and the general public.

Table A.  
Maximum Number of Asbestos Fibers  
Allowable in the Atmosphere

Type of Asbestos	No. of fibers greater than 5 microns/cc*
Amosite . . . . .	0.5
Chrysolite . . . . .	2.0
Crocidolite . . . . .	0.2
Other forms . . . . .	2.0*

\*Maximum number of asbestos fibers longer than five (5) microns permitted or allowable per cubic centimeter of air.

(b) Demolition or renovation of buildings, etc., with asbestos-containing materials. Any person who intends to demolish any building, structure, facility, or renovate any such premise, whereby the heating or air conditioning system is removed or any insulation, fireproofing or acoustical material is dislodged, shall make a thorough inspection of the entire premises to determine if asbestos-containing materials have been used for insulation, fireproofing or acoustical purposes, etc., and shall notify the department of health and hospitals in writing of such findings prior to the demolition or renovation operation. Demolition or renovation of I and J occupancy structures as defined by the building code of

the city and any new construction, renovation or remodeling operation whereby insulation, fireproofing or acoustical materials are not removed during or prior to construction shall be exempt from this section.

(c) Removal of asbestos materials. When asbestos is found at the premises, it shall be removed in accordance with an approved plan submitted prior to the demolition or renovation. If asbestos is found during demolition or renovation activities and if a plan for removal has not been submitted to and approved by the department, no further demolition or renovation shall continue until an approved plan is obtained. The plan shall contain the means for accomplishing the following precautions and handling methods:

- (1) Asbestos shall be completely isolated by enclosure during the removal and clean-up operation.
- (2) Materials containing asbestos shall be adequately wetted and shall remain wet during all stages of removal and handling. Surface-active agents shall be added to the water to improve the wetsability.
- (3) All persons involved in the handling and removal of asbestos and materials containing asbestos shall be provided with, and shall wear protective clothing and respiratory protective devices approved by the manager or his authorized representative.
- (4) All asbestos-containing waste materials shall be collected and sealed in approved impermeable bags and shall be placed in a container suitable for transportation which is approved by the manager or his authorized representative. These containers shall be properly labeled, handled and stored at the demolition or renovation site.
- (5) All asbestos-containing waste materials shall be transported in an approved manner and to a disposal site which has been approved by the manager or his authorized representative.

(6) During the asbestos removal operation, air samples shall be collected to determine compliance with subsection (a) and Table a. The sampling locations and the type of sampling device utilized shall be approved by the manager or his authorized representative prior to sample collection.

(d) Emergency demolition waiver of section. Any building, structure, facility or installation which contains asbestos materials and has been declared by the building department to be structurally unsound, unsafe, and designated for emergency demolition, shall not be required to meet the provisions of subsections (a) through (c).  
Sec. 4-28 through 4-40. RESERVED.

PASSED BY THE COUNCIL May 29 1990

Cathy Reynolds - PRESIDENT Pro Tem

APPROVED: John Doe - MAYOR May 30 1990

ATTEST: Thomas H. [Signature] - CLERK AND RECORDER,  
EX-OFFICIO CLERK OF THE  
CITY AND COUNTY OF DENVER

PUBLISHED IN THE DAILY JOURNAL May 11, 1990 June 4, 1990

PREPARED BY: SHAWN SULLIVAN ASST. CIV. ATTY.

REVIEWED BY: Domestic Wells - CITY ATTORNEY 5/27 1990

SPONSORED BY COUNCIL MEMBER(S) \_\_\_\_\_



**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Denver - Ordinance 1018

**Rule Title** .

**State Effective Date** 12/16/1993

**State Adoption Date** 12/16/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 1018 - Denver.pdf](#)

BY AUTHORITY

ORDINANCE NO. 1018

COUNCIL BILL NO. 1009

SERIES OF 1993

COMMITTEE OF REFERENCE:

• AMENDED 12-13-93

Health, Housing,  
Human Services

A B I L L

FOR AN ORDINANCE AMENDING THE REVISED MUNICIPAL CODE OF THE CITY AND COUNTY OF DENVER BY AMENDING SECTIONS 4-2, 4-23 and 4-24 TO PRESERVE AND ENHANCE AIR QUALITY BY MODIFYING PROVISIONS GOVERNING SOLID FUEL FIRED DEVICES.

BE IT ENACTED BY THE COUNCIL OF THE CITY AND COUNTY OF DENVER:

Section 1. That from and after the date of enactment of this ordinance, Section 2, Chapter 4, also known and cited as Section 4-2 of the Revised Municipal Code of the City and County of Denver, be and the same is hereby amended to read as follows:

"Section 4-2 Definitions.

The following definitions shall apply in the interpretation and enforcement of this chapter and all regulations adopted hereunder.

(1) Air contaminant or air pollutant: Any fume, odor, smoke, particulate matter, vapor, gas or any combination thereof but not including water vapor or steam condensate.

(2) Air contamination source: Any source whatsoever at, from or by reason of which there is emitted or discharged into the atmosphere any air contaminant.

(3) Air pollution: The presence in the outdoor atmosphere of one (1) or more air contaminants.

New definition (4) on Page 1a

(5) ~~(4)~~ Air quality permit: The permit issued to industrial facilities by the department pursuant to regulations promulgated by the board to effect the purposes of this chapter.

(6) ~~(5)~~ Air quality review: A review of industrial facilities to be performed by the department in accordance with regulations promulgated by the board pursuant to this chapter.

(7) ~~(6)~~ Ambient air: The surrounding or outside air.

(8) ~~(7)~~ Approved: To be officially acceptable to the department or satisfactorily meeting the requirements of this chapter and any rules and regulations promulgated and adopted hereunder.

Revised 12-12-93 Insert new "(4)" definition to read:

(4) AIR PROGRAM AREA: That area defined as such in section 42-4-307 (18), Colorado Revised Statutes.

- (9)~~(8)~~ **Atmosphere:** The air that envelopes or surrounds the earth.
- (10)~~(9)~~ **Best available control technology:** An emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under the federal Clean Air Act emitted from or which results from any major emitting facility which the department, on a case-by-case basis taking into account energy, environmental and economic impacts and other costs, determines is achievable for such facility through the application for production processes and available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for the control of each such pollutant. In no event shall the application of the best available control technology result in emissions of any pollutants which exceed the emissions allowed by any applicable standard established pursuant to Section 111 or 112 of the federal Clean Air Act.
- (11)~~(10)~~ **Board:** The board of health and hospitals of the city.
- (12)~~(11)~~ **Clean-burning fuels:** Compressed natural gas, liquefied natural gas, liquefied petroleum gas or hydrogen; multifuels, such as diesel/compressed natural gas fumigations; fuels containing not less than eighty-five (85) per cent ethanol or methanol; electricity or any other alternative fuel that the board determines to be clean-burning.
- (13)~~(12)~~ **Criteria pollutants:** Those pollutants for which national ambient air standards have been established pursuant to the federal Clean Air Act as amended, i.e., particulate matter, sulfur oxides, nitrogen dioxide, ozone, carbon monoxide and lead.
- (14)~~(13)~~ **Department:** The department of health and hospitals of the city.
- (15)~~(14)~~ **Device:** Any machine, equipment or contrivance which causes or which alters, contains, controls, prevents or removes air pollution from any air contamination source.
- (16)~~(15)~~ **Emergency vehicle:** Any surface or airborne vehicle used for the official business of the police and fire departments and any emergency medical vehicle as defined in chapter 17 of this Code.
- (17)~~(16)~~ **Emission or emit:** To discharge, release or to permit or



cause the discharge or release of one (1) or more air contaminants into the atmosphere.

- (18)~~(19)~~ *Emission offset*: A net reduction in total emissions of a specified air pollutant so that emissions of the specified air pollutant are less than were emitted prior to instituting the offset. An offset can be accomplished by the installation of air pollution control devices or by the elimination of or changes in the method or process of manufacture in existing stationary or mobile sources or in any other way approved by the board.
- (19)~~(18)~~ *Engine*: Any internal combustion machine, such as found in motor vehicles, aircraft, locomotives and stationary power units, which utilizes gas or liquid fuel for combustion energy.
- (20)~~(17)~~ *Existing industrial facilities*: Industrial facilities for which application for all applicable permits and approvals required from the city have been submitted prior to the effective date of this article.
- (21)~~(20)~~ *Fireplace*: An opening made in a chimney and surrounded with brick, stone, metal or like material to hold a fire, and which has no specific method for recirculating heat or reducing emissions.
- (22)~~(21)~~ *Fleet*: Ten (10) or more surface transportation vehicles, powered by an engine and owned by the same person, which are used for business or governmental purposes or, in the case of a non-profit corporation, that are used to further the purpose for which the nonprofit corporation was formed.
- (23)~~(22)~~ *Fuel*: Any combustible substance or material or any combination of such.
- (24)~~(23)~~ *Fuel-burning equipment*: Any furnace, boiler apparatus, stack or appurtenance thereto used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.
- (25)~~(24)~~ *Gas*: An aeroform fluid having neither independent shape nor volume but tending to expand indefinitely.
- (26)~~(25)~~ *Gaseous fuel*: A fuel that exists as a gas at atmospheric temperature and pressure.
- (27)~~(26)~~ *Hazardous air pollutant*: An air pollutant to which no

national ambient air quality standard is applicable and which, in the judgment of the Colorado Air Quality Control Commission, 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 or injury; and any air pollutant listed by the state or federal government as a hazardous air pollutant.

- (28) ~~(27)~~ *Health risk assessment*: An assessment, based on accepted scientific standards and information from inventories, sampling, modeling and/or estimation techniques, of the potential human health risk from exposure to specified levels of identified hazardous air pollutants and criteria pollutants.
- (29) ~~(28)~~ *High-pollution Day*: That period of time in which the Colorado Department of Health anticipates levels of carbon monoxide or particulates exceeding federal ambient air quality standards or when air pollution standards are exceeded for particulates, carbon monoxide, or visibility.
- (30) ~~(29)~~ *Incinerator*: A container, device or other appliance, including residential solid-fuel-fired devices, designed, used or intended to be used for the disposal or reduction of household, commercial or industrial waste material or any commercial or industrial material by burning.
- (31) ~~(30)~~ *Industrial facility*: An industrial plant or operation that has been assigned or comes within an industrial category assigned one (1) of the following standard industrial code numbers: 226 dyeing and finishing textiles except wool fabrics and knit goods; 227 carpets and rugs; 2434 wood kitchen cabinets; 2435 hardwood veneer and plywood; 2436 softwood veneer and plywood; 2491 wood preserving; 2499 wood products not elsewhere classified; 25 furniture and fixtures; 26 paper and allied products; 27 printing and publishing; 28 chemicals and allied products; 29 petroleum refining and related industries; 30 rubber and miscellaneous plastics products; 31 leather and leather products; 32 stone, clay, glass and concrete products; 33 primary metal industries; 34 fabricated metal products except machinery and transportation

equipment; 35 industrial and commercial machinery and computer equipment; 36 electronic and other electrical equipment and components; 37 transportation equipment; 38 measuring, analyzing and controlling instruments: Photographic, medical and optical goods, watches and clocks; 39 miscellaneous manufacturing industries; 4231 terminal and joint terminal maintenance facilities for motor freight transportation; 4953 refuse systems; 4959 sanitary services, e.g., sweeping services; 5093 scrap and waste materials; 5171 petroleum bulk stations; 7261 crematoria only; 7948 racing, including track operations.

- (32)-~~(31)~~ **Manager:** The manager of the department of health and hospitals of the city.
- (33)-~~(32)~~ **New Industrial facilities:** Industrial facilities and temporary industrial facilities, not exempted through regulation by the board, which have not applied for all applicable permits prior to the effective date of this article.
- (34)-~~(33)~~ **New Solid-Fuel-Fired Device:** Any solid-fuel-fired device other than one which was acquired by an individual for his or her personal use prior to January 1, 1993.
- (35) ~~(34)~~ **Nuisance:** The doing of or the failure to do something which allows or permits air contaminants to escape into the open air which are or tend to be detrimental to the health, comfort, safety or welfare of the public or which causes or tends to cause substantial annoyance, inconvenience or injury to persons exposed thereto or causes or tends to cause damage to property.
- (36)-~~(35)~~ **Opacity:** The degree to which an air contaminant emission obscures the view of a trained observer expressed in percentage of the obstruction or the degree (percentage) to which transmittance of light is reduced by an air contaminant emission.
- (37) ~~(36)~~ **Open Burning:** Fire or smoldering where any material is burned in the outdoor air or in a receptacle other than a furnace, approved incinerator or other equipment connected to a stack or chimney.
- (38) ~~(37)~~ **Particulate matter:** Any material, except unconfined water, that exists in a finely divided form as a liquid or solid.

- \* (39) ~~(38)~~ **Person:** Any person, firm, association, organization, partnership, business, trust, corporation, company, contractor, supplier, installer, user or owner and shall include any municipal corporation, state or federal governmental agency, district or any officer or employee thereof.
- \* (40) ~~(39)~~ **Phase II Wood Stove:** A wood burning device that has been certified by the United States Environmental Protection Agency or the Colorado Department of Health to meet the following criteria: wood stoves containing catalytic devices that emit less than 5.1 grams of particulate matter per kilogram of wood burned or other wood stoves that emit less than 7.5 grams of particulate matter per kilogram of wood burned.
- (41) ~~(40)~~ **Premises:** Any building structure, land, utility or portion thereof, including all appurtenances, and shall include yards, lots, courts and properties without buildings.
- (42) ~~(41)~~ **Process:** Any individual action, operation or treatment involving chemical, industrial or manufacturing factors and all other methods or forms of manufacturing or processing that may emit air contaminants.
- (43) ~~(42)~~ **Process weight.** The total weight of all materials introduced into a unit process, including gaseous fuels.
- (44) ~~(43)~~ **Reduction:** Any process utilizing heat, including but not limited to rendering, drying, dehydrating, digesting, evaporating and protein concentrating.
- (45) ~~(44)~~ **Shall or must:** Mandatory provisions.
- (46) ~~(45)~~ **Smolder:** To burn and produce smoke without flame.
- \* (47) ~~(46)~~ **Solid-fuel-fired device:** A device designed for the combustion of solid fuels, including but not limited to wood, coal and paper, including wood burning devices, fireplaces, solid-fuel-fired stoves and combustion fuel furnaces which burn solid fuel. Solid-fuel-fired devices do not include natural gas-fired devices, commercial ovens or stoves used to prepare food for human consumption, ~~or~~ public utility facilities generating steam or electricity, or solid-fuel-fired barbecue devices. The board may promulgate rules and regulations, as authorized in Section 4-6(a), to further define solid-fuel-fired devices including exclusions to the definition for

fuels or classes of technology where the board determines that the excluded fuel or technology is reliably cleaner burning than a Phase II woodstove or where the board determines that no reasonable alternative to the burning of solid fuel exists. In no case shall such definitions or exclusions be inconsistent with the requirements of Chapter 24 of the <sup>Denver</sup> Revised Municipal Code.

- (48) ~~(47)~~ *Solid waste*: Refuse consisting of paper, wood, yard wastes, food wastes, plastic, leather, rubber and such other combustibles and noncombustible glass, rock, etc., which may be generated from residential and commercial operations and from industrial sites.
- (49) ~~(48)~~ *Standard condition*: A gas pressure of 29.92 inches of mercury and a gas temperature of twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (50) ~~(49)~~ *Stationary source*: Any building, structure, facility, equipment or installation or any combination thereof belonging to the same industrial facility which emits or may emit any air pollutant subject to regulation under the federal Clean Air Act, which is located on one (1) or more contiguous or adjacent properties and which is owned or operated by the same person or by persons under common control.
- (51) ~~(50)~~ *Traffic operations*: Activities necessary to direct traffic, to repair, install or maintain traffic control devices, to paint traffic-control lanes or to pave, maintain or repair streets and sidewalks or to accomplish similar activities.
- (52) ~~(51)~~ *Trained Observer*: A person who is certified by the state department of health to be trained in the area of odor and/or opacity identification of air pollutants."

Section 2. That from and after the date of enactment of this ordinance, Subsection (b) of Section 23 of Chapter 4 also known and cited as Subsection 4-23(b) of the Revised Municipal Code of the City and County of Denver, be and the same is hereby amended to read as follows.

"Section 4-23. Opacity.

- (b) *Solid-fuel-fired devices*. It shall be unlawful for any person to emit any air contaminants from a solid fuel-fired

device which exceeds twenty (20) percent opacity."

Section 3. That from and after the date of enactment of this ordinance, Section 24 of Chapter 4 of the Revised Municipal Code of the City and County of Denver be and the same is hereby amended to read as follows:

"Section 4-24

(a) *Open Burning*

(1) It shall be unlawful for any person to engage in or allow open burning within the city except when a written permit has been issued by the department; provided, however, that permits will not be required for fires used exclusively for noncommercial cooking of food for human consumption nor for smokeless or safety flares used for the combustion of gases or used to indicate some danger to the public.

(b) *Incinerator burning.*

It shall be unlawful for any person to burn any materials in any incinerator within the city unless such incinerator is of the multi-chamber type or the domestic auxiliary fuel-fired type which has been approved by both the Building Division of the Department of Public Works and the department prior to its use and which meets the air pollution emission standards of this chapter.

(c) *Solid Fuel Burning.*

(1) *High Pollution Day Prohibition.* It shall be unlawful for any person to operate a solid-fuel-fired device during a high pollution day unless a permit has been granted by the manager pursuant to this section. It shall be the responsibility of all persons owning or operating a solid fuel-fired device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

(2) *Permits*

Upon application for a high pollution day burning permit as provided for in subsection (1), above, the manager

will issue or deny the same based upon one (1) or more of the following considerations:

- i. necessity of the burning to provide heat for the building;
- ii. the type and amount of emissions from the device to be permitted;
- iii. compliance with relevant City Building and Housing Codes;
- iv. completeness of the application and the accuracy of the information contained therein;
- v. proximity to other permittees and potential impact on neighboring property.

NEW DEVICES. See page 10 for (3)

~~(2) New Devices. / No person shall sell, advertise for sale, offer for sale, install, or offer to install any new solid fuel-fired device unless it is certified to meet the standards applicable for a Phase II woodstove.~~

(4) *Number limited for single-unit dwelling.* One (1) solid fuel-fired device may be installed in a single-unit dwelling, as defined in subsection 59-2(131) of the Revised Municipal Code, which is constructed or added to after the effective date of this section.

(5) *Square-foot limitation for multiple-unit dwellings.* Multiple-unit dwellings, as defined in subsection 59-2(88) of the Revised Municipal Code, constructed or added to after the effective date of this section shall be limited to one (1) solid fuel-fired device for every seven thousand (7000) square feet of lot area multiplied by the number of floors in the unit, e.g., a three-story multifamily residential unit located on a seven-thousand-square-foot lot or parcel of land could have three (3) solid fuel-fired devices. "

PASSED BY THE COUNCIL

*December 13,*

1993

*[Signature]*

- PRESIDENT

APPROVED:

*[Signature]*

- MAYOR *December 16,* 1993

ATTEST:

*[Signature]*

- CLERK AND RECORDER,  
EX-OFFICIO CLERK OF THE

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Douglas County - Resolution R-991-128

**Rule Title** .

**State Effective Date** 11/14/1991

**State Adoption Date** 11/14/1991

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Resolution R-991-128 - DouglasCo.pdf](#)



RESOLUTION NO. R-991-128

DC9134039

THE BOARD OF COUNTY COMMISSIONERS  
OF THE COUNTY OF DOUGLAS, COLORADO

A RESOLUTION ADOPTING EMISSION PERFORMANCE STANDARDS FOR FIREPLACES  
IN THE UNINCORPORATED AREA OF DOUGLAS COUNTY

WHEREAS, areas of Douglas County have exceeded healthful levels for total particulate emissions, especially through the winter months; and

WHEREAS, the Board of County Commissioners believes that the use of fireplaces, wood stoves, and other solid fuel burning devices has contributed to the degradation of air quality within Douglas County, including violations of federal health standards; and

WHEREAS, there is a large number of very low polluting wood stoves and fireplaces sold in this country; and

WHEREAS, pursuant to §30-28-201(2), C.R.S., the Board of County Commissioners wishes to adopt a building code provision to regulate the construction and installation of fireplaces in order to minimize emission levels; and

WHEREAS, said building code provision relating to the construction and installation of fireplaces contains standards which are the same or stricter than the approved emission performance standards for fireplaces established by the Air Quality Control Commission in the Department of Health pursuant to §25-7-407, C.R.S.; and

WHEREAS, pursuant to §30-28-201, et seq., C.R.S., the Douglas County Planning Commission has reviewed, approved, and certified said code to the Board of County Commissioners; and

WHEREAS, proper notice and publication of this public hearing have been provided pursuant to law.

NOW, THEREFORE, BE IT RESOLVED, by the Board of County Commissioners of the County of Douglas as follows:

1. The fireplace standards, attached hereto and incorporated by reference herein as Exhibit "A", are hereby adopted as a building code provision for the unincorporated territory of Douglas County and are referred to and made a part hereof as if fully set out in this Resolution.

2. Certified copies of restrictions on use of solid fuel appliances adopted herein shall be available to the public for a fee not to exceed the cost of printing at the Building Division office of the Douglas County Department of Planning and Community Development, 416 Jerry Street, Castle Rock, Colorado 80104.

PASSED AND ADOPTED THIS 14th day of November, 1991, in Castle Rock, Douglas County, Colorado.

BOARD OF COUNTY COMMISSIONERS  
OF THE COUNTY OF DOUGLAS,  
COLORADO

By:   
Robert A. Christensen  
Chairman

ATTEST:

  
Reta A. Crain  
Clerk and Recorder

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Englewood - Ordinance 31

**Rule Title** .

**State Effective Date** 07/20/1992

**State Adoption Date** 07/20/1992

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 31 - Englewood.pdf](#)

BY AUTHORITY

ORDINANCE NO. 31  
SERIES OF ~~1991~~ 1992

COUNCIL BILL NO. 25  
INTRODUCED BY COUNCIL  
MEMBER HATHAWAY

AN ORDINANCE AMENDING TITLE 6, CHAPTER 1, OF THE ENGLEWOOD MUNICIPAL CODE 1985, BY ADDING A NEW SECTION 11 RELATING TO A BAN ON WOOD BURNING ON HIGH POLLUTION DAYS.

WHEREAS, the health, safety and welfare of the citizens of Englewood are adversely affected by poor air quality within the city limits; and

WHEREAS, it is necessary for the Denver Metropolitan area to make reasonable efforts to attain the standards established in the Federal Clean Air Act or lose federal highway funds; and

WHEREAS, residential wood combustion produces particulate matter and carbon monoxide that contributes to the deterioration of air quality which is physically harmful and aesthetically unpleasant;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, AS FOLLOWS:

Section 1. Title 6, Chapter 1 Englewood Municipal Code 1985, is hereby amended by adding a new Section 11 to read as follows:

6-1-11: WOOD BURNING AND SOLID FUEL-FIRED HEATING DEVICES

A. DEFINITIONS. AS USED IN THIS SECTION THE FOLLOWING TERMS SHALL HAVE THE MEANINGS AS INDICATED:

BARBECUE DEVICES	DEVICES THAT ARE UTILIZED SOLELY FOR THE PURPOSE OF COOKING FOOD.
COLORADO PHASE III AND EPA PHASE II EMISSIONS STANDARDS	EMISSIONS WHICH CONTAIN NOT MORE THAN EIGHT (8) GRAMS PER HOUR OF PARTICULATES AND NOT MORE THAN ONE HUNDRED (100) GRAMS PER HOUR OF CARBON MONOXIDE.
HIGH POLLUTION DAY	THAT PERIOD OF TIME DECLARED TO BE A HIGH POLLUTION DAY BY THE COLORADO DEPARTMENT OF HEALTH.
PERSON	AN INDIVIDUAL, PARTNERSHIP, CORPORATION, COMPANY OR OTHER ASSOCIATION.
SOLE SOURCE OF HEAT	ONE (1) OR MORE RESIDENTIAL SOLID FUEL-FIRED HEATING DEVICES WHICH CONSTITUTE THE ONLY SOURCE OF HEAT IN A PRIVATE RESIDENCE FOR THE PURPOSE OF SPACE HEATING. A RESIDENTIAL SOLID FUEL-FIRED HEATING DEVICE OR DEVICES SHALL BE CONSIDERED TO BE THE SOLE SOURCE OF HEAT IF THE PRIVATE RESIDENCE IS EQUIPPED WITH A PERMANENTLY INSTALLED FURNACE OR HEATING SYSTEM, DESIGNED TO HEAT THE RESIDENCE, BUT IS

DISCONNECTED FROM ITS ENERGY SOURCE, E.G. HEATING OIL, NATURAL GAS, ELECTRICITY OR PROPANE.

**SOLID FUEL**

ANY COMBUSTIBLE SUBSTANCE OR MATERIAL, INCLUDING BUT NOT LIMITED TO WOOD, COAL AND PAPER, SO THAT USABLE HEAT IS DERIVED FOR THE INTERIOR OF A BUILDING.

**SOLID FUEL-FIRED HEATING DEVICE**

A DEVICE DESIGNED FOR SOLID FUEL COMBUSTION SO THAT USABLE HEAT IS DERIVED FOR THE INTERIOR OF A BUILDING, AND INCLUDES SOLID FUEL-FIRED STOVES, FIREPLACES, SOLID FUEL-FIRED COOKING STOVES AND COMBINATION FUEL FURNACES OR BOILERS WHICH BURN SOLID FUEL. SOLID FUEL-FIRED HEATING DEVICES DO NOT INCLUDE BARBECUE DEVICES OR NATURAL GAS FIRED OR FIREPLACE LOGS.

**B. HIGH POLLUTION PROHIBITION.**

1. AFTER THE EFFECTIVE DATE OF THIS SECTION, NO PERSON MAY OPERATE A SOLID FUEL-FIRED HEATING DEVICE DURING A HIGH POLLUTION DAY UNLESS AN EXEMPTION HAS BEEN GRANTED PURSUANT TO SECTION (C) BELOW. IT SHALL BE THE DUTY OF ALL PERSONS OWNING OR OPERATING A SOLID FUEL-FIRED DEVICE TO BE AWARE OF ANY DECLARATION OF A HIGH POLLUTION DAY BY THE COLORADO DEPARTMENT OF HEALTH.
2. AT THE TIME OF THE DECLARATION OF A HIGH POLLUTION DAY, THE CITY MANAGER SHALL ALLOW THREE (3) HOURS FOR THE BURN DOWN OF EXISTING FIRES IN SOLID FUEL-BURNING DEVICES PRIOR TO THE INITIATION OF ENFORCEMENT.

**C. EXEMPTIONS.**

1. A PERSON WHO HAS AN ECONOMIC NEED TO BURN SOLID FUEL FOR RESIDENTIAL SPACE HEATING PURPOSES OR WHO RELIES ON A SOLID FUEL-FIRED HEATING DEVICE AS HIS OR HER SOLE SOURCE OF HEAT MAY APPLY FOR A TEMPORARY EXEMPTION FROM SECTION B OF THIS ORDINANCE.
  - (a) A PERSON MAY DEMONSTRATE ECONOMIC NEED BY CERTIFYING HIS OR HER ELIGIBILITY FOR ENERGY ASSISTANCE ACCORDING TO ECONOMIC GUIDELINES ESTABLISHED BY THE UNITED STATES OFFICE OF MANAGEMENT AND BUDGET UNDER THE LOW-INCOME ENERGY ASSISTANCE PROGRAM (L.E.A.P.), AS ADMINISTERED BY ARAPAHOE COUNTY.
  - (b) A PERSON MAY DEMONSTRATE THAT HE OR SHE RELIES ON A SOLID FUEL-FIRE OR SOLAR HEATING DEVICE AS HIS OR HER SOLE SOURCE OF HEAT BY SIGNING A SWORN STATEMENT TO THAT EFFECT.
2. A PERSON IS EXEMPT FROM SECTION B OF THIS ORDINANCE TO BURN A SOLID FUEL-FIRE HEATING DEVICE PROVIDED THAT DEVICE HAS BEEN CERTIFIED TO MEET COLORADO PHASE III EMISSION STANDARDS OR EPA PHASE II STANDARDS FOR WOODSTOVES AND FIREPLACE INSERTS.


3. AN EXEMPTION OBTAINED UNDER THIS SECTION SHALL BE EFFECTIVE FOR TWELVE (12) MONTHS FROM THE DATE IT IS GRANTED.
- D. DEFENSE. IT SHALL BE AN AFFIRMATIVE DEFENSE TO A CHARGE OF BURNING ON A HIGH POLLUTION DAY UNDER SECTION B ABOVE, THAT A POWER OUTAGE, INTERRUPTION OF NATURAL GAS SUPPLY, OR TEMPORARY EQUIPMENT FAILURE EXISTED AT THE TIME AND LOCATION OF THE VIOLATION, WHICH DID NOT RESULT FROM ANY ACTION OF THE PERSON CHARGED WITH THE VIOLATION.
- E. INSPECTIONS. FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH THE PROVISIONS OF THIS CHAPTER, THE CITY MANAGER, THROUGH AUTHORIZED REPRESENTATIVES, IS HEREBY AUTHORIZED TO MAKE INSPECTIONS OF SOLID FUEL-FIRED HEATING DEVICES WHICH ARE BEING OPERATED ON HIGH POLLUTION DAYS. IF ANY PERSON REFUSES OR RESTRICTS ENTRY AND FREE ACCESS TO ANY PART OF A PREMISE, OR REFUSES INSPECTION OR SAMPLING OF ANY DEVICE, FACILITY OR PROCESS WHERE INSPECTION IS SOUGHT, THE CITY MANAGER, THROUGH AUTHORIZED REPRESENTATIVES, SHALL SEEK FROM THE MUNICIPAL COURT A WARRANT FOR INSPECTION. THE COURT SHALL HAVE FULL POWER, JURISDICTION, AND AUTHORITY TO ENFORCE ALL ORDERS ISSUED UNDER THE PROVISIONS OF THIS CHAPTER.
- F. ENFORCEMENT.
1. ANY PERSON VIOLATING ANY PROVISION OF THIS SECTION SHALL BE PUNISHED BY THE PENALTIES SET FORTH IN TITLE 1, CHAPTER 4 OF THE ENGLEWOOD MUNICIPAL CODE.
  2. THE MUNICIPAL COURT JUDGE SHALL TAKE JUDICIAL NOTICE OF ANY DECLARATION OF A HIGH POLLUTION DAY ISSUED BY THE COLORADO DEPARTMENT OF HEALTH.

Introduced, read in full, and passed on first reading on the 6th day of July 1992.

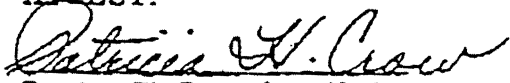
Published as a Bill for an Ordinance on the 9th day of July, 1992.

Read by title and passed on final reading on the 20th day of July, 1992.

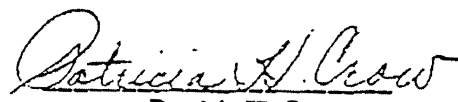
Published by title as Ordinance No. 31, Series of 1992, on the 23rd day of July 1992.

  
Clyde E. Wiggins, Mayor

ATTEST:

  
Patricia H. Crow, City Clerk

I, Patricia H. Crow, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of the Ordinance passed on final reading and published by title as Ordinance No. 31, Series of 1992.

  
Patricia H. Crow

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Englewood - Ordinance 39

**Rule Title** .

**State Effective Date** 07/20/1992

**State Adoption Date** 07/20/1992

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

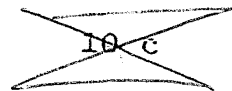
**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 39 - Englewood.pdf](#)



BY AUTHORITY

ORDINANCE NO. 39  
SERIES OF 1992

COUNCIL BILL NO. 37  
INTRODUCED BY COUNCIL  
MEMBER VAN DYKE

AN ORDINANCE AMENDING TITLE 6, CHAPTER 1, BY ADDING A NEW SECTION 12, TO THE ENGLEWOOD MUNICIPAL CODE 1985, WHICH GENERALLY PROHIBITS THE INSTALLATION OF SOLID FUEL BURNING DEVICES AND RESTRICTS THE REPAIR AND REPLACEMENT OF SOLID FUEL DEVICES.

WHEREAS, the local governments in the metropolitan area have recognized that air pollution must be addressed by a collective effort on both the state and local level; and

WHEREAS, further degradation of air quality will adversely affect the health, safety and welfare of existing and future residents, and will impede the ability of the City of Englewood to attract future residential and commercial development to the City of Englewood; and

WHEREAS, studies of the metropolitan area have concluded that carbon monoxide, ozone, nitrogen oxides, sulphur dioxide and particulate matter are major components of air pollution along the Front Range.

WHEREAS, residential solid fuel combustion has been found to produce significant quantities of carbon monoxide and particulates, which can be physically harmful, and in the case of particulates, contribute to visible pollution; and

WHEREAS, without restriction on solid fuel burning devices on new construction and remodeling, the air degradation attributable to such new development potentially will greatly exceed that from existing solid fuel burning within the City; and

WHEREAS, alternative fuel combustion devices, such as gaseous fireplaces are readily available and are being installed in a significant percentage of new residential construction in Englewood. Gaseous burning devices produce a fraction of the carbon monoxide and particulate emissions of solid fuel combustion devices, and do not materially degrade in performance over time;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ENGLEWOOD, COLORADO, AS FOLLOWS:

Section 1. Title 6, Chapter 1, of the Englewood Municipal Code 1985, is hereby amended by adding a new Section 12, to read as follows.

6-1-12: RESTRICTIONS ON INSTALLATION OF SOLID FUEL BURNING DEVICES.

A. DEFINITIONS. AS USED IN THIS SECTION THE FOLLOWING TERMS SHALL HAVE THE MEANINGS AS INDICATED.

SOLID FUEL BURNING DEVICE	ANY FIREPLACE, STOVE, FIREBOX OR HEARTH DEVICE DESIGNED OR USED FOR THE PURPOSE OF BURNING WOOD, COAL, PULP, PAPER OR OTHER SOLID COMBUSTIBLE MATERIAL SPECIFICALLY EXCLUDING PELLETS. ANY DEVICE WHICH MEETS THE REQUIREMENTS FOR BURNING SOLID FUEL SUCH AS CHIMNEY DIAMETER OR CONSTRUCTION UNDER THE APPLICABLE PROVISIONS OF THE UNIFORM BUILDING CODE AND/OR UNIFORM PLUMBING CODE, AND/OR UNIFORM
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DISCONNECTED FROM ITS ENERGY SOURCE, E.G. HEATING OIL, NATURAL GAS, ELECTRICITY OR PROPANE.

**SOLID FUEL**

ANY COMBUSTIBLE SUBSTANCE OR MATERIAL, INCLUDING BUT NOT LIMITED TO WOOD, COAL AND PAPER, SO THAT USABLE HEAT IS DERIVED FOR THE INTERIOR OF A BUILDING.

**SOLID FUEL-FIRED HEATING DEVICE**

A DEVICE DESIGNED FOR SOLID FUEL COMBUSTION SO THAT USABLE HEAT IS DERIVED FOR THE INTERIOR OF A BUILDING, AND INCLUDES SOLID FUEL-FIRED STOVES, FIREPLACES, SOLID FUEL-FIRED COOKING STOVES AND COMBINATION FUEL FURNACES OR BOILERS WHICH BURN SOLID FUEL. SOLID FUEL-FIRED HEATING DEVICES DO NOT INCLUDE BARBECUE DEVICES OR NATURAL GAS FIRED OR FIREPLACE LOGS.

**B. HIGH POLLUTION PROHIBITION.**

1. AFTER THE EFFECTIVE DATE OF THIS SECTION, NO PERSON MAY OPERATE A SOLID FUEL-FIRED HEATING DEVICE DURING A HIGH POLLUTION DAY UNLESS AN EXEMPTION HAS BEEN GRANTED PURSUANT TO SECTION (C) BELOW. IT SHALL BE THE DUTY OF ALL PERSONS OWNING OR OPERATING A SOLID FUEL-FIRED DEVICE TO BE AWARE OF ANY DECLARATION OF A HIGH POLLUTION DAY BY THE COLORADO DEPARTMENT OF HEALTH.
2. AT THE TIME OF THE DECLARATION OF A HIGH POLLUTION DAY, THE CITY MANAGER SHALL ALLOW THREE (3) HOURS FOR THE BURN DOWN OF EXISTING FIRES IN SOLID FUEL-BURNING DEVICES PRIOR TO THE INITIATION OF ENFORCEMENT.

**C. EXEMPTIONS.**

1. A PERSON WHO HAS AN ECONOMIC NEED TO BURN SOLID FUEL FOR RESIDENTIAL SPACE HEATING PURPOSES OR WHO RELIES ON A SOLID FUEL-FIRED HEATING DEVICE AS HIS OR HER SOLE SOURCE OF HEAT MAY APPLY FOR A TEMPORARY EXEMPTION FROM SECTION B OF THIS ORDINANCE.
  - (a) A PERSON MAY DEMONSTRATE ECONOMIC NEED BY CERTIFYING HIS OR HER ELIGIBILITY FOR ENERGY ASSISTANCE ACCORDING TO ECONOMIC GUIDELINES ESTABLISHED BY THE UNITED STATES OFFICE OF MANAGEMENT AND BUDGET UNDER THE LOW-INCOME ENERGY ASSISTANCE PROGRAM (L.E.A.P.), AS ADMINISTERED BY ARAPAHOE COUNTY.
  - (b) A PERSON MAY DEMONSTRATE THAT HE OR SHE RELIES ON A SOLID FUEL-FIRE OR SOLAR HEATING DEVICE AS HIS OR HER SOLE SOURCE OF HEAT BY SIGNING A SWORN STATEMENT TO THAT EFFECT.
2. A PERSON IS EXEMPT FROM SECTION B OF THIS ORDINANCE TO BURN A SOLID FUEL-FIRE HEATING DEVICE PROVIDED THAT DEVICE HAS BEEN CERTIFIED TO MEET COLORADO PHASE III EMISSION STANDARDS OR EPA PHASE II STANDARDS FOR WOODSTOVES AND FIREPLACE INSERTS.

3. AN EXEMPTION OBTAINED UNDER THIS SECTION SHALL BE EFFECTIVE FOR TWELVE (12) MONTHS FROM THE DATE IT IS GRANTED.

- D. DEFENSE. IT SHALL BE AN AFFIRMATIVE DEFENSE TO A CHARGE OF BURNING ON A HIGH POLLUTION DAY UNDER SECTION B ABOVE, THAT A POWER OUTAGE, INTERRUPTION OF NATURAL GAS SUPPLY, OR TEMPORARY EQUIPMENT FAILURE EXISTED AT THE TIME AND LOCATION OF THE VIOLATION, WHICH DID NOT RESULT FROM ANY ACTION OF THE PERSON CHARGED WITH THE VIOLATION.
- E. INSPECTIONS. FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH THE PROVISIONS OF THIS CHAPTER, THE CITY MANAGER, THROUGH AUTHORIZED REPRESENTATIVES, IS HEREBY AUTHORIZED TO MAKE INSPECTIONS OF SOLID FUEL-FIRED HEATING DEVICES WHICH ARE BEING OPERATED ON HIGH POLLUTION DAYS. IF ANY PERSON REFUSES OR RESTRICTS ENTRY AND FREE ACCESS TO ANY PART OF A PREMISE, OR REFUSES INSPECTION OR SAMPLING OF ANY DEVICE, FACILITY OR PROCESS WHERE INSPECTION IS SOUGHT, THE CITY MANAGER, THROUGH AUTHORIZED REPRESENTATIVES, SHALL SEEK FROM THE MUNICIPAL COURT A WARRANT FOR INSPECTION. THE COURT SHALL HAVE FULL POWER, JURISDICTION, AND AUTHORITY TO ENFORCE ALL ORDERS ISSUED UNDER THE PROVISIONS OF THIS CHAPTER.
- F. ENFORCEMENT.
1. ANY PERSON VIOLATING ANY PROVISION OF THIS SECTION SHALL BE PUNISHED BY THE PENALTIES SET FORTH IN TITLE 1, CHAPTER 4 OF THE ENGLEWOOD MUNICIPAL CODE.
  2. THE MUNICIPAL COURT JUDGE SHALL TAKE JUDICIAL NOTICE OF ANY DECLARATION OF A HIGH POLLUTION DAY ISSUED BY THE COLORADO DEPARTMENT OF HEALTH.

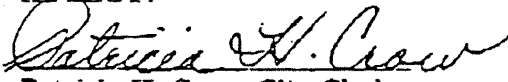
Introduced, read in full, and passed on first reading on the 6th day of July 1992.

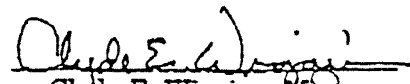
Published as a Bill for an Ordinance on the 9th day of July, 1992.

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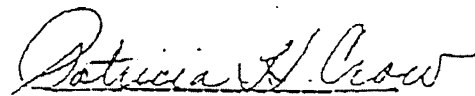
Published by title as Ordinance No. 31, Series of 1992, on the 23rd day of July 1992.

ATTEST:

  
Patricia H. Crow, City Clerk

  
Clyde E. Wiggins, Mayor

I, Patricia H. Crow, City Clerk of the City of Englewood, Colorado, hereby certify that the above and foregoing is a true copy of the Ordinance passed on final reading and published by title as Ordinance No. 31, Series of 1992.

  
Patricia H. Crow

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Federal Heights - Ordinance 565

**Rule Title** .

**State Effective Date** 01/05/1988

**State Adoption Date** 01/05/1988

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 565 - Federal Heights.pdf](#)

ORDINANCE NO. 565

INTRODUCED BY:

Series 1987

Councilwoman Earley

Councilmen Headley & Martin

AN ORDINANCE AMENDING CHAPTER VI, ARTICLE IV  
OF THE MUNICIPAL CODE OF THE CITY OF FEDERAL HEIGHTS, COLORADO  
REGARDING RESTRICTIONS ON SOLID FUEL BURNING

BE IT HEREBY ORDAINED BY THE CITY COUNCIL OF THE CITY OF  
FEDERAL HEIGHTS, COLORADO, That:

Section 1. Chapter VI, Article IV of the Federal Heights  
Municipal Code is hereby amended by adding Section 21, which  
Section shall read as follows:

6-4-21 Burning Restrictions.

A. Definitions.

"Barbecue Devices" means devices that are utilized  
solely for the purpose of cooking food.

"High Pollution Day" means that period of time  
declared to be a high pollution day by the Colorado Department of  
Health.

"Person" means an individual, partnership,  
corporation, company or other association.

"Sole Source of Heat" means one or more residential  
solid fuel-fired heating devices which constitute the only source  
of heat in a private residence for purposes of space heating. A  
residential solid fuel-fired heating device or devices shall be  
considered to be the sole source of heat if the private residence  
is equipped with a permanently installed furnace or heating  
system, designed to heat the residence, but is disconnected from  
its energy source, e.g., heating oil, natural gas, electricity or  
propane.

"Solid Fuel-Fired Heating Device" means a device  
designed for solid fuel combustion so that usable heat is derived  
for the interior of a building, and includes solid fuel-fired  
stoves, fireplaces, solid fuel-fired cooking stoves, and  
combination fuel furnaces or boilers which burn solid fuel. Solid  
fuel-fired heating devices do not include barbecue devices or  
natural gas-fired fireplace logs.

B. High Pollution Prohibition.

1. After the effective date of this Ordinance, no  
person may operate a solid fuel-fired heating device during a high  
pollution day unless an exemption has been granted pursuant to  
Section C. below. It shall be the duty of all persons owning or  
operating a solid fuel-fired device to be aware of any declaration  
of a high pollution day by the Colorado Department of Health.

2. At the time of the declaration of a high

pollution day, the City Administrator shall allow three (3) hours for the burndown of existing fires in solid fuel burning devices prior to the initiation of enforcement.

C. Exemption for Sole Heat Source.

1. A person who relies on a solid fuel-fired heating device as his sole source of heat may apply to the City Administrator or his designee for a temporary exemption from Section B. above.

2. A person applying for an exemption must sign a sworn statement that he relies on a solid fuel-fired heating device as his sole source of heat.

3. An exemption obtained under this Section shall be effective for twelve (12) months from the date it is granted.

D. Inspections.

For the purpose of determining compliance with the provisions of this Section, the City Administrator, through authorized representatives, is hereby authorized to make inspections of solid fuel-fired heating devices which are being operated on high pollution days. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the City Administrator, through authorized representatives, shall seek from the Municipal Court a warrant for inspection and order that such person refusing inspection be required to permit an inspection at a reasonable time, without interference, restriction or obstruction. The Court shall have full power, jurisdiction and authority to enforce all orders issued under the provisions of this Chapter.

Section 2. This Ordinance is deemed necessary for the protection of the health, safety and welfare of the citizens of Federal Heights.


Section 3. If any article, section, paragraph, sentence, clause or phrase of this Ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance and each part or parts hereof irrespective of the fact that any one part or parts hereof be declared unconstitutional or invalid.

Section 4. The Council finds and declares that an emergency exists and that for the preservation of the continued operation of the City, this Ordinance shall become effective and be in full force immediately upon passage, on second reading

Section 5. Violations of this Ordinance shall be punishable in accordance with the provisions of 1-1-7 of the Federal Heights Municipal Code.

INTRODUCED, READ AND PASSED, ON FIRST READING, AT A REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF FEDERAL HEIGHTS, COLORADO, This eighteenth day of December, 1987.

READ, PASSED AND ADOPTED, ON SECOND READING, AT A REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF FEDERAL HEIGHTS, COLORADO, This fifth day of January, 1988.

  
\_\_\_\_\_  
Lester M. Bauer, Mayor

ATTEST:

  
\_\_\_\_\_  
Margaret M. French, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Karen E. Nieman, City Attorney

PUBLISHED: Westminster Window

December 24, 1987

January 14, 1988

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Glendale - Ordinance 02

**Rule Title** .

**State Effective Date** 10/20/1992

**State Adoption Date** 01/05/1988

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 2 - Glendale.pdf](#)

~~Glendale~~

ORDINANCE NO. 2

SERIES OF 1988

AN ORDINANCE AMENDING CHAPTER 14 1/2 OF THE CODE OF ORDINANCES OF THE CITY OF GLENDALE BY ADDING AN ARTICLE REGARDING WOODBURNING RESTRICTIONS ON HIGH POLLUTION DAYS, AND DECLARING AN EMERGENCY.

WHEREAS, the City Council recognizes that air pollution in the Denver Metropolitan area is a significant problem, and,

WHEREAS, the City of Glendale does not presently have an ordinance which specifically applies to woodburning restrictions on high pollution days, and

WHEREAS, the City Council has determined that it is necessary to establish an ordinance restricting woodburning on high pollution days as established by the State of Colorado Department of Health.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GLENDALE, COLORADO:

1. Chapter 14 1/2 of the Code of Ordinances of the City of Glendale is amended by the addition of new a Article III, to read:

**ARTICLE III. WOOD BURNING RESTRICTIONS**

**Section 14 1/2-20. Purpose; intent.**

This article is enacted to protect, preserve and promote the health, safety and welfare of the citizens of the City of Glendale through the reduction, prevention and control of air pollution. It is the intent of this article to establish and provide for the enforcement of woodburning restrictions which will assure that ambient air be adequately pure and free from smoke, contamination, pollutants or synergistic agents injurious to humans, plant life, animal life or property, or which interfere with the comfortable enjoyment of life or property or the conduct of business.

**Section 14 1/2-21. Definitions.**

The following definitions shall apply in the interpretation and enforcement of this article and all regulations adopted hereunder:

a. "Barbecue Devices" means devices that are utilized solely for the purpose of cooking food.

b. "High Pollution Day" means that period of time declared to be a high pollution day by the State of Colorado Department of Health.

c. "Person" means an individual, partnership, corporation, company or other association.



d. "Sole Source of Heat" means one or more residential solid fuel-fired heating devices which constitute the only source of heat in a private residence for the purposes of space heating. No residential solid fuel-fired heating device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed furnace or heating system, designated to heat the residence connected or disconnected from its energy source, utilizing oil, natural gas, electricity, or propane.

e. "Solid Fuel Fired Heating Device" means a device designated for solid fuel combustion so that usable heat is derived for the interior of a building, and includes solid fuel-fired stoves, fireplaces, solid fuel-fired cooking stoves, and combination fuel furnaces or boilers which burn solid fuel. Solid fuel-fired heating devices do not include barbecue devices or natural gas fired fireplace logs.

Section 14 1/2-22. Pollution Prohibited.

a. After the effective date of this ordinance, no person may operate a solid fuel-fired heating device during a high pollution day unless an exemption has been granted pursuant to Section 23 below. It shall be the duty of all persons owning or operating a solid fuel-fired device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

b. At the time of the declaration of a high pollution day, the City Manager shall allow three (3) hours for the burndown of existing fires in solid fuel burning devices prior to the initiation of enforcement.

Section 14 1/2-23. Exemption for Sole Heat Source.

a. A person who relies on a solid fuel-fired heating device as his sole source of heat may apply to the City Manager or his designee for a temporary exemption from Section 22 above.

b. A person applying for an exemption must sign a sworn statement that he relies on a solid fuel-fired heating device as his sole source of heat.

c. An exemption obtained under this section shall be effective for twelve (12) months from the date it is granted.

Section 14 1/2-24. Non-Owner Occupied Dwelling Units.

It shall be unlawful for a solid fuel-fired heating device to be the sole source of heat in any non-owner occupied dwelling unit. Any violation of Section 22 above by the tenant of such a dwelling unit shall be considered a violation by the owner of the dwelling unit if a solid fuel-fired heating device is the tenant's sole source of heat. In such a case, the owner, and not the tenant, shall be liable for any penalty imposed.

Section 14 1/2-25. Inspections.

For the purpose of determining compliance with the provisions of this chapter, the City Manager, through authorized representatives, is hereby authorized to make inspections of solid fuel-fired heating devices which are being operated on high pollution days. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the City Manager, through authorized representatives, shall seek from the Municipal Court a warrant for inspection and order that such person refusing inspection be

required to permit an inspection at a reasonable time, without interference, restriction, or obstruction. The Court shall have full power, jurisdiction, and authority to enforce all orders issued under the provisions of this chapter.

Section 14 1/2-26. Enforcement.

Any person violating any provisions of this ordinance shall be punished by the penalties set forth in Section 1-7 of the Code of Ordinance of the City of Glendale.

2. If any part, section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such invalidity shall not affect the validity of the remaining sections of the ordinance or of said standards; the City Council hereby declares that it would have passed the ordinance and adopted such standards in each part, section, subsection, sentence, clause or phrase thereof, irrespective of the fact that one or more parts, sections, subsections, sentence, clauses or phrases be declared invalid.

3. All ordinances or resolutions, or parts thereof, in conflict with this ordinance are hereby repealed, provided that such repealer shall not repeal the repealer clauses of such ordinance nor revive any ordinance thereby.

4. The City Council deems this an emergency ordinance and needed for the immediate preservation of the public health, safety and welfare, and said ordinance shall become effective immediately upon adoption.

INTRODUCED BY COUNCIL MEMBER Wheatley,  
SECONDED BY COUNCIL MEMBER Parnell, AND UNANIMOUSLY  
ADOPTED AND DECLARED AN EMERGENCY BY THE CITY COUNCIL OF THE  
CITY OF GLENDALE, COLORADO, THIS 5<sup>th</sup> DAY OF January,  
1999.

William D. Amery  
Mayor

ATTEST:

J. Ann Skaggs  
City Clerk

APPROVED:

Charles W. McLean  
City Attorney

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Glendale - Ordinance 14

**Rule Title** .

**State Effective Date** 10/20/1992

**State Adoption Date** 01/05/1988

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 14 - Glendale.pdf](#)

## ORDINANCE NO. 14 ..

## SERIES OF 1992

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF GLENDALE, COLORADO, AMENDING TITLE 15, ARTICLE III, OF THE CODE OF ORDINANCES OF THE CITY OF GLENDALE AND THE UNIFORM BUILDING CODE, 1991 EDITION, IN REGARD TO THE REDUCTION OF WOOD BURNING STOVES AND FIREPLACES, AND THE USE OF LESS POLLUTING DEVICES.

WHEREAS, the City of Glendale finds that air pollution in the City of Glendale is a threat to the health and welfare of its citizens and that a major contributor to said pollution is wood smoke, and

WHEREAS, the City Council has determined that it is necessary to regulate the type of wood burning devices which may be hereafter used in the City of Glendale, and encourage the use of less polluting devices, in an effort to control pollution caused by wood smoke, and

WHEREAS, the City Council deems it necessary to amend the Uniform Building Code, 1991 Edition, to include provisions for the regulation of fireplaces.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GLENDALE, COLORADO, AS FOLLOWS:

1. Title 15, Article III, of the Code of Ordinances of the City of Glendale is hereby amended to include the following definitions in Section 3702 of the Uniform Building Code, 1991 Edition:

FIREPLACE INSERT is any wood-burning device designed to be installed in an existing fire place which complies as a Phase III wood stove as outlined in this section.

PHASE III WOOD STOVE is any wood-burning device that meets the most stringent standards adopted by the State of Colorado Regional Air Quality Control Commission, or any non-affected wood-burning device approved by the Commission.

2. Title 15, Article III, of the Code of Ordinances of the City of Glendale, is hereby further amended to include a new Section 3708 in the Uniform Building Code, 1991 Edition, which shall read as follows:

Regional Control

Regional Woodstove Installation. Any new or remodeled fireplace to be installed in any occupancy shall be one of the following:

1. A Gas appliance;
2. An electric device; or
3. A Phase III wood stove or fireplace insert.
4. A site built fireplace that complies with the State of Colorado Regional Air Quality Commission regulations regarding air pollution.

(b) Certification. Any person who installs or constructs any wood stove or fireplace shall provide evidence of a certificate issued by the Regional Air Quality Control Commission for such fireplace and, in case of site built fireplaces, demonstrate compliance with such certificate.

3. Any and all ordinances or sections thereof in conflict with these amended provisions set forth herein are repealed.

4. This Ordinance shall become effective the 26<sup>th</sup> day of October, 1992.

INTRODUCED BY COUNCIL MEMBER Felker

SECONDED BY COUNCIL MEMBER Forster, AND PASSED ON FIRST READING BY THE CITY COUNCIL OF THE CITY OF GLENDALE, COLORADO, THIS 1<sup>st</sup> DAY OF September, 1992, ORDERED PUBLISHED, AND SET FOR PUBLIC HEARING.

Stephen P. Plank  
Mayor

ATTEST:  
J. Ann Skaggs  
City Clerk

APPROVED:  
Wayne G. McLean  
City Attorney

PASSED ON THE SECOND READING BY THE CITY COUNCIL OF THE CITY OF GLENDALE, COLORADO, THIS 4<sup>th</sup> DAY OF October, 1992, AND ORDERED PUBLISHED BY SAID COUNCIL.

Stephen P. Plank  
Mayor

ATTEST:  
J. Ann Skaggs  
City Clerk

APPROVED:  
Wayne G. McLean  
City Attorney

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Greenwood Village - Ordinance 9

**Rule Title** .

**State Effective Date** 03/25/1992

**State Adoption Date** 06/24/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 9 - Greenwood Village.pdf](#)

## A BILL FOR AN ORDINANCE

ORDINANCE NO. 9

SERIES OF 1992

INTRODUCED BY MS. POTICHA

AN ORDINANCE AMENDING SECTION 13.08.020 OF THE CITY OF GREENWOOD VILLAGE CODE, KNOWN AS THE CITY OF GREENWOOD VILLAGE AMENDMENTS TO UNIFORM BUILDING CODE - 1989, BY THE ADDITION OF A NEW SUBSECTION (SS.1) THEREOF CONCERNING THE INSTALLATION OF APPROVED GAS BURNING OR ELECTRIC APPLIANCES OR APPROVED FIREPLACE INSERTS IN ALL FIREPLACES WHICH ARE INSTALLED OR CONVERTED AFTER THE EFFECTIVE DATE OF THE ORDINANCE, AND PROHIBITING THE INSTALLATION OF FIREPLACE STOVES OR FIREPLACE INSERTS UNLESS SAID STOVES OR INSERTS MEET CERTAIN COMBUSTION STANDARDS.

WHEREAS, the burning of solid fuel for heating or aesthetic purposes in the City of Greenwood Village has been determined by the Council to be a cause of air pollution in the City; and

WHEREAS, the Council has determined that, in the interest of the protection of the public health, safety and welfare and the abatement of nuisances, regulations on the installation of solid fuel burning appliances should be adopted; and

WHEREAS, the Council has determined that it is in the best interest of the citizens of the City that the Code of the City be amended to prohibit the installation of solid fuel burning appliances; and

WHEREAS, the installation of approved gas burning or electric appliances or approved fireplace inserts provide an available and environmentally safe alternative to solid fuel burning fireplaces and stoves; now, therefore

THE COUNCIL OF THE CITY OF GREENWOOD VILLAGE, COLORADO  
ORDAINS:

Section 13.08.020 of the City of Greenwood Village Code is hereby amended by the addition of new subsection (SS.1) thereof to read as follows:

13.08.020 City of Greenwood Village Amendments to Uniform Building Code - Adopted.

. . .

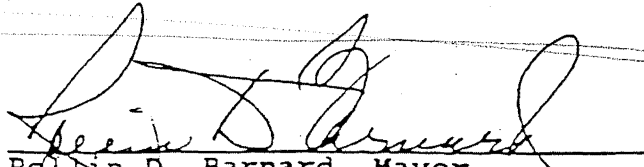
(SS.1) New section 3708 is added to read as follows:

Section 3708. FIREPLACES.

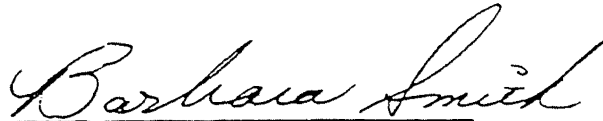
- (a) No fireplace, as defined in Section 3702, of the Uniform Building Code, 1988 Edition, as amended, shall be installed or converted from solid fuel burning unless the fireplace contains an approved gas burning appliance, an approved electric appliance or an approved fireplace insert. Each fireplace which is installed or converted after the effective date of this ordinance to include an approved gas burning appliance or an approved electric appliance and which is not suitable for solid fuel combustion shall contain a written notice permanently affixed to said fireplace which shall identify the fireplace as one in which the burning of wood or other solid fuel is unsafe and is prohibited. All fireplaces shall comply with all the requirements of Chapter 37 of the Uniform Building Code, 1988 Edition, as amended.
- (b) No fireplace stove, as defined in Section 408 of the Uniform Mechanical Code, 1988 Edition, or fireplace insert shall be installed within any building or structure, unless said fireplace stove or fireplace insert meets the requirements of Phase III combustion standards.
- (c) As used in this section, the term "Phase III combustion standards" means the most stringent standards adopted by the Colorado Air Quality Control Commission pursuant to Section 25-7-106.3, C.R.S.

INTRODUCED AND APPROVED ON FIRST READING ON THE 2ND DAY  
OF MARCH, 1992, AND ORDERED PUBLISHED IN THE VILLAGER.

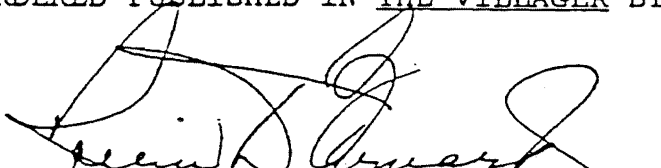


  
 Rollin D. Barnard, Mayor

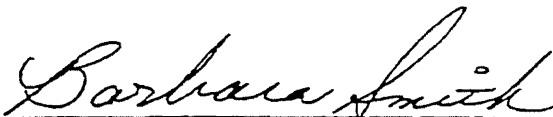
ATTEST:

  
 Barbara Smith, City Clerk

INTRODUCED AND APPROVED ON SECOND READING ON THE 16TH DAY  
 OF MARCH, 1992, AND ORDERED PUBLISHED IN THE VILLAGER BY  
 REFERENCE TO TITLE ONLY.

  
 Rollin D. Barnard, Mayor

ATTEST:

  
 Barbara Smith, City Clerk

EFFECTIVE: March 25, 1992

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Greenwood Village - Ordinance 17

**Rule Title** .

**State Effective Date** 07/09/1988

**State Adoption Date** 06/24/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 17 - Greenwood Village.pdf](#)

A BILL FOR AN ORDINANCE

ORDINANCE NO. 17

SERIES OF 1988

INTRODUCED BY MRS. CRAWFORD

AN ORDINANCE AMENDING TITLE VII, CHAPTER 5, OF THE  
GREENWOOD VILLAGE OFFICIAL CODE-1980 BY THE  
ADDITION OF A NEW SECTION 7-5-18 PERTAINING TO  
BURNING RESTRICTIONS.

THE COUNCIL OF THE CITY OF GREENWOOD VILLAGE, COLORADO  
ORDAINS:

Title VII, Chapter 5, of the Greenwood Village Official  
Code-1980 is amended by the addition of a new Section 7-5-18  
which shall read as follows:

7-5-18 BURNING RESTRICTIONS.

(A) Definitions.

- 1) "Barbeque devices" means devices that are utilized solely for the cooking of food.
- 2) "Fireplace" means a hearth, fire chamber or similar place and a chimney.
- 3) "High pollution day" means that period of time declared to be a high pollution day by the Colorado Department of Health.
- 4) "Person" means an individual, partnership, corporation, or other association.
- 5) "Sole source of heat" means one or more solid fuel-fired heating devices which constitute the only source of heat in a private residence. No solid fuel-fired heating device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed furnace or heating system which utilizes oil, natural gas, electricity, or propane.

- 6) "Solid fuel-fired heating device" means a device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel-fired stoves, fireplaces, wood stoves of any nature, solid fuel-fired cooking stoves, combination fuel furnaces or boilers which burn solid fuel, or any other device used for the burning of solid combustible material. "Solid fuel-fired heating device" does not include barbecue devices or natural gas-fired fireplace logs.

(B) High Pollution Day Prohibition.

- 1) It shall be unlawful for any person to operate a solid fuel-fired heating device during a high pollution day unless that person has an exemption granted pursuant to subsection (C) below. It shall be the duty of all persons owning or operating a solid fuel-fired heating device to be aware of any declaration of a high pollution day by the Colorado Department of Health.
- 2) At the time of the declaration of a high pollution day, the Police Department shall allow three hours for the burn-down of existing fires in solid fuel-fired heating devices prior to initiating enforcement of this Section.

(C) Exemption for Sole Source of Heat.

- 1) A person may operate a solid fuel-fired heating device during a high pollution day if he has previously obtained an exemption from the Police Department. An exemption may be granted if the applicant submits a sworn statement that he relies on a solid fuel-fired heating device as his sole source of heat, and that said device was installed prior to January 1, 1988.
- 2) An exemption obtained under this subsection shall be effective for twelve months from the date it is granted and may be renewed upon compliance with the requirements of paragraph 1) above.

(D) Non-Owner Occupied Dwelling Units.

It shall be unlawful for a solid fuel-fired heating device to be the sole source of heat in any non-owner occupied dwelling unit. Any violation of subsection (B) above by the tenant of such a dwelling unit shall be con-

sidered a violation by the owner of the dwelling unit if a solid fuel-fired heating device is the tenant's sole source of heat. In such case, the owner, and not the tenant, shall be subject to the penalty prescribed in subsection (H) below.

(F) Inspections.

For the purpose of determining compliance with the provisions of this section, the Chief of Police, or a City police officer, is authorized to make inspections of solid fuel-fired heating devices which are being operated on high pollution days. If any person refuses or restricts entry or free access to any part of a premises where a solid fuel-fired heating device is being operated on a high pollution day, or refuses inspection or sampling of any such device where inspection is sought, the Chief of Police, or City police officer, may apply to the Municipal Court for the issuance of a warrant for inspection and an order that the owner, lessee, or occupant of the premises must submit to an inspection without interference, restriction, or obstruction. If the Municipal Court finds that there are reasonable grounds to believe that the burning restrictions contained in this section are being or have been violated, it may issue the requested warrant and order. The Municipal Court shall have full jurisdiction, authority, and power to issue warrants for entry into any place by the Chief of Police, or a City police officer, where the Court is presented with reasonable grounds to believe that the burning restrictions contained in this section are being or have been violated."

(G) Enforcement.

The Chief of Police or a City police officer shall have the responsibility for the enforcement of this section.

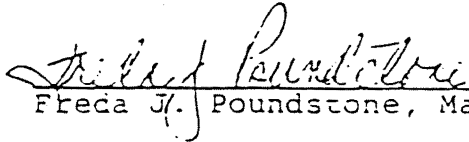
(H) Violations.

- 1) Where the Chief of Police or a City police officer has reasonable grounds to believe that any of the provisions of this section are being violated, he shall issue a written warning to the violator. If the Chief of Police or a City police officer subsequently observes within the following twelve-month period another violation of said provisions on the same premises, he may issue a summons and complaint to the violator.
- 2) Any person who shall be convicted of a violation of any provision of this section shall be punished by a fine of \$25.00 for the first offense, \$50.00 for the second offense, and \$25.00 more than the

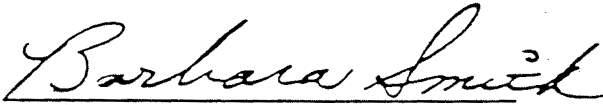
fine for the preceding offense for the third and any subsequent offense up to a maximum fine of \$499.00.

- (I) At the time any person may be issued a summons and complaint for violation of the provisions of this section, the police officer charging such violation may give a penalty assessment notice to the person charged.
- 1) Such notice shall contain the information required by section 8-1-2(D) except that it need not contain the number of such person's driver's license.
  - 2) If a person to whom a penalty assessment notice is tendered accepts the notice, such acceptance shall constitute an acknowledgment of guilt and a promise to pay the fine specified in subsection (H) above to the City's Municipal Court, either in person or by mail, within 20 days from the date of the violation. A penalty assessment notice given to a corporation may be accepted by an officer or by an authorized employee or agent of the corporation. Refusal, neglect, or inability to pay the specified fine within said time period constitutes a refusal to accept the penalty assessment notice.
  - 3) If a person to whom a penalty assessment notice is tendered refuses to accept the notice, then the notice shall constitute a summons and complaint.

INTRODUCED, READ IN FULL, AND APPROVED ON FIRST READING ON THE 16th DAY OF May, 1988, AND ORDERED PUBLISHED IN THE VILLAGER.

  
Freda J. Poundstone, Mayor

ATTEST:

  
Barbara Smith, City Clerk

INTRODUCED, PASSED, AND APPROVED ON SECOND READING ON THE 6th DAY OF June, 1988, AND ORDERED PUBLISHED IN THE VILLAGER BY REFERENCE TO TITLE ONLY.

*Freda J. Poundstone*  
Freda J. Poundstone, Mayor

ATTEST:

*Barbara Smith*  
Barbara Smith, City Clerk

EFFECTIVE: July 9, 1988

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Jefferson County - Resolution CC89-873

**Rule Title** .

**State Effective Date** 12/29/1989

**State Adoption Date** 12/29/1989

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Resolution CC89-873 - JeffersonCo.pdf](#)



Commissioner Stone moved that the following Resolution be adopted:

BEFORE THE BOARD OF COUNTY COMMISSIONERS

OF THE COUNTY OF JEFFERSON

STATE OF COLORADO

RESOLUTION NO. CC89-873

RE: Mandatory Restriction On the Use of Solid Fuel Burning Devices Below 7,000 Feet On High Pollution Days

WHEREAS, the Board of County Commissioners previously adopted Resolution Number 87-976 which urged voluntary restriction on the use of solid fuel burning devices within unincorporated Jefferson County on high pollution days; and

WHEREAS, the Board now desires to regulate the use of solid fuel burning devices, which contribute to the degradation of the air quality within Jefferson County, by placing mandatory restrictions on the use of such devices in areas in the County below 7,000 feet in elevation.

NOW THEREFORE, BE IT RESOLVED, by the Board of County Commissioners of the County of Jefferson, State of Colorado that, subject to the terms and conditions herein, it shall be unlawful for all citizens in the unincorporated portion of Jefferson County living in areas below 7,000 feet in elevation to use solid fuel burning devices on days declared to be high pollution days:

1. Definitions

As used herein, the following terms have the following meanings:

a. "Solid Fuel Burning Device" means a device designed for the combustion of solid fuels including but not limited to wood, coal, paper or similar materials so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel burning stoves, fireplaces or wood stoves of any nature, solid fuel burning cooking stoves, combination fuel furnaces or heaters which burn solid fuel, or any other device used for the burning of solid combustible material. Solid fuel burning devices do not include devices used solely for the cooking of food or natural gas-fired fireplace logs.

b. "Sole source of heat" means one or more solid fuel burning devices which constitute the only source of heating in a private residence. No solid fuel burning device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed furnace or heating system utilizing oil, natural gas, electricity or propane.

c. "High pollution day" means a period of time designated as a high pollution day for the Denver metropolitan area by the Colorado Department of Health.

2. Exemptions:

a. It is an affirmative defense to a charge of solid fuel burning on a high pollution day that a person has obtained a temporary exemption demonstrating:

(1) An economic need to burn solid fuel for residential space heating purposes; or

(2) Reliance on a solid fuel burning device installed prior to December 1, 1989, as the sole source of heat.

b. The County's Director of Community Resources, or his designee, may grant such exemptions according to the following standards:

(1) A person shall demonstrate economic need by certifying eligibility for energy assistance according to economic guidelines established by the United States Office of Management and Budget under the Low-income Energy Assistance Program (L.E.A.P.), as administered by Jefferson County.

(2) A person applying for an exemption must sign a sworn statement demonstrating reliance on a solid fuel burning device installed prior to January 1, 1990, as the sole source of heat.

(3) An exemption obtained under this section shall be effective for one year from the date it is granted.

c. This resolution shall not be applicable to any solid fuel burning sources located at or above 7,000 feet in elevation within the County.

d. This resolution shall not be applicable to any solid fuel burning sources for which a permit has been obtained

from the State of Colorado or the United States Environmental Protection Agency.

3. Non-Owner Occupied Dwelling Units:

After January 1, 1990, no person shall rent a building if a woodstove or fireplace is the sole source of heat. In such case, the owner, and not the tenant, shall be liable for any penalty imposed.

4. Inspections:

For the purpose of determining compliance with the provisions of this resolution, County inspectors, duly appointed by the Board of County Commissioners, are authorized to make inspections of all air contamination sources, including solid fuel burning devices which are being operated on high pollution days and to issue citations for violations of this resolution. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the inspectors may seek from the appropriate court in and for the County of Jefferson a search warrant authorizing an inspector to enter the premises and comply with this resolution.

5. Hearings:

a. Any person cited for a violation of this resolution shall be entitled to an administrative hearing before either the Board of County Commissioners or an administrative hearing officer appointed by the Board of County Commissioners at which the person cited for violation shall have the right to present their case by oral and documentary evidence, to submit rebuttal evidence and to conduct such cross-examination as may be required for a full and true disclosure of the facts. Any witness testifying shall be placed under oath.

b. All hearing officers appointed by the Board of County Commissioners to hear cases involving alleged violations of this resolution shall be an attorney at law in good standing and admitted to practice in this state, with five years' experience practicing law.

c. A full and complete record of all proceedings and testimony presented shall be taken and filed. This record shall be kept on file with the Clerk to the Board of County Commissioners.

d. Any order or determination by the hearing officer shall be subject to judicial review pursuant to the provisions of Rule 106 of the Colorado Rules of Civil Procedure.

e. With respect to any alleged violation of this resolution, the burden of proof at any hearing shall be upon the County.

6. Penalties:

a. Every person found to have violated this resolution shall pay a fine according to the following schedule:

- (1) first violation, one hundred dollars;
- (2) second violation, two hundred dollars; and
- (3) third violation, three hundred dollars.

b. The date when the actual violation occurred will control regardless of the date of conviction.

c. The record of the violator for two years prior to the date of the current violation will be considered in imposing the penalties specified herein.

Commissioner Clement seconded the adoption of the foregoing Resolution. The roll having been called, the vote was as follows:

Commissioner John P. Stone	- "Aye";
Commissioner Rich Ferdinandsen	- "Absent";
Commissioner Marjorie E. Clement, Chairman	- "Aye":

The Resolution was adopted by majority vote of the Board of County Commissioners of the County of Jefferson, State of Colorado.

DATED: December 29, 1989

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Jefferson County - Resolution CC90-617

**Rule Title** .

**State Effective Date** 08/07/1990

**State Adoption Date** 08/07/1990

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Resolution CC90-617 - JeffersonCo.pdf](#)

Commissioner Clement moved that the following Resolution be adopted:

BEFORE THE BOARD OF COUNTY COMMISSIONERS  
OF THE COUNTY OF JEFFERSON  
STATE OF COLORADO

RESOLUTION NO. CC90-617

RE: AMENDMENTS TO THE JEFFERSON COUNTY BUILDING CODE--NEW  
FACTORY-BUILT FIREPLACES, MASONRY FIREPLACES, AND  
VENTED DECORATIVE APPLIANCES OR ROOMHEATERS

WHEREAS, the Board of County Commissioners of Jefferson County is desirous of amending the Jefferson County Building Code as provided in the amendments attached hereto as Exhibit 1 to adopt controls to reduce airborne pollution caused by woodburning; and

WHEREAS, the Jefferson County Planning Commission, on July 11, 1990, reviewed and recommended approval of the proposed amendments to the Jefferson County Building Code; and

WHEREAS, after notice as provided by law, a public hearing on the proposed amendments was held by the Board of County Commissioners on June 26, 1990, at which time this matter was continued until July 31, 1990, for further testimony and/or decision, at which time this matter was continued until August 7, 1990, for decision; and

WHEREAS, the Board of County Commissioners finds that the amendments to the Jefferson County Building Code are in the best interest of and in accord with the public health, safety, morals, and general welfare of the citizens of Jefferson County; and further that the amendments to the Jefferson County Building Code are in accord with the safety, protection, and sanitation of present and future dwellings, buildings, and structures in Jefferson County.

NOW THEREFORE, BE IT RESOLVED that the proposed amendments to the Jefferson County Building Code, attached hereto as Exhibit 1 and containing proposed modifications of four separate provisions of the Uniform Building and Mechanical Codes be and hereby are adopted as part of the Jefferson County Building Code.

BE IT FURTHER RESOLVED THAT the Building Department Director is hereby authorized and directed to incorporate the changes on

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CC90-617

Exhibit 1, supra, into the Jefferson County Building Code, to become effective on January 1, 1991.

Commissioner Stone seconded the adoption of the foregoing Resolution. The roll having been called, the vote was as follows:

Commissioner Marjorie E. Clement	- "Aye";
Commissioner John P. Stone	- "Nay";
Commissioner Rich Ferdinandsen, Chairman	- "Aye":

The Resolution was adopted by majority vote of the Board of County Commissioners of the County of Jefferson, State of Colorado.

DATED: August 7, 1990

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Lafayette - Ordinance 24

**Rule Title** .

**State Effective Date** 11/15/1988

**State Adoption Date** 06/24/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 24 - Lafayette.pdf](#)



ORDINANCE NO. 24, Series 1988

INTRODUCED BY: Councilman Yoshihara

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF LAFAYETTE, COLORADO BY ADDING ARTICLE XII TO CHAPTER 30 WHICH ARTICLE SHALL BE TITLED "WOODBURNING PROHIBITIONS"; SAID ARTICLE PROHIBITING WOODBURNING IN THE CITY OF LAFAYETTE, COLORADO AT CERTAIN TIMES; SAID ARTICLE PROVIDING FOR A PENALTY FOR VIOLATION.

THE CITY OF LAFAYETTE ORDAINS:

SECTION 1. Chapter 30 of the Code of Ordinances of the City of Lafayette, Colorado is hereby amended by adding thereto Article XII titled "Woodburning Prohibitions" which shall read as follows:

ARTICLE XII.

WOODBURNING PROHIBITIONS

Section 30-300. Definitions. The following terms shall have the following meanings for the purposes of this article:

(a) "Barbecue devices" means devices that are utilized solely for the purpose of cooking food.

(b) "High pollution day" means that period of time declared to be a high pollution day by the State of Colorado Department of Health.

(c) "Person" means any individual, partnership, corporation, company or other association.

(d) "Sole source of heat" means one or more solid fuel burning devices which constitute the only source of heating in a private residence. No solid fuel burning device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed furnace or

heating system utilizing oil, natural gas, electricity or propane.

(e) "Solid fuel-fired heating device" means a device designated for solid fuel combustion so that usable heat is derived for the interior of a building and includes solid fuel-fired stoves, fireplaces, solid fuel-fired cooking stoves and combination fuel furnaces or boilers which burn solid fuel. Solid fuel-fired heating devices do not include barbecue devices or natural gas fixed fireplace logs.

**Section 30-301. High Pollution Prohibition.**

(a) No person may operate a solid fuel-fired heating device during a high pollution day unless an exemption has been granted pursuant to Section 30-302 below. It shall be the duty of all persons owning or operating a solid fuel-fired device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

(b) At the time of the declaration of a high pollution day, the City Administrator shall allow three hours for the burn down of existing fires in solid fuel burning devices prior to the initiation of enforcement.

**Section 30-302. Exemption for Sole Heat Source.**

(a) A person who relies on a solid fuel-fired heating device as his sole source of heat may apply to the City Administrator or his designee for a temporary exemption from Section 30-301 above.

(b) A person applying for an exemption must sign a sworn statement that he relies on a solid fuel-fired heating device as his sole source of heat.

(c) An exemption obtained under this section shall be effective for twelve months from the date it is granted.

**Section 30-303. Inspections.** For the purpose of determining compliance with the provisions of this article, the City Administrator, through authorized representatives, is hereby authorized to make inspections of solid fuel-fired heating devices which are being operated on high pollution days. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the City Administrator, through authorized representatives, shall seek from the Municipal Court a search warrant for inspection and order that such person refusing inspection be required to permit an inspection at a reasonable time, without interference, restriction or obstruction. The Municipal Court shall have full power, jurisdiction and authority to enforce all orders issued under the provisions of this article.

**Section 30-304. Penalties.** Any person violating any provision of this article shall be punished by a fine of not less than twenty-five dollars and not more than three hundred dollars.

**SECTION 2. Effective Date.** This ordinance shall take effect pursuant to the Home Rule Charter of the City of Lafayette, Colorado.

INTRODUCED, PASSED ON FIRST READING AND PUBLIC NOTICE  
ORDERED THIS 1st DAY OF November, 1988.

PASSED ON SECOND AND FINAL READING AND PUBLIC NOTICE  
ORDERED THIS 15th DAY OF November, 1988.

CITY OF LAFAYETTE, COLORADO

BY Bob L. Burger  
Mayor

ATTEST:

Beverly A. Smith  
city clerk

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Lakewood - Ordinance O-86-113

**Rule Title** .

**State Effective Date** 12/01/1986

**State Adoption Date** 06/24/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance O-86-113 - Lakewood.pdf](#)

0-86-113

A BILL FOR AN

ORDINANCE ENACTING A BAN ON WOODBURNING ON POLLUTION ALERT DAYS AND FURTHER  
DECLARING AN EMERGENCY

WHEREAS, the health, safety and welfare of the citizens of Lakewood are adversely affected by the degradation of the air quality within the city limits; and

WHEREAS, it is necessary for the Denver Metropolitan area to make reasonable efforts to attain the standards established in the Federal Clean Air Act or lose federal highway funds; and

WHEREAS, residential wood combustion produces particulate matter which is physically harmful, aesthetically unpleasant and contributes to the degradation of the air quality.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Lakewood, Colorado, that:

SECTION 1. Definitions. The following words and phrases have the following meanings unless the context clearly indicates otherwise:

- (1) "Barbeque devices" means devices that are utilized solely for the purpose of cooking food.
- (2) "Fireplace" means a hearth, fire chamber or similarly prepared place and a chimney.
- (3) "High pollution day" means a period of time designated as a high pollution day by the Colorado Department of Health.
- (4) "Sole source of heat" means one or more solid fuel burning devices which constitute the only source of heating in a private residence. No solid fuel burning device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed, furnace or heating system utilizing oil, natural gas, electricity, or propane.
- (5) "Solid fuel burning device" means a device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel burning stoves, fireplaces or wood stoves of any nature, solid fuel burning cooking stoves, combination fuel furnaces or boilers which burn solid fuel, or any other device used for the burning of solid combustible material. Solid fuel burning devices do not include barbeque devices or natural gas-fired fireplace logs.

SECTION 2. Woodburning Prohibition.

- (1) It shall be unlawful for any person to operate a solid fuel burning device during a high pollution day unless an exemption has been granted pursuant to Section 3. It shall be the duty of all persons owning or operating a solid fuel burning device to be aware of any declaration of a high pollution day by the Colorado Department of Health.
- (2) At the time of the declaration of a high pollution day, the City Manager shall allow three hours for the burndown of existing fires in solid fuel burning devices prior to the initiation of enforcement.

SECTION 3. It is an affirmative defense to a charge of burning on a high pollution day that a person has obtained a temporary exemption demonstrating (a) an economic need to burn solid fuel for residential space heating purposes, or (b) reliance on a solid fuel burning device installed prior to December 1, 1986, as the sole source of heat. The City Manager may grant such exemptions according to the following standards:

- (1) A person shall demonstrate economic need by certifying eligibility for energy assistance according to economic guidelines established by the United States Office of Management and Budget under the Low-Income Energy Assistance Program (L.E.A.P.), as administered by Jefferson County.
- (2) A person applying for an exemption must sign a sworn statement demonstrating reliance on a solid fuel burning device installed prior to December 1, 1986, as the sole source of heat.
- (3) An exemption obtained under this section shall be effective for one year from the date it is granted.

SECTION 4. For the purpose of determining compliance with the provisions of this chapter, City of Lakewood inspectors are hereby authorized to make inspections of all air contamination sources, including solid fuel burning devices which are being operated on high pollution days, and to take samples of air for analysis whenever necessary to determine the quantity and character of air pollutants. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the inspectors shall seek from the Municipal Court of the City of Lakewood a search warrant authorizing an inspector to enter the premises and comply with this Section. The court shall have full power, jurisdiction and authority to enforce all orders issued under the provisions of this chapter.

SECTION 5. This ordinance shall be enforceable on and after December 1, 1986.

SECTION 6. Emergency. This ordinance is necessary for the immediate preservation of the public health and safety and an emergency exists by reason of the fact that the enactment of this ordinance is necessary to the orderly and efficient administration of the business of the City of Lakewood; therefore, this ordinance shall take effect following adoption immediately upon the signature of this ordinance by the Mayor (or Mayor Pro Tem) approving

INTRODUCED, READ AND PASSED on first reading at a regular meeting of the City Council on November 10, 1986; ordered published in full in the Lakewood Sentinel and Public Hearing and consideration on final passage set for November 24, 1986, at 7 o'clock p.m. at Lakewood City Hall, 445 South Allison Parkway, Lakewood, Colorado.

Linda Shaw  
Linda Shaw, Mayor

ATTEST:

Karen Goldman  
Karen Goldman, City Clerk

INTRODUCED, READ AND ADOPTED by the City Council the 24th day of November, 1986.

SIGNED AND APPROVED THIS 25th day of November, 1986, PURSUANT TO THE EMERGENCY PROVISION CONTAINED IN THIS ORDINANCE.

Linda Shaw  
Linda Shaw, Mayor

I hereby certify and attest that the within and foregoing Ordinance was introduced, read and passed on first reading on the date hereinabove set forth, published in full in the Lakewood Sentinel on the 14th day of November, 1986; introduced, read, finally passed and adopted by the City Council, and signed and approved by the Mayor on the dates hereinabove set forth.

ATTESTED AND CERTIFIED:

Karen Goldman, City Clerk

Approved as to form:

City Attorney

Roger W. Noonan

Date

November 17, 1986

Approved as to content:

Community Development \_\_\_\_\_  
Parks and Recreation \_\_\_\_\_  
Employee Relations \_\_\_\_\_  
Finance \_\_\_\_\_

Date \_\_\_\_\_  
Date \_\_\_\_\_  
Date \_\_\_\_\_  
Date \_\_\_\_\_

City Manager KG  
Public Safety \_\_\_\_\_  
Public Works \_\_\_\_\_  
City Clerk \_\_\_\_\_

Date 11/5  
Date \_\_\_\_\_  
Date \_\_\_\_\_  
Date \_\_\_\_\_



**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Lakewood - Ordinance O-92-61

**Rule Title** .

**State Effective Date** 11/28/1992

**State Adoption Date** 06/24/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance O-92-61 - Lakewood.pdf](#)

A BILL FOR AN

ORDINANCE AMENDING THE UNIFORM BUILDING CODE AND CHAPTER 8.12 OF THE LAKEWOOD MUNICIPAL CODE RELATING TO PHASE III WOODBURNING APPLIANCES

WHEREAS, the General Assembly has determined that wood smoke is a major contributor to the air pollution in the Denver metropolitan area; and,

WHEREAS, the General Assembly has found that such air pollution and wood smoke is damaging to the health, safety and welfare of the population in the Denver metropolitan area; and

WHEREAS, in order to reduce wood smoke emissions into the air, the General Assembly has enacted Sections 25-7-411 to 25-7-413 of the Colorado Revised Statutes to encourage and promote the reduction of woodburning devices and the use of less polluting devices by taking advantage of new technology; and

WHEREAS, the City Council of the City of Lakewood wishes to encourage and promote the reduction of woodburning devices and the use of less polluting devices.

Be It Ordained by the City Council of the City of Lakewood, Colorado, that:

SECTION 1. Chapter 8.12 of the Lakewood Municipal Code is hereby repealed and reenacted as follows:

8.12.010 DEFINITIONS. The following words and phrases have the following meanings unless the context clearly indicates otherwise:

(1) "Barbeque devices" means devices that are utilized solely for the purpose of cooking food.

(2) "Fireplace" means a hearth, fire chamber or similarly prepared place and a chimney.

(3) "High pollution day" means a period of time designated as a high pollution day by the Colorado Department of Health.

(4) "Fireplace insert" means any woodburning device designed to be installed in an existing fireplace which meets the Phase III Wood Stove standard, as such term is defined in Subsection (5) of this section.

(5) "Phase III Wood Stove" means any woodburning device that meets the most stringent standards adopted

by the Air Quality Control Commission pursuant to Section 25-7-106.3(1), C.R.S., or any nonaffected woodburning device that is approved by the Commission.

(6) "Sole source of heat" means one or more solid fuel burning devices which constitute the only source of heating in a private residence. No solid fuel burning device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed furnace or heating system utilizing oil, natural gas, electricity, or propane.

(7) "Solid fuel burning device" means a device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel burning stoves, fireplaces or wood stoves of any nature, solid fuel burning cooking stoves, combination fuel furnaces or boilers which burn solid fuel, or any other device used for the burning of solid combustible material. Solid fuel burning devices do not include barbeque devices of natural gas-fired fireplace logs.

8.12.020 INSTALLATION. On or after January 1, 1993, any new or remodeled fireplace to be installed shall be one of the following:

- (1) A gas appliance;
- (2) An electric device; or

(3) A fireplace or fireplace insert that meets the most stringent emissions standards for wood stoves established by the Air Quality Control Commission, or any other clean burning device that is approved by the Air Quality Control Commission.

8.12.030 WOODBURNING -- PROHIBITION.

(1) It is unlawful for any person to operate a solid fuel burning device during a high pollution day unless an exemption has been granted pursuant to Section 8.12.040. It is the duty of all persons owning or operating a solid fuel burning device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

(2) At the time of the declaration of a high pollution day, the City Manager shall allow three hours

for the burndown of existing fires in solid fuel burning devices prior to the initiation of enforcement.

8.12.040 EXEMPTION.

(1) It is an affirmative defense to a charge of burning on a high pollution day that a person

(a) was utilizing an appliance listed in Section 8-12-020, or

(b) has obtained a temporary exemption demonstrating:

i) An economic need to burn solid fuel for residential space heating purposes; or

ii) Reliance on a solid fuel burning device installed prior to December 1, 1986, as the sole source of heat.

(2) The City Manager may grant exemptions as set forth in 8-12-040(b) according to the following standards:

(a) A person shall demonstrate economic need by certifying eligibility for energy assistance according to economic guidelines established by the United States Office of Management and Budget under the Low-income Energy Assistance Program (L.E.A.P.), as administered by Jefferson County.

(b) A person applying for an exemption must sign a sworn statement demonstrating reliance on a solid fuel burning device installed prior to December 1, 1986, as the sole source of heat.

(c) An exemption obtained under this section shall be effective for one year from the date it is granted.

8.12.050 INSPECTIONS. For the purpose of determining compliance with the provisions of this chapter, city inspectors are authorized to make inspections of all air contamination sources, including solid fuel burning devices which are being operated on high pollution days, and to take samples of air for analysis whenever

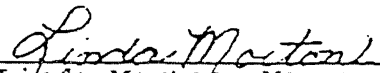
necessary to determine the quantity and character of air pollutants. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the inspectors shall seek from the Municipal Court of the City of Lakewood a search warrant authorizing an inspector to enter the premises and comply with this section. The court shall have full power, jurisdiction and authority to enforce all orders issued under the provisions of this chapter.

SECTION 2. Subsection 14.02.040(3)(B) of the Lakewood Municipal Code is amended by the addition of the following paragraph:

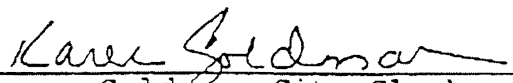
Sec. 304(g) Waiver for clean burning device. The building official shall waive the permit fee for the installation of a decorative gas appliance or Phase III certified solid fuel-burning device meeting the most stringent emission standards for wood stoves established under state statute and/or regulations promulgated by the Colorado Air Quality Control Commission, as demonstrated by a test by an E.P.A. accredited laboratory. This waiver shall expire and be of no effect on January 1, 1994.

SECTION 3. This ordinance shall take effect thirty (30) days after final publication.

INTRODUCED, READ AND PASSED on first reading at a regular meeting of the City Council on October 26, 1992; ordered published in full in the Lakewood Sentinel and Public Hearing and consideration on final passage set for November 9, 1992, at 7 o'clock p.m. at Lakewood City Hall, 445 South Allison Parkway, Lakewood, Colorado.

  
\_\_\_\_\_  
Linda Morton, Mayor

ATTEST:

  
\_\_\_\_\_  
Karen Goldman, City Clerk

INTRODUCED, READ AND ADOPTED by the City Council the 9th  
day of November, 1992.

APPROVED AND SIGNED THIS 10th day of November, 1992.

Linda Morton  
Linda Morton, Mayor

I hereby certify and attest that the within and foregoing Ordinance was introduced, read and passed on the first reading on the date hereinabove set forth, published in full in the Lakewood Sentinel on the 29th day of October, 1992; introduced, read, finally passed and adopted by the City Council, and signed and approved by the Mayor on the dates hereinabove set forth.

ATTESTED AND CERTIFIED:

Karen Goldman  
Karen Goldman, City Clerk

Approved as to form:

City Attorney Reginald L. Brown Date November 3, 1992

Approved as to content:

City Manager William Date 10-21-92  
Community Resources \_\_\_\_\_ Date \_\_\_\_\_  
Police Department \_\_\_\_\_ Date \_\_\_\_\_  
Employee Relations \_\_\_\_\_ Date \_\_\_\_\_  
Planning, Permits and Public Works \_\_\_\_\_ Date \_\_\_\_\_  
Finance \_\_\_\_\_ Date \_\_\_\_\_  
City Clerk \_\_\_\_\_ Date \_\_\_\_\_  
Economic Development \_\_\_\_\_ Date \_\_\_\_\_

State Colorado  
State Agency Department of Public Health and Environment  
Affected Area Denver Metropolitan Area  
Regulation Local Woodburning Ordinances  
Rule Number Littleton - Ordinance 26  
Rule Title .  
State Effective Date 08/18/1992  
State Adoption Date 08/18/1992  
EPA Effective Date 05/19/1997  
Notice of Final Rule Date 04/17/1997  
Notice of Final Rule Citation 62 FR 18716  
Comments

Rule:



[Ordinance 26 - Littleton.pdf](#)

CITY OF LITTLETON, COLORADO

ORDINANCE NO. 26

Series of 1992

INTRODUCED BY COUNCILMEMBERS: Emley and Tonsing

AN ORDINANCE OF THE CITY OF LITTLETON, COLORADO, AMENDING THE UNIFORM BUILDING CODE BY PROVIDING FOR RESTRICTIONS ON NEW SOLID FUEL BURNING FIREPLACES AND STOVES.

WHEREAS, the burning of solid fuel for heating or aesthetic purposes is a cause of air pollution in the City;

WHEREAS, the General Assembly has determined that it is necessary to regulate the type of solid fuel burning devices which may be hereafter installed in the City of Littleton; and

WHEREAS, the City Council deems it necessary to amend the Uniform Building Code to include provisions for the regulation of solid fuel burning devices as required by state law.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LITTLETON, COLORADO, THAT:

Section 1: Title 4, Chapter 1, Section 5 of the Littleton City Code is hereby amended by the addition of new Subsections (PP) and (QQ) to read as follows:

*ale* (PP) Chapter 37 of the Uniform Building Code is hereby amended by the addition of a new Section 3708 to read:

Notwithstanding anything contained in this Chapter to the contrary, any new or remodeled fireplace shall be one of the following:

(1) Gas appliance;

(2) An electric device; or

(3) A fireplace or fireplace insert that meets the most stringent emission standards for wood stoves established by the Air Quality Control Commission of the Department of Health of the State of Colorado, or any other clean burning device that is approved by said Commission.

Any person who installs or constructs any fireplace insert or fireplace shall provide evidence of a certificate issued by the Air Pollution Control Division of the Department of Health of the State of Colorado for such fireplace, and in the case of site-built fireplaces, shall demonstrate compliance with the certificate. Such



demonstration of compliance shall include inspection by the building inspector, or his or her designee, of the new fireplace after installation. The owner of any site-built fireplace shall be responsible for the payment of all costs of such inspection.

22  
(10)

Section 802 of the Uniform Mechanical Code is hereby amended by the addition of the following sentence, as the last sentence thereof.

Every new installation of a solid fuel burning vented decorative appliance or room heater shall meet the most stringent emission standards for wood stoves established under the Uniform Building Code, as amended.

Section 2: The provisions of Section 1 of this ordinance shall be effective January 1, 1993.

Section 3: Severability. If any part, section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such invalidity shall not affect the validity of the remaining sections of this ordinance. The City Council hereby declares that it would have passed this ordinance, including each part, section, subsection, sentence, clause or phrase hereof, irrespective of the fact that one or more parts, sections, subsections, sentences, clauses or phrases may be declared invalid.

Section 4: Repealer. All ordinances or resolutions, or parts thereof, in conflict with this ordinance are hereby repealed, provided that this repealer shall not repeal the repealer clauses of such ordinance nor revive any ordinance thereby.

INTRODUCED AS A BILL at a regularly scheduled meeting of the City Council of the City of Littleton on the 21st day of July, 1992, passed on first reading by a vote of 7 FOR and 0 AGAINST; and ordered published in full in the Littleton Independent of July 23, 1992.

PUBLIC HEARING on the Ordinance to take place on the ~~21st~~ 18th of August, 1992, in the Council Chambers, Littleton Center, 2255 West Berry Avenue, Littleton, Colorado, at the hour of 7:30 p.m., or as soon thereafter as it may be heard.

PASSED on second and final reading, following public hearing, by a vote of 6 FOR and 0 AGAINST on the ~~21st~~ 18th day of

August, 1992, and ordered published by reference only in the  
Littleton Independent on the 20th day of August, 1992.

ATTEST:

*J. Alice K. Allen*  
CITY CLERK

*Susan M. Aberton*  
PRESIDENT OF CITY COUNCIL

APPROVED AS TO FORM:

*Shirley W. Beilow*  
CITY ATTORNEY



State Colorado  
State Agency Department of Public Health and Environment  
Affected Area Denver Metropolitan Area  
Regulation Local Woodburning Ordinances  
Rule Number Littleton - Ordinance 51  
Rule Title .  
State Effective Date 12/06/1988  
State Adoption Date 12/06/1988  
EPA Effective Date 05/19/1997  
Notice of Final Rule Date 04/17/1997  
Notice of Final Rule Citation 62 FR 18716  
Comments

Rule:



[Ordinance 51 - Littleton.pdf](#)

CITY OF LITTLETON, COLORADO

ORDINANCE NO. 51

Series of 1988

INTRODUCED BY COUNCILMEN Tonsing and Thornton

AN ORDINANCE PROHIBITING THE INSTALLATION OF NONCONFORMING SOLID FUEL BURNING DEVICES; PROHIBITING THE OPERATION OF SOLID FUEL BURNING DEVICES ON HIGH POLLUTION DAYS; AND PROVIDING EXEMPTIONS FROM, AND ESTABLISHING FINES FOR, VIOLATIONS OF SUCH PROHIBITION.

WHEREAS, the health, safety and welfare of the citizens of the City of Littleton are adversely affected by the degradation of the air quality within the City limits; and

WHEREAS, residential wood combustion produces particulate matter which can be physically harmful, aesthetically unpleasant, and contribute to the degradation of the air quality; and

WHEREAS, the City Council desires to impose certain limitations on activities that have an impact on the quality of air and to provide for effective enforcement; and

WHEREAS, the City Council wishes to encourage the replacement of polluting devices with those that meet or exceed the standards of the State of Colorado.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LITTLETON, COLORADO, THAT:

Section 1: Title 4 of the Littleton Municipal Code is hereby amended by the addition of a new Chapter 5:

4-5-1: Short Title. This ordinance shall be known and may be cited as the "Littleton Woodburning Ordinance."

4-5-2: Definitions. The following words and phrases have the following meanings unless the context clearly indicates otherwise:

- A. "Approved solid fuel burning device" shall mean a solid fuel burning device which has been certified by the Colorado Department of Health in accordance with procedures specified in Colorado Air Quality Control Commission Regulations as meeting the emissions standards for certification under such regulation.

- B. "Burn down time" shall mean that period of time not to exceed three hours following the declaration of a high pollution day required for the cessation of combustion within any solid fuel burning device pursuant to this ordinance.
- C. "Exemption Permit" shall mean any symbol adopted by the City Manager for purposes of notification of exemption from the no burn regulations herein, which may include signs, placards, decals, or other appropriate symbols easily visible from the street side of the property upon which it is installed or placed.
- D. "Exempt solid fuel burning devices" shall mean those devices specifically exempted from regulation by the Commission in accordance with applicable state law.
- E. "Fireplace" shall mean a structure designed for the burning of wood (whether or not it is an integral part of the construction of a building) which would commonly be considered a fireplace.
- F. "High pollution day" shall mean that period of time declared by the City Manager or the Colorado Department of Health to be a high pollution day.
- G. "Nonconforming solid fuel burning device" shall mean any solid fuel burning device which is not an approved solid fuel burning device.
- H. "Person" shall mean an individual, partnership, corporation, company, or other association.
- I. "Sole source of heat" shall mean one or more residential solid fuel burning devices which constitute the only source of heat in a private residence. No residential solid fuel burning device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed furnace or heating system designed to heat the residence or any part thereof, connected or disconnected from its energy source, utilizing oil, natural gas, electricity or propane.

J. "Solid fuel burning device" shall mean any solid fuel burning device, including but not limited to, free-standing fireplaces, airtight stoves, franklin stoves, masonry fireplaces, pre-fabricated zero clearance fireplaces, any similar fireplace the operation of which requires it to be built in the structure as a component of the building, a fireplace insert or another device intended for use to heat interior habitable space or for aesthetic enjoyment, provided such device is capable of burning solid fuel such as wood, coal, or any other solid fuel. Solid fuel burning devices shall not include natural gas devices or solid fuel cooking devices.

4-5-3: Installation of New Solid Fuel Burning Devices  
After the effective date of this ordinance, no person shall install a solid fuel burning device unless authorized to do so in a building permit. No building permit shall be issued authorizing the installation of a solid fuel burning device, unless such device is an approved solid fuel burning device or an exempt solid fuel burning device. Fireplaces shall be deemed approved solid fuel burning devices for purposes of installation only until such time as the Colorado Air Quality Control Commission (the "Commission") promulgates emissions standards for fireplaces. As of the compliance date specified in such regulations, only those fireplaces certified by the Colorado Department of Health as having emissions which do not exceed the emissions standards shall be considered to be approved solid fuel burning devices.

4-5-4: Solid Fuel Burning During High Pollution Days Prohibited.

A. It shall be unlawful for any person to operate a solid fuel burning device during a high pollution day unless an exemption permit has been issued pursuant to Section 4-5-5 below. It shall be the duty of all persons owning or operating a solid fuel burning device to be aware of any declaration of a high pollution day by the Littleton City Manager or the Colorado Department of Health. Any such declaration shall constitute constructive notice of the existence of a high

2. Approved or exempt solid fuel burning devices. Any person who operates an approved or exempt solid fuel burning device shall be eligible for an exemption from the prohibition or operation contained in subsection 1 of this section. Persons entitled to an exemption under this section shall be issued an exemption permit which must be displayed on the premises to which the exemption applies and be visible from a place of public access on high pollution days.
3. Fireplaces. Fireplaces shall not be eligible for exemption from the provisions of this section until such time as emissions standards for fireplaces are promulgated by the Commission. Thereafter, only those fireplaces which have been certified by the Colorado Department of Health as having emissions that do not exceed the emissions standards shall be exempt from the provisions of this section.

B. The fee for an exemption permit shall be \$25.00. This fee shall not include the costs of any inspection or testing which may be required by regulations promulgated pursuant to Section 4-5-4(D) hereof. Any such costs shall be in addition to said fee and paid prior to said inspection or test. No fee shall be charged for a "sole source of heat" exemption.

- C. An exemption shall remain in effect until:
1. A residence which has a "sole source of heat" exemption installs a permanent heating system using oil, natural gas, electricity or propane; or
  2. A visible emission violation is detected for the third time in a single burning season (October through March) at a premise with an exemption permit for an "approved solid fuel burning device"; or

3. More stringent Federal or State laws or regulations are adopted or promulgated.

4-5-6: Investigation and Compliance.

For the purpose of determining compliance with the provisions of this ordinance City inspectors are hereby authorized to make inspections. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the inspectors shall seek from the municipal court a search warrant authorizing an inspector to enter the premises and comply with this section. The court shall have full power, jurisdiction and authority to enforce all orders issued under the provisions of this section.

Section 2: Severability. If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional in a court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and shall not affect the validity of the remaining portion thereof.

Section 3: Repealer. All acts, orders, resolutions, or parts thereof taken by the City and in conflict with this ordinance are hereby repealed, except that this repealer shall not be construed so as to revive any act, order, ordinance, resolution or part thereof heretofore repealed.

INTRODUCED AS A BILL at a regularly scheduled meeting of the City Council of the City of Littleton on the 15th day of November, 1988, passed on first reading by a vote of 7 FOR and 0 AGAINST; and ordered published in full in the Independent of November 18,, 1988.


PUBLIC HEARING on the Ordinance to take place on the 6th day of December, 1988, in the Council Chambers, Littleton Center, 2255 West Berry Avenue, Littleton, Colorado, at the hour of 7:30 p.m., or as soon thereafter as it may be heard.

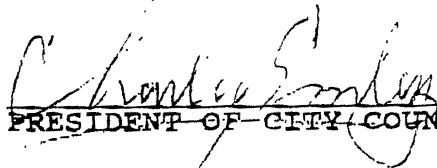


as amended


PASSED on second and final reading, following public hearing, by a vote of 5 FOR and 1 AGAINST on the 6th day of December, 1988; and ordered published by reference only in the Independent on the 9th day of December, 1988.

ATTEST:

  
CITY CLERK

  
~~PRESIDENT OF CITY COUNCIL~~

APPROVED AS TO FORM:

  
CITY ATTORNEY

CD/A:520.

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Longmont - Ordinance O-89-1

**Rule Title** .

**State Effective Date** 12/27/1988

**State Adoption Date** 12/27/1988

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance O-89-1 - Longmont.pdf](#)

ORDINANCE NO. 0-89-1

AN ORDINANCE ADDING A NEW CHAPTER TO THE LONGMONT MUNICIPAL CODE REGARDING RESTRICTIONS ON SOLID FUEL-FIRED HEATING DEVICES AND COAL BURNING.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LONGMONT, COLORADO:

Section 1: A new chapter is added to the Longmont Municipal Code to read as follows:

CHAPTER 16.44  
BURNING RESTRICTIONS

Sections:

16.44.010	Definitions		
16.44.020	High Pollution Prohibition	16.44.060	Inspections
16.44.030	Exemptions	16.44.070	Violation--Penalty
16.44.040	Defense	16.44.080	Violation--Injunctive Relief
16.44.050	Coal Burning Prohibited	16.44.090	Severance Clause

16.44.010 Definitions: The following words and phrases shall have the indicated meanings:

A.) "High Pollution Day" means that period of time declared to be a high pollution day by the Colorado Department of Health.

B.) "Sole source of heat" means one or more solid fuel-fired heating devices which constitute the only source of heat in a private residence for purposes of space heating.

C.) "Solid fuel-fired heating device" means a device designed for solid fuel combustion so that useable heat is derived for the interior of a building and includes solid fuel-fired stoves, fireplaces, and furnaces or boilers. "Solid fuel-fired heating device" does not include a barbecue device used solely for the cooking of food or natural gas-fired fireplace logs.

16.44.020 High Pollution Prohibition

A.) It shall be unlawful for any person to operate a solid fuel-fired heating device during a high pollution day unless that person has an exemption granted pursuant to Section 16.44.030 below. It shall be the duty of all persons owning or operating a solid fuel-fired device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

B.) At the time of the declaration of a high pollution day, the City shall allow three (3) hours for the burn-down of existing fire in solid fuel-burning devices prior to the initiation of enforcement.

16.44.030 Exemptions

A.) A person may operate a solid fuel-fired heating device during a high pollution day if an exemption has previously been obtained from the City Manager

## BURNING RESTRICTIONS

Page 2

or his designee. An exemption may be granted if the applicant submits a sworn statement that either, 1.) a solid fuel-fired burning device is the sole source of heat and that said device was installed prior to the effective date of the ordinance codified herein, or 2.) an electrical heating system is the primary source and a solid fuel-fired heating device is a supplemental heating system, and that said system was installed prior to the effective date of the ordinance codified herein. A fee to cover the administrative costs of the exemption certificate may be charged. The fee shall be established and from time to time revised by resolution of the City Council.

B.) An exemption obtained under this section shall be effective for one year from the date it is granted and may be renewed upon submission of a new sworn statement as provided in subsection A.), above.

C.) An exemption granted as provided herein may be revoked by the City if the solid fuel-fired heating device is operated inefficiently so as to create a nuisance due to excessive smoke production.

D.) The exemption certificate shall be posted in a conspicuous location near the main entrance to be visible from the street.

### 16.44.040 Defense

It shall be an affirmative defense to a charge of burning on a high pollution day under Section 16.44.020 above, that a power outage, interruption of natural gas supply, or temporary equipment failure existed at the time and location of the violation, which did not result from any action of the person charged with the violation.

### 16.44.050 Coal Burning Prohibited

It shall be unlawful to burn coal in any form in a solid fuel-fired heating device.

### 16.44.060 Inspections

For the purpose of determining compliance with the provisions of this chapter, the City Manager, or his designee is authorized to make inspections to determine whether solid fuel-fired heating devices are being operated on high pollution days. If any person refuses or restricts entry or free access to any part of the premises, or refuses inspection of any device, the Municipal Court may issue a warrant for inspection and order that such person refusing inspection be required to permit an inspection at a reasonable time, without interference, restriction, or obstruction. The Court shall have full power, jurisdiction, and authority to enforce all orders issued under the provisions of this chapter.

### 16.44.070 Violation--Penalty

Any person, firm, or corporation violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this chapter is commit-

BURNING RESTRICTIONS

ge 3

ted, continued, or permitted, and upon conviction of any such violation such person shall be punishable by a fine of not more than \$300 or by imprisonment for not more than 90 days, or by both such fine and imprisonment.

16.44.080 Violation--Injunctive Relief

Notwithstanding any other penalties, any violation of this chapter is deemed a public nuisance. Nothing in this chapter shall prevent the City Attorney from seeking appropriate legal or equitable relief from any court of competent jurisdiction.

16.44.090 Severance Clause

If any article, section paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of the ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts thereof, irrespective of the fact that any one part or parts be declared invalid or unconstitutional.

INTRODUCED, READ, AND ADOPTED on first reading and ordered published in full this 27<sup>TH</sup> day of DECEMBER, 1988.

FINALLY ADOPTED AND ORDERED FINALLY PUBLISHED by title only this \_\_\_ day of \_\_\_\_\_, 19\_\_.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_

APPROVED AS TO FORM:

*Paul A. Bailey*  
City Attorney

Effective Date: \_\_\_\_\_

NOTICE: PUBLIC HEARING ON THE ABOVE ORDINANCE WILL BE HELD ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 1989 IN COUNCIL CHAMBERS AT 7:00 P.M.

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Mountain View - Ordinance 90-5

**Rule Title** .

**State Effective Date** 01/07/1991

**State Adoption Date** 01/07/1991

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 90-5 - Mountain View.pdf](#)

BEFORE THE TOWN COUNCIL  
TOWN OF MOUNTAIN VIEW  
STATE OF COLORADO

ORDINANCE 90-5

"AN ORDINANCE AMENDING CHAPTER 16, SECTION 13-04, OF THE CODE OF THE TOWN OF MOUNTAIN VIEW, COLORADO, EXEMPTING CERTAIN CERTIFIED WOOD BURNING STOVES FROM THE RESTRICTIONS OF SAID CHAPTER."

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF MOUNTAIN VIEW,  
COLORADO:

1. That Section 13-04 of Chapter 16 of the Town Code of the Town of Mountain View, Colorado be amended by adding thereto the following subsection C.

C. Exemption For New Technology Stoves. The Town Council shall grant an exemption from Section 16-13-03 of this chapter to any person who has a solid fuel-fired heating device which is currently certified as a Phase II Stove by the Colorado Air Pollution Control Division and the United States Environmental Protection Agency and does not exceed a standard of 8 g/rh. particulate and 100 g/hr. carbon monoxide, AND THAT SAID STOVE SHALL NOT EMIT ANY VISIBLE EMISSIONS DURING A HIGH POLLUTION DAY.

2. That all of the other terms and conditions of said Chapter 16 remain in full force and effect except as specifically amended herein.

INTRODUCED, READ AND ORDERED POSTED THIS 10th DAY OF December, A.D., 1990.

Betty A. VanHarte  
Mayor

ATTEST:

\_\_\_\_\_  
Town Clerk

PASSED, ADOPTED AND APPROVED THIS 7th DAY OF January, A.D., <sup>1991</sup>~~1990~~.

Betty A. VanHarte  
Mayor

ATTEST:

\_\_\_\_\_  
Town Clerk

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Sheridan - Ordinance 1

**Rule Title** .

**State Effective Date** 02/09/1993

**State Adoption Date** 02/09/1993

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 1 - Sheridan.pdf](#)



ORDINANCE NO. 1  
SERIES OF 1993  
COUNCIL BILL NO. 1, SERIES OF 1993

INTRODUCED BY COUNCIL MEMBER MUELLER

A BILL FOR AN ORDINANCE TO AMEND THE BUILDING CODE OF THE CITY OF SHERIDAN, COLORADO TO SET REQUIREMENTS ON FIRE PLACES THAT COMPLY WITH THE COLORADO AIR QUALITY CONTROL ACT

SECONDED BY COUNCIL MEMBER JENKINS

Upon a roll call being taken the following votes were cast:

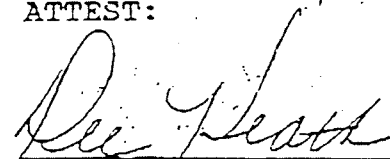
	YES	NO
James Egan	<u>X</u>	___
Charles Herman	<u>X</u>	___
Nancy Jenkins	<u>X</u>	___
Aileen Marple	<u>X</u>	___
Clifford Mueller	<u>X</u>	___
Donald Smith	<u>X</u>	___
Dale Patton	<u>X</u>	___

This ordinance was published in full in the Englewood Herald newspaper on January 14, 1993 following approval by the City Council of the City of Sheridan after first reading on January 12, 1993.

PASSED AND APPROVED this 9TH day of FEBRUARY, 1993 and ordered published in the Englewood Herald newspaper.

  
Dale W. Patton, Mayor

ATTEST:

  
Dee Heath, City Clerk

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Sheridan - Ordinance 22

**Rule Title** .

**State Effective Date** 10/25/1988

**State Adoption Date** 10/25/1988

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 22 - Sheridan.pdf](#)

ORDINANCE NO. 22  
SERIES OF 1987  
COUNCIL BILL NO. 22

INTRODUCED BY COUNCILMEMBER \_\_\_\_\_

TITLE: A BILL FOR AN ORDINANCE ENACTING A BAN ON WOODBURNING ON POLLUTION ALERT DAYS ; ~~AND FURTHER DECLARING AN EMERGENCY~~ RR

WHEREAS, the health, safety and welfare of the citizens of Sheridan are adversely affected by the degradation of the air quality within the city limits; and

WHEREAS, it is necessary for the Denver Metropolitan area to make reasonable to attain the standards established in the Federal Clean Air Act or lose Federal highway funds; and

WHEREAS, residential wood combustion produces particulate matter which is physically harmful, aesthetically unpleasant and contributes to the degradation of the air quality.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SHERIDAN, COLORADO, THAT:

Section 1. A new Article XI is hereby added to Chapter 18 of the Sheridan Municipal Code to read as follows:

Sec. 18-280. Definitions. The following words and phrases have the following meanings unless the context clearly indicates otherwise:

(1) "Barbeque devices" means devices that are utilized solely for the purpose of cooking food.

(2) "Fireplace" means a hearth, fire chamber or similarly prepared place and a chimney.

(3) "High pollution day" means a period of time designated as a high pollution day by the Colorado Department of Health.

(4) "Sole source of heat" means one or more solid fuel burning devices which constitute the only source of heating in a private residence. No solid fuel burning device or devices shall be considered to be the sole source of heat if the private residence is equipped with a permanently installed, furnace or heating system utilizing oil, natural gas, electricity or propane.

(5) "Solid fuel burning device" means a device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel burning stoves, fireplaces or wood stoves of any nature, solid fuel burning cooking stoves, combination fuel furnaces or boilers

which burn solid fuel, or any other device used for the burning of solid combustible material. Solid fuel burning devices do not include barbeque devices or natural gas-fired fireplace logs.

Sec. 18-281. Woodburning Prohibition.

(1) It shall be unlawful for any person to operate a solid fuel burning device during a high pollution day unless an exemption has been granted pursuant to Section 3. It shall be the duty of all persons owning or operating a solid fuel burning device to be aware of any declaration of a high pollution day by the Colorado Department of Health.

(2) At the time of the declaration of a high pollution day, the City Administrator shall allow three hours for the burndown of existing fires in solid fuel burning devices prior to the initiation of enforcement.

Sec. 18-282. Affirmative defenses. It is an affirmative defense to a charge of burning on a high pollution day that a person has obtained a temporary exemption demonstrating (a) an economic need to burn solid fuel for residential space heating purposes, or (b) reliance on a solid fuel burning device installed prior to December 1, 1988, as the sole source of heat. The City Administrator may grant such exemptions according to the following standards:

(a) A person shall demonstrate economic need by certifying eligibility for energy assistance according to economic guidelines established by the United States Office of Management and Budget under Low-Income Energy Assistance Program (L.E.A.P.), as administered by Jefferson County.

(b) A person applying for an exemption must sign a sworn statement demonstrating reliance on a solid fuel burning device installed prior to December 1, 1988, as the sole source of heat.

(c) An exemption obtained under this section shall be effective for one year from the date it is granted.

Sec. 18-283. Inspections. For the purpose of determining compliance with the provisions of this chapter, City of Sheridan inspectors are hereby authorized to make inspections of all air contamination sources, including solid fuel burning devices which are being operated on high pollution days, and to take samples of air for analysis whenever necessary to determine the quantity and character of air pollutants. If any person refuses or restricts entry and free access to any part of a premise, or refuses inspection or sampling of any device, facility or process where inspection is sought, the inspectors shall seek from the Municipal Court of the City of Sheridan a search warrant authorizing and inspector to enter the premises and comply with this Section. The court shall have full power, jurisdiction and authority to enforce all orders issued under the provisions of this chapter.

Sec. 18-284. Violations. Violations of this Article shall be punishable by a fine not to exceed three hundred dollars (\$300.00).

Section 2. Safety Clause. The City Council hereby finds, determines, and declares that this ordinance is promulgated under the general police power of the City of Sheridan, that it is promulgated for the health, safety, and welfare of the public, and that this ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare. The City Council further determines that the ordinance bears a rational relation to the proper legislative object sought to be attained.

Section 3. Severability. If any clause, sentence, paragraph, or part of this ordinance or the application thereof to any person or circumstances shall for any reason be adjudged by a court of competent jurisdiction invalid, such judgment shall not affect application to other persons or circumstances.

SECONDED BY COUNCILMEMBER Mueller

Upon a roll call being taken, the following was case:

	Yes	No
Charles Adlon	_____	_____ ✓
Charles Herman	_____ x	_____
Carol Jonkoniec	_____ x	_____
Aileen Marple	_____ x	_____
Clifford Mueller	_____ x	_____
Dale Patton	_____ x	_____
Roger Rowland	_____	_____ ✓

PASSED AND APPROVED this 25<sup>th</sup> day of October, 1988, and ordered published in the Independent Newspaper.

Roger B. Rowland  
Roger B. Rowland, Mayor

ATTEST:

Dee Heath  
Dee Heath, City Clerk

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Thornton - Ordinance 2120

**Rule Title** .

**State Effective Date** 10/28/1991

**State Adoption Date** 10/28/1991

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 2120 - Thornton.pdf](#)

ORDINANCE NO.: 2120  
INTRODUCED BY: Votruba

AN ORDINANCE ADOPTING SECTIONS 27A-1 THROUGH 27A-6 OF THE THORNTON CITY CODE RELATING TO RESTRICTIONS AND EXEMPTIONS FOR SOLID FUEL-FIRED HEATING DEVICES.

WHEREAS, some persons residing in residences rely on solid fuel-fired devices as an alternate source to supplement their heating requirements; and

WHEREAS, some persons residing in residences have demonstrated a need to supplement their heat source by the use of solid fuel-fired devices as an alternative source of heat, even on high pollution days; and

WHEREAS, former Chapter 27A is no longer in effect.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF THORNTON, COLORADO, AS FOLLOWS:

That the Thornton Municipal Code Chapter 27A is adopted to read as follows:

## BURNING RESTRICTION, SOLID-FUEL

### Thornton Code

#### *Chapter 27A*

#### Section 1. Definitions

When not clearly otherwise indicated by the context, the following words and phrases, as used in this chapter, shall have the following meanings:

- (A) AIR POLLUTION ALERT - A period of time designated as an "air pollution alert" by the Colorado Department of Health, representing a more severe air pollution condition than occurring during a high-pollution day.
- (B) AIR POLLUTION EMERGENCY - A period of time designated as an "air pollution emergency" by the Colorado Department of Health, representing a more severe air pollution condition than occurring during an air pollution alert.
- (C) AIR POLLUTION WARNING - A period of time designated as an "air pollution warning" by the Colorado Department of Health, representing a more severe air pollution condition than occurring during an air pollution alert.

- (D) APPROVED SOLID FUEL-BURNING DEVICE - A solid fuel-burning device which has been certified by the Colorado Department of Health in accordance with procedures specified in Colorado Air Quality Control Commission, Regulation No. 4, 5CCR 1001-6, as meeting the emissions standards for Phase II certification under such regulation, as in effect on the effective date of this chapter.
- (D) BARBECUE DEVICES - Devices that are utilized solely for the purpose of cooking food.
- (E) EXEMPT SOLID FUEL-BURNING DEVICES - Those devices specifically exempted from regulation by the commission in accordance with Sections 25-7-403(2)(a)(viii) and 25-7-407(2)(b), C.R.S. (1987 Supp.).
- (F) HIGH POLLUTION DAY - A period of time declared to be a "high pollution day" by the Colorado Department of Health, representing a less severe air pollution condition than occurring during an air pollution alert.
- (G) SOLE SOURCE OF HEAT - One (1) or more solid fuel-burning devices that constitute the only source of heat in a residence for the purpose of central or space heating. A residential solid fuel-fired heating device or devices shall be considered to be the "sole source of heat" if the private residence is equipped with a permanently installed non-solid fuel-burning furnace or heating system designed to heat the residence which is physically disconnected from its non-solid fuel energy source, including heating oil, natural gas, electricity or propane.
- (F) SOLID FUEL-FIRED HEATING DEVICE - A device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes solid fuel-fired stoves, fireplaces, solid fuel-fired cooking stoves and combination of fuel furnaces or boilers which burn solid fuel. "Solid fuel-fired heating devices" do not include barbecue devices or natural gas fired fireplace logs.

Section 2. Use of solid fuel-fired heating devices restricted.

No person shall operate, permit or cause to be operated within any residential structure or unit a solid fuel-fired heating device during a high pollution day, air pollution alert, air pollution warning or air pollution emergency, subject to the exemptions hereinbelow set forth. However, such prohibition shall not take effect until the expiration of three (3) hours from the time of public declaration of the high pollution day or air pollution alert by the Colorado Department of Health in order to permit burndown of existing fires. It shall be the duty of all persons owning or operating a solid fuel-burning device to be aware of any such declaration by the



Colorado Department of Health, and the fact that such person was not aware of such declaration shall not constitute a defense to the violation of the provisions of this chapter.

Section 3.        Exemptions

- (A) The following persons may apply to the City Manager, or his designee, for an exemption from the requirements of Section 27A-2 hereof:
- (1) A person residing in a residence relying on a solid fuel-fired device as a sole source of heat;
  - (2) A person having an approved solid fuel burning device;
  - (3) A person who is eligible for energy assistance under the Low Income Energy Assistance Program administered by Adams County, Colorado or;
  - (4) A person who resides in a residence which uses a solid fuel-fired device as a source of heat prior to the effective date of Thornton Ordinance No. 1927 and who establishes that the acquisition of an approved solid fuel-fired device or of natural gas as a source of heat is not economically feasible at the time of application.
- (B) For purposes of this section, a residence shall not include any accessory or outbuildings or garages, whether attached or not, to the principal structure.
- (C) Each person applying for an exemption shall submit an application fee of five dollars (\$5.00) and complete a Building Inspection Permit form or application form depending on the type of exemption requested.
- (D) The applicant shall submit the application under oath that the information submitted meets the requirements of the applicable provisions of Section 27A-3.A and is true and accurate.
- (E) The City Manager, or his designee, shall issue the exemption to the address of the residence being sought for exemption, unless the exemption is under revocation or denial as herein provided or the residence is determined to be ineligible for exemption under the standards hereof. No exemption granted under Section 27A-3.A(4) may be renewed so as to extend the exemption more than three years from the date of initial issuance or April 30, 1993, whichever is earlier.

- (F) An exemption shall permit solid fuel-fired heating devices to be operated during periods designated as air pollution alerts, air pollution warnings, air pollution emergencies and high pollution days.
- (G) Upon suspension or withdrawal of an exemption, it shall be the duty of the owner or resident of the residence having been issued an exemption to forthwith remove any sign or other marker having been issued by the City for attachment to the residence to display the status of exemption.
- (H) It shall be the duty of the resident or owner of the property for which the exemption has been issued to advise the City Manager, or his designee, of any change of condition or circumstance set forth in the application for exemption within thirty (30) days of such change. A determination shall be made whether the exemption shall be withdrawn due to ineligibility for exemption pursuant to the standards of this section.

Section 4. Violations and penalties.

Any person who shall violate any of the provisions of this Chapter shall, upon conviction, be fined a sum of not more than fifty dollars (\$50.00) for the first violation and not more than one hundred dollars (\$100.00) for each subsequent violation within any calendar year.

Section 5. Suspension, withdrawal and denial.

Any exemption granted hereunder may be revoked, withdrawn or denied upon personal service or mailing of a notice of suspension, withdrawal or denial submitted to the applicant for exemption, or resident of the residence if no exemption has been granted, for the following reasons:

(A) Suspension

(1) Reasons for suspension:

- a) Three (3) or more violations of this chapter within any calendar year.
- b) Any misstatement of fact in any application for exemption or renewal thereof.
- c) The refusal of the applicant for exemption to permit City law enforcement and code enforcement officials inspection of the heating devices and facilities at reasonable times to verify the information contained in any application for exemption or otherwise to determine

compliance with this chapter. Nothing herein shall restrict the City from seeking a search warrant from the Municipal court to enforce the provisions of this chapter against any residential property, whether holding an exemption or not.

d) Any other violation of the terms and requirements of this chapter.

(2) A notice of suspension shall be operative for one (1) year following the date the order becomes effective. Upon eligibility for reinstatement, the applicant shall fully be subject to the application standards set forth at 27A-3 hereof.

(B) Withdrawal

In the event that an exemption is ordered withdrawn pursuant to change of conditions brought to the attention of the City pursuant to 27A-3H hereof, such order of withdrawal shall remain in effect until the residence again becomes eligible for the issuance of an exemption. The applicant shall submit an application for reinstatement and shall have the burden to establish facts and circumstances which justify the reinstatement of exemption.

(C) Denial

If the resident or owner of a residence not having been issued an exemption hereunder has committed acts which would justify a suspension as set forth at Subsection A hereof, then the residence shall be subject to an order of denial, which shall be operative for one (1) year following the date the order becomes effective. At the expiration of such period, the resident or owner shall be reinstated to eligibility to apply for an exemption hereunder.

Section 6. Effective term.

This chapter shall remain in effect until April 30, 1993.

INTRODUCED, READ, PASSED on first reading, ordered posted in full, and title ordered published at a regular meeting of the City Council of the City of Thornton, Colorado, this 14th day of October, 1991.

PASSED AND ADOPTED on second and final reading this 28th day of October, 1991.

CITY OF THORNTON, COLORADO

Margaret W. Carpenter  
Margaret W. Carpenter, Mayor

ATTEST:

Nancy A. Wincent  
Nancy A. Wincent, City Clerk

THIS ORDINANCE IS ON FILE IN THE CITY CLERK'S OFFICE FOR PUBLIC INSPECTION.

APPROVED AS TO FORM:

Ken Duggan  
Thornton City Attorney

Posted in six (6) public places for ten (10) days after first and second reading.

Published in the Northglenn-Thornton Sentinel on October 17, 1991  
and on October 31, 1991.

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Thornton - Ordinance 2194

**Rule Title** .

**State Effective Date** 09/28/1992

**State Adoption Date** 09/28/1992

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 2194 - Thornton.pdf](#)

C.D. No. 92-145

ORDINANCE NO.: 2194  
INTRODUCED BY: Votruba

AN ORDINANCE AMENDING CHAPTER 44, SECTION 44-32 OF THE THORNTON MUNICIPAL CODE BY THE ADDITION OF NEW SUBSECTIONS I AND J, AND FURTHER AMENDING SECTION 44-36 BY THE ADDITION OF NEW SUBSECTIONS B AND C, PERTAINING TO CERTIFIED PHASE II SOLID FUEL BURNING DEVICE RESTRICTIONS FOR NEW CONSTRUCTION.

WHEREAS, the State of Colorado passed into law legislation that restricts the installation of conventional fireplaces in new or remodeled construction, and allow instead, installation of gas, pellet, electric or clean burning Phase III fire place inserts; and

WHEREAS, cities and counties in the Denver metro area are required, by January 1, 1993, to adopt conforming building code provisions that are substantially equivalent to the provisions of the new state laws; and

WHEREAS, it is the desire of the City Council to enhance the quality of life of the citizens of Thornton.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF THORNTON, COLORADO, AS FOLLOWS:

1. Section 44-32 of the Municipal Code is hereby amended by the addition of new Subsections I and J with words set forth in capital letters, to read as follows:

Section 44-32. The Uniform Building Code, 1988 Edition, adopted in the preceding section, is hereby amended as follows: (Section numbers refer to section numbers of the Uniform Building Code):

\* \* \*

I. § 3705.(a) is amended to read as follows:

Section 3705.(a) General. Factory-built chimneys and factory-built fireplaces shall be listed and shall be installed in accordance with the terms of their listings and the manufacturer's instructions as specified in the Mechanical Code. EVERY NEW OR REMODELED SOLID FUEL BURNING FACTORY BUILT FIREPLACE SHALL HAVE PERMANENTLY INSTALLED EITHER: (1) CERTIFIED NATURAL GAS LOGS OR FIREPLACE INSERTS; (2) A CERTIFIED ELECTRICAL DEVICE; (3) A CERTIFIED PHASE III FIREPLACE INSERT; OR (4)

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CERTIFIED PELLET STOVES OR INSERTS MEETING THE MOST STRINGENT EMISSION STANDARDS FOR WOOD STOVES ESTABLISHED UNDER STATE STATUTE AND/OR REGULATIONS PROMULGATED BY THE STATE AIR QUALITY CONTROL COMMISSION (AQCC) AS OF THE TIME OF INSTALLATION AND BE INSTALLED PER THE UNIFORM MECHANICAL CODE.

J. § 3707.(a) is amended to read as follows:

Section 3707.(a) General. Masonry fireplaces, barbecues, smoke chambers and fireplace chimneys shall be of masonry or reinforced concrete and shall conform to the requirements of this section. EVERY NEW OR REMODELED MASONRY FIREPLACE SHALL HAVE PERMANENTLY INSTALLED EITHER: (1) CERTIFIED NATURAL GAS LOGS OR FIREPLACE INSERTS; (2) A CERTIFIED ELECTRICAL DEVICE; (3) A CERTIFIED PHASE III FIREPLACE INSERT; OR (4) CERTIFIED PELLET STOVES OR INSERTS MEETING THE MOST STRINGENT EMISSION STANDARDS FOR WOOD STOVES ESTABLISHED UNDER STATE STATUTE AND/OR REGULATIONS PROMULGATED BY THE STATE AIR QUALITY CONTROL COMMISSION (AQCC) AS OF THE TIME OF INSTALLATION AND BE INSTALLED PER THE UNIFORM MECHANICAL CODE.

2. Section 44-36 of the Thornton Municipal Code is hereby amended by the addition of new subsections B and C with words set forth in capital letters, to read as follows:

Section 44-36. The Uniform Mechanical Code, 1988 Edition, adopted in the preceding section, is hereby amended as follows (section numbers refer to section numbers of the Uniform Mechanical Code):

\* \* \*

B. § 802 is amended to read as follows:

Sec. 802. Every vented decorative appliance, floor furnace, vented wall furnace, unit heater and room heater shall be of a type listed for vented use and shall be connected to a vent complying with Chapter 9, except as provided for in Section 807.

Every vented decorative appliance, floor furnace, vented wall furnace, unit heater and room heater shall be provided with combustion air complying with Chapter 6.

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A vented decorative appliance, floor furnace, vented wall furnace, unit heater or room heater shall not be located in any of the following places:

1. In any surgical operating room.
2. In any hazardous location.
3. In any Group H, Division 1, 2 or 3 Occupancy.
4. In any room or space where an open flame is prohibited.
5. In Group H, Division 4 Occupancies, devices generating a spark or glow capable of igniting gasoline vapors shall not be installed or used within 18 inches of the floor.
6. In any Group H, Division 5 Occupancy, and Group B, Division 3 Occupancy, unless the appliance is located at least 8 feet above the floor.

Overhead heaters installed in aircraft storage or servicing areas of Group B, Division 3 Occupancies shall be at least 10 feet above the upper surface of wings or engine enclosures of the tallest aircraft which may be housed in the hangar. Overhead heaters shall be at least 8 feet above the floor of shops, offices and other sections of hangars communicating with aircraft storage or working areas.

Vented decorative appliances, floor furnaces, vented wall furnaces, unit heaters and room heaters shall be installed so as to minimize the probability of damage from an external source.

EVERY NEW INSTALLATION OF A SOLID-BURNING VENTED DECORATIVE APPLIANCE OR ROOM HEATER SHALL MEET THE MOST STRINGENT EMISSION STANDARDS FOR WOOD STOVES ESTABLISHED UNDER STATE STATUTE AND/OR REGULATIONS PROMULGATED BY THE STATE AIR QUALITY CONTROL COMMISSION AS OF THE TIME OF INSTALLATION OF THE APPLIANCE OR ROOM HEATER.

C. § 803 is amended to read as follows:

Sec. 803. In addition to the general requirements specified in Section 802, every vented decorative appliance shall comply with the



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requirements specified for heating equipment and heating appliances of this code.

Approved gas logs may be installed only in solid-fuel-burning fireplaces, provided:

1. The gas log is installed only in accordance with the manufacturer's instructions.
2. If the fireplace is equipped with a damper, it shall be permanently blocked open to a sufficient amount to prevent spillage of combustion products into the room.
3. The minimum flue passageway shall be not less than 1 square inch per 2000 Btu/h input.
4. Gas logs when equipped with a pilot shall have a listed safety shutoff valve.
5. APPROVED NATURAL GAS LOGS SHALL BE INSTALLED IN NEW SOLID FUEL BURNING FIREPLACES WHEN REQUIRED BY SECTIONS 3705.(A) AND 3707.(A) OF THE UNIFORM BUILDING CODE, AS AMENDED.

INTRODUCED, READ, PASSED on first reading, ordered posted in full and title ordered published by the City Council of the City of Thornton, Colorado, this 14th day of September, 1992.

PASSED AND ADOPTED on second and final reading this 28th day of September, 1992.

CITY OF THORNTON, COLORADO

*Margaret W. Carpenter*  
Margaret W. Carpenter, Mayor

ATTEST:

*Nancy A. Vincent*  
Nancy A. Vincent, City Clerk

C.D. No. 92-145

THIS ORDINANCE IS ON FILE IN THE CITY CLERK'S OFFICE FOR PUBLIC INSPECTION.

APPROVED AS TO LEGAL FORM:

  
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Kevin Maggio, City Attorney

PUBLICATION:

Posted in six (6) public places after first and second readings.

Published in the Northglenn-Thornton Sentinel after first reading on  
September 17, 1992, and after second reading on  
October 1, 1992.

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Westminster - Ordinance 1742

**Rule Title** .

**State Effective Date** 11/09/1987

**State Adoption Date** 11/09/1987

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 1742 - Westminster.pdf](#)

BY AUTHORITY

ORDINANCE NO. 1742

COUNCILMAN'S BILL NO. 88

SERIES OF 1987

INTRODUCED BY COUNCILMEMBERS

Harris-Neil

A BILL

FOR AN ORDINANCE CONCERNING SOLID FUEL BURNING RESTRICTIONS

THE CITY OF WESTMINSTER ORDAINS:

Section 1. Title VI, Westminster Municipal Code, is amended by the addition of a new chapter to read:

6-14-1: LEGISLATIVE INTENT: The City Council finds and declares that the health, safety, and welfare of the citizens of Westminster are adversely affected by the degradation of the air quality within the City limits; and further, that solid fuel combustion produces particulate matter and carbon monoxide which is physically harmful, aesthetically unpleasant, and contributes to the degradation of the air quality. The City Council further declares that it is the responsibility of every person owning or operating a solid fuel-fired heating device to be aware of any declaration of a high pollution day issued by the Colorado Department of Health.

6-14-2: DEFINITIONS:

(A) "Barbecue device" means a device that is utilized solely for the purpose of cooking food.

(B) "High pollution day" means a period of time designated as a high pollution day by the Colorado Department of Health.

(C) "Operation" means the burning of solid fuel in a solid fuel-fired heating device.

(D) "Person" means any inhabitant, occupant or person or entity with legal possession of a structure.

(E) "Sole source of heat" means one or more solid fuel-fired heating devices which constitute the only source of heat in a structure for the purpose of space heating. A solid fuel-fired heating device shall be considered to be the sole source of heat when no other means of space heat is in place. A heating device that is disconnected from its energy source including, but not limited to, heating oil, natural gas, electricity or propane shall be considered to be in place. When the structure is not receiving the electric or natural gas service necessary for utilizing the heating device it shall not be considered in place.

(F) "Solid fuel" means a substance which is neither liquid nor gas.

(G) "Solid fuel-fired heating device" means a device designed for solid fuel combustion located within the interior of a structure and includes without limitation, solid fuel burning stoves, combination fuel furnaces or boilers which burn solid fuel, or any other devices used for the burning of solid fuel. Solid fuel-fired heating devices do not include barbecue devices.

**6-14-3: SOLID FUEL PROHIBITION:**

(A) It shall be unlawful for any person to have a solid fuel-fired heating device in operation during a high pollution day. It shall be an affirmative defense to a charge under this subsection (A) that a person has obtained an exemption pursuant to section 6-14-4.

(B) The Municipal Court Judge shall take judicial notice of any declaration of a high pollution day issued by the Colorado Department of Health.

(C) In order to allow a period for the burn down of existing fires, the Code Enforcement Officer shall wait three (3) hours after the commencement of a high pollution day before enforcing the provisions of subsection (A) of this section.

**6-14-4: EXEMPTION CRITERIA; PROCEDURE; DURATION.**

(A) A person may apply to the Department of Community Development to obtain a temporary certificate of exemption based on any of the following criteria:

1. Demonstration of economic need. A person may demonstrate economic need to use a solid fuel-fired heating device by demonstrating that he has been determined to be eligible for energy assistance under the Low Income Energy Assistance Program administered by either Adams or Jefferson County.

2. Sole source of heat. To obtain this exemption a person must demonstrate that the solid fuel-fired heating device is the sole source of heat.

3. Device meets emissions criteria. To obtain this exemption a person must demonstrate that the solid fuel-fired heating device meets the following criteria:

(a) When tested in accordance with the provisions of 500R 1001-8, Appendix A, Colorado Air Quality Control Commission Regulation Number 4, or by an equivalent test, the device emits particulates at a rate that is less than or equal to six and one tenth (6.1) grams per hour and emits carbon monoxide at a rate that is less than or equal to seventy-five (75) grams per hour; or

(b) When tested in accordance with the provisions of 500R 1001-8, Appendix B, Colorado Air Quality Control Commission Regulation Number 4, or by an equivalent test, the device emits particulates at a rate that is less than or equal to four and thirty-two hundredth (4.32) grams per hour and emits carbon monoxide at a rate that is less than or equal to seventy-five (75) grams per hour.

(B) The Department of Community Development shall establish procedures for the issuance of temporary certificates of exemption.

(C) An exemption obtained under this section shall be effective for one year from the date it is granted.

**6-14-6: ENFORCEMENT:** Any person found guilty of a violation of section 6-14-4(A) shall be punished by a fine of not less than Twenty-five Dollars (\$25.00) and not more than Three Hundred Dollars (\$300.00).

Section 2. 3-4-4(B), Westminster Municipal Code, is amended to read:

3-4-4: CODE ENFORCEMENT OFFICER:

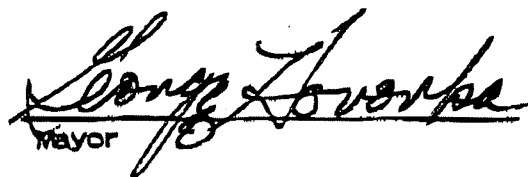
(B) It shall be the duty of the Code Enforcement Officer to enforce the provisions of Title IV; Chapters 1, 2, 3, 6, 7, 11 and 12 of Title V; Sections 5-9-1 and 5-9-2; Sections 5-10-2, 5-10-3, and 5-10-4; Sections 6-10-2, 6-10-3, 6-10-4, 6-13-4(C), and 6-13-5(C) AND 6-14-3(A); Chapters 3, 4, 5 and 7 of Title VIII, Title IX, Section 10-1-12; Title XI; Title XII; and Chapter 3 of Title XIII of this Code.

Section 3. This ordinance shall be effective ten (10) days following its enactment, and shall apply to acts committed on or after that date.

Section 4. Pursuant to sections 8.3 and 8.4 of the City Charter, the title and purpose of this ordinance shall be published prior to its consideration on second reading, and upon its enactment after second reading the full text of this ordinance shall be published prior to its effective date.

INTRODUCED, PASSED ON FIRST READING, AND TITLE AND PURPOSE ORDERED PUBLISHED this 12th day of October , 1987.

PASSED, ADOPTED ON SECOND READING, AND FULL TEXT ORDERED PUBLISHED this 9th day of November , 1987 as amended.

  
Mayor

ATTEST:

  
City Clerk

**State** Colorado

**State Agency** Department of Public Health and Environment

**Affected Area** Denver Metropolitan Area

**Regulation** Local Woodburning Ordinances

**Rule Number** Westminster - Ordinance 2092

**Rule Title** .

**State Effective Date** 12/28/1992

**State Adoption Date** 12/28/1992

**EPA Effective Date** 05/19/1997

**Notice of Final Rule Date** 04/17/1997

**Notice of Final Rule Citation** 62 FR 18716

**Comments**

Rule:



[Ordinance 2092 - Westminster.pdf](#)

BY AUTHORITY

ORDINANCE NO. 2092

COUNCILLOR'S BILL NO. 57

SERIES OF 1992

INTRODUCED BY COUNCILLORS

Harris - Asay

A BILL

FOR AN ORDINANCE TO TEMPORARILY WAIVE FEES AND USE TAX FOR THE CONVERSION OF EXISTING NON-CONFORMING SOLID FUEL BURNING DEVICES TO GAS, ELECTRIC, PHASE III OR DEVICES WITH EQUAL EMISSIONS REDUCTION AND RESTRICTING THE SALE AND INSTALLATION OF FIREPLACES IN DWELLING UNITS

THE CITY OF WESTMINSTER ORDAINS:

Section 1. Chapter 6 of Title 8 of the Westminster Municipal Code is amended BY THE ADDITION OF A NEW SECTIONS 13, 14, 15, 16 as follows:

8-6-13 LEGISLATIVE INTENT: The City Council finds and declares that air pollution is a threat to the health and welfare of Westminster citizens and that a major contributor to said pollution is wood smoke. The City Council further finds that new technologies can reduce pollution caused by woodburning and that the Colorado Air Quality Control Commission has established standards utilizing these new technologies for wood burning devices. Therefore, the City Council finds that it is necessary to implement restrictions to reduce wood smoke emissions from wood-burning devices and to encourage the use of less polluting devices by the prohibition of the sale, installation or remodeling of fireplaces which do not meet the standards of the new technology.

8-6-14 RESTRICTION ON FIREPLACE INSTALLATIONS:

(A) On and after January 1, 1993, any new or remodeled fireplace to be installed in any dwelling in the City shall be one of the following:

1. a gas appliance;
2. an electric device; or
3. a fireplace or fireplace insert that meets the most stringent emissions standards for wood stoves established by the Colorado Air Quality Control Commission, or any other clean burning device that is approved by the Commission.

8-6-15 RESTRICTION ON WOOD-BURNING DEVICES: On and after January 1, 1993, no used wood-burning device shall be sold or installed in the City unless such device meets the most stringent standards adopted by the Colorado Air Quality Control Commission.

8-6-16 CERTIFICATION REQUIRED: On or after January 1, 1993, no person shall install, offer to install, advertise to sell, offer to sell, or sell a new fireplace in the City unless:

(A) the particular model of the fireplace or the particular configuration of the fireplace has been certified by the Colorado Air Pollution Control Division; and

(B) an emission certification label is attached to the fireplace.

(C) Any person who installs or constructs any fireplace shall provide evidence of a certificate issued by the Colorado Air Pollution Control Division for such fireplace.



(D) Any person who constructs a site-built fireplace shall demonstrate compliance with the certificate, including an inspection by the Building Official of the fireplace after installation.

Section 2. Section 11-10-3 (E) Fees and Taxes shall be changed by the addition of the following exception to the end of Subsection 1.

Exception: The Building Official shall waive the permit fees and use tax for the conversion of existing non-conforming solid fuel burning devices to gas, electric, phase III, or devices meeting the most stringent emission standard for solid fuel burning devices established under state statutes and/or regulations promulgated by the Colorado Air Quality Control Commission, as demonstrated by a test by an E.P.A. accredited laboratory.

This exception shall be in effect for those devices purchased or installed from September 1, 1992 to August 31, 1993.

Section 2. This ordinance shall take effect upon its passage after second reading.

Section 3. The title and purpose of this ordinance shall be published prior to its consideration on second reading. The full text of this ordinance shall be published within ten (10) days after its enactment after second reading.

INTRODUCED, PASSED ON FIRST READING, AND TITLE AND PURPOSE ORDERED PUBLISHED this 14th day of December, 1992.

PASSED, ENACTED ON SECOND READING, AND FULL TEXT ORDERED PUBLISHED this 28th day of December, 1992.

ATTEST:

Nancy Heil  
Mayor

Michele Sallegos  
City Clerk

## **5CRR 1001-08 Regulation 6 Standards of Performance for New Stationary sources**

### IV. STANDARDS OF PERFORMANCE FOR NEW SOURCES OF SULFUR DIOXIDE

#### A. Applicability and Designation of Affected Facilities

The affected facilities to which the provisions of this Section apply are: natural gas desulfurization, petroleum refineries, production of oil from shale, refining of oil from shale, and any other new source of SO<sub>2</sub> specifically covered by other sections of this regulation.

#### B. Definitions

As used in this Section, all terms not defined herein shall have the meaning given them in the Common Provisions Regulation and in Section I. of this regulation.

#### C. Standards for Sulfur Dioxide

1. On and after the date on which the performance test required to be conducted by Section I. has been completed, no owner or operator subject to the provisions of this Section shall discharge or cause the discharge into the ambient air from natural gas desulfurization facilities, sulfur dioxide in excess of:

a. 2.0 lbs. SO<sub>2</sub>/1000 cubic feet of delivered natural gas, for sources emitting less than three (3) tons per day of SO<sub>2</sub>.

b. 0.8 lbs. SO<sub>2</sub>/1000 cubic feet of delivered natural gas, for sources emitting three or more tons per day of SO<sub>2</sub>.

2. On and after the date on which the required performance test has been completed, no owner or operator subject to the provisions of this Section shall discharge or cause the discharge into the ambient air from any petroleum refining facility, sulfur dioxide in excess of:

a. 0.3 lbs. sulfur dioxide for the sum of all SO<sub>2</sub> emissions from a given refining facility, per barrel of oil processed.

3. On and after the date on which the required performance test has been completed, no owner or operator subject to the provisions of this Section shall discharge or cause the discharge into the ambient air from the production of oil from shale, sulfur dioxide in excess of:

a. Facilities producing 1,000 or more barrels of oil per day:

(i) Standard. Shale oil production facilities shall employ Best Available Control Technology (BACT) (as determined by the Division after consultation with the Commission), but as provided in Section IV.C.3.a.(ii). In no event shall the total sulfur dioxide emissions from a production facility exceed 0.30 lbs SO<sub>2</sub> per barrel of oil produced.

(ii) Exemption. For shale oil production facilities which will employ combined modified in-situ retorting and above ground retorting and which meet all the following criteria, the standard shall be BACT (as determined by the Division after consultation with the Commission) with total daily SO<sub>2</sub> emissions not to exceed the emissions which would result from operation of the facility at design capacity (expressed in barrels of oil produced per stream day) multiplied by 0.3 lbs. SO<sub>2</sub> per barrel:

(A) The applicant must demonstrate that it intends and has the capability to construct and operate a shale oil production facility with the design capacity claimed in its permit application. If at any time the Division determines that the permitted facility is not constructed or does not have the capability to operate (except as is prohibited by the maximum emission limitation provided for in this exemption) to the design capacity stated in the permit application, the maximum allowable emissions shall be recalculated to a limitation equal to actual production capacity multiplied by 0.30 lbs. SO<sub>2</sub> per barrel; and the emission permits for such facility shall be amended to reflect such newly calculated emission limitation.

(B) Emission permit applications shall indicate whether the applicant is applying for exemption from the 0.3 lbs SO<sub>2</sub> per barrel emission limitation and the anticipated date of commencement of construction for the source of SO<sub>2</sub> emissions (i.e. each emission point or group of emission points at a shale oil production facility requiring a separate permit). With respect to any source of SO<sub>2</sub> emissions the construction of which is to be commenced more than two years after issuance of initial approval of the emission permit, the Division shall by permit conditions state a date certain by which the applicant shall submit data to the Division for review of the determination of BACT for such source. Failure of the applicant to meet the permit conditions requiring submittal of data shall be grounds for revocation in the initially approved permit. Nothing herein shall, however, be construed as prohibiting an applicant from making a timely application for an amendment to the terms and

conditions of an emission permit. The determination of BACT shall be reviewed by the Division and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of such source, unless this time period is waived or extended by mutual agreement of the Division and the applicant. At such time, the owner or operator of the stationary source may be required to demonstrate the adequacy of any previous determination of BACT for the source. Determination of the date of commencement of construction shall be on a source-by-source basis and construction of an individual source shall not be deemed to have commenced by reason of (1) commencement of construction of the overall shale oil production facility; (2) commencement of construction of components of the facility which will be used in common with more than one source (e.g., mine shafts); or (3) commencement of construction of components of the source which in no way limit what control technology may be applied (e.g., pouring of concrete pads well in advance of other construction). Acceptance of a permit so conditioned shall be deemed as an agreement that the applicant accepts the possibility that BACT might be revised for the source.

(C) Only applicants for sources locating in SO<sub>2</sub> attainment areas are eligible for this exemption. The exemption shall not be granted to any source locating in an SO<sub>2</sub> non-attainment area or unclassifiable area, nor to any source where the granting of such exemption would cause or contribute to a violation of the National Ambient Air Quality Standards or class increments for SO<sub>2</sub> as they exist on the effective date of this provision (March 30, 1981).

(D) The exemption is only from the requirement not to exceed the SO<sub>2</sub> emission limitation of 0.30 lbs./bbl. and in no way exempts any shale oil production facility from employing BACT, not violating the National Ambient Air Quality Standards (including class increments) for SO<sub>2</sub>, or otherwise meeting the applicable statutory and regulatory requirements for issuance of an emission permit.

(E) The above-ground retorting operations shall be commenced at the earliest practicable time.

(F) The exemption provided for herein shall be applicable only to the first eighteen (18) tons of SO<sub>2</sub> emissions from a shale oil production facility per day. Any SO<sub>2</sub> emissions in excess of eighteen (18) tons per day shall be subject to the provisions of Section IV.C.3.a.(i)

(G) For the purpose of this section:

(1) "design capacity" shall mean maximum production capability (expressed in barrels per day) on a stream day basis (24-hour operation period) of the applicant's proposed facility when fully constructed and operated in accordance with prudent utilization of the site and the oil shale resource, and taking into consideration the rated capacities of individual facility components, designed retorting efficiency of modified in-situ retorts, and other factors affecting production capability deemed appropriate by the Division. Even though the facility may be constructed in phases, its design capacity shall be deemed to be the total design capacity of all sources for which emission permits have been granted.

(2) "actual production capacity" shall mean the maximum production capability on a stream day basis of the permitted facility operated in accordance with prudent utilization of the site and oil shale resource and taking into consideration actual demonstrated capacities (including individual facility components), demonstrated modified in-situ retorting efficiency, and other factors affecting production capability deemed appropriate by the Division.

(3) "shale oil production facilities which employ in-situ retorting and surface retorting" shall mean shale oil production facilities which utilize both in-situ retorting and surface retorting to recover oil from oil shale with at least 20% of the shale processed being processed by surface retorting.

(H) Unless renewed by the Commission, the exemption provided for in Section IV.C.3.a.(ii) shall expire on July 1, 1992.

b. Facilities producing less than 1,000 barrels of oil per day:

There shall be no process emission standard for purposes of this regulation for sources processing less than 1000 barrels per day.

#### D. Test Methods and Procedures

The reference methods contained in Appendix A of this regulation shall be used to determine compliance with the standards prescribed in subsection C. as follows:

1. Method 1 for selecting sample site and velocity traverses.

2. Method 2 for velocity and volumetric flowrate.
3. Method 3 for gas analysis to be used when applying Method 6,  
and
4. Method 6 for concentration of SO<sub>2</sub>.

WRITTEN STATEMENTS OF THE BASIS AND PURPOSE OF THIS REGULATION AND REVISIONS HAVE BEEN PREPARED AND ADOPTED BY THE COMMISSION. THESE WRITTEN STATEMENTS HAVE BEEN INCORPORATED IN THIS REGULATION BY REFERENCE AND IN ACCORD WITH C.R.S. 1973, 24-4-103 AS AMENDED.



## DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

### Air Quality Control Commission

#### REGULATION NUMBER 7

### CONTROL OF OZONE VIA OZONE PRECURSORS AND CONTROL OF HYDROCARBONS VIA OIL AND GAS EMISSIONS (EMISSIONS OF VOLATILE ORGANIC COMPOUNDS AND NITROGEN OXIDES)

#### 5 CCR 1001-9

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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  - II.         General Provisions
- Appendix A   Colorado Ozone Nonattainment or Attainment Maintenance Areas
- PART B      Storage, Transfer, and Disposal of Volatile Organic Compounds and Petroleum Liquids and Petroleum Processing and Refining
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  - II.         Storage of Highly Volatile Organic Compounds
  - III.        Disposal of Volatile Organic Compounds
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<del>PART F</del>	<del>Statements of Basis, Specific Statutory Authority and Purpose</del>

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Pursuant to Colorado Revised Statutes Section 24-4-103 (12.5), materials incorporated by reference are available for public inspection during normal business hours, or copies may be obtained at a reasonable cost from the Air Quality Control Commission (the Commission), 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. The material incorporated by reference is also available through the United States Government Printing Office, online at [www.govinfo.gov](http://www.govinfo.gov). Materials incorporated by reference are those editions in existence as of the date indicated and do not include any later amendments.

**PART A      Applicability and General Provisions**

**I.      Applicability**

I.A.

I.A.1.   The provisions of this regulation shall apply as follows:



I.A.1.a. All provisions of this regulation apply to the Denver 1-hour ozone attainment/maintenance area, to any nonattainment area for the 1-hour ozone standard, and to the 8-hour Ozone Control Area.

~~I.A.1.b. (State Only) All provisions of this regulation apply to any ozone nonattainment area, which includes areas designated nonattainment for either the 1-hour or 8-hour ozone standard, unless otherwise specified in Section I.A.1.c. Colorado's ozone nonattainment or attainment maintenance area maps and chronologies of attainment status are identified in Appendix A of this regulation.~~

I.A.1.c. The provisions of Part B, Sections III., IV.B.1. and 2., V.C., and Part D, Sections II., III., IV., and V. apply statewide. The provisions of Part D, Sections II., III., and any other sections marked by (State Only) are not federally enforceable, unless otherwise identified.

I.A.2. REPEALED

I.A.3. REPEALED

I.B. Sources

I.B.1. New Sources

I.B.1.a. New sources, defined as any sources which either (1) submit a complete permit application on or after October 30, 1989, or (2) if no permit is required, commence operation on or after October 30, 1989, must comply with the provisions of this regulation upon commencement of operation.

~~I.B.1.b. (State Only) New sources are any sources which commenced construction on or after the date on which the area is first designated as being in nonattainment for ozone and are located in that area, or, if located in the 1-hour ozone nonattainment or attainment maintenance area, by October 30, 1989. New sources shall comply with the requirements of this regulation by whichever date comes later:~~

~~I.B.1.b.(i) (State Only) October 30, 1989, if they are located in what was previously designated as a 1-hour ozone nonattainment or attainment maintenance area;~~

~~I.B.1.b.(ii) (State Only) February 1, 2009, if they are located in an 8-Hour Ozone Control Area and outside of the 1-hour ozone nonattainment or attainment maintenance area; or~~

~~I.B.1.b.(iii) (State Only) Upon commencement of operation, if located within an ozone nonattainment or attainment maintenance area.~~

I.B.1.c. This Section I.B.1. does not apply to oil and gas operations subject to Part D, Section I., stationary and portable engines subject to Part E, Section I.A. through C., or natural gas actuated pneumatic controllers subject to Part D, Section III.

I.B.2. Existing Sources

I.B.2.a. Existing sources are (1) those sources for which a complete permit application was submitted prior to October 30, 1989, or (2) those sources, which commenced operation prior to October 30, 1989.

~~I.B.2.b. (State Only) Existing sources are those sources which commenced construction prior to the date on which the area is first designated as being in nonattainment for ozone and are located in that area, or, if located in the 1-hour ozone nonattainment or attainment maintenance area, by October 30, 1989.~~

I.B.2.c. Existing sources shall not be required to comply with requirements of this regulation until on and after October 30, 1991. All existing sources shall comply with the requirements set forth in Exhibit A until October 30, 1991.

~~I.B.2.d. (State Only) Existing sources shall be required to comply with requirements of this regulation by whichever date comes later:~~

~~I.B.2.d.(i) (State Only) October 30, 1989, if they are located in what was previously designated as a 1-hour ozone nonattainment or attainment maintenance area,~~

~~I.B.2.d.(ii) (State Only) February 1, 2009, if they are located in an 8-hour Ozone Control Area and outside of the Denver 1-hour ozone nonattainment or attainment maintenance area; or~~

~~I.B.2.d.(iii) (State Only) the date on which the area is first designated as being in nonattainment for ozone, if located within that ozone nonattainment or attainment maintenance area.~~

I.B.2.e. On and after October 30, 1991, all existing sources shall comply with the requirements of this regulation, and Exhibit A shall no longer be applicable.

I.B.2.f. Repealed.

I.B.2.g. Repealed.

I.B.2.h. This Section I.B.2. does not apply to oil and gas operations subject to Part D, Section I., or stationary and portable engines subject to Part E, Section I.A. through C.

I.C. Once a source subject to this regulation exceeds an applicable threshold limit, the requirements of this regulation are irrevocably effective unless the source obtains a federally enforceable permit limiting emissions to levels below the threshold limit by restricting production capacity or hours of operation.

I.D. The owner or operator of a source not required to obtain a permit by provisions of law other than this section may apply for and shall be required to accept a permit as a condition of avoiding RACT requirements. Such permits shall contain only those conditions necessary to ensure the enforcement of the production capacity or hours of operation.

## II. General Provisions

### II.A. Definitions

II.A.1. "8-Hour Ozone Control Area" means the Counties of Adams, Arapahoe, Boulder (includes part of Rocky Mountain National Park), Douglas, and Jefferson; the Cities and Counties of Denver and Broomfield; and the following portions of the Counties of Larimer and Weld:

- II.A.1.a. For Larimer County (includes part of Rocky Mountain National Park), that portion of the county that lies south of a line described as follows: Beginning at a point on Larimer County's eastern boundary and Weld County's western boundary intersected by 40 degrees, 42 minutes, and 47.1 seconds north latitude, proceed west to a point defined by the intersection of 40 degrees, 42 minutes, 47.1 seconds north latitude and 105 degrees, 29 minutes, and 40.0 seconds west longitude, thence proceed south on 105 degrees, 29 minutes, 40.0 seconds west longitude to the intersection with 40 degrees, 33 minutes and 17.4 seconds north latitude, thence proceed west on 40 degrees, 33 minutes, 17.4 seconds north latitude until this line intersects Larimer County's western boundary and Grand County's eastern boundary.
- II.A.1.b. For Weld County, that portion of the county that lies south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.
- II.A.2. "Denver 1-Hour Ozone Attainment/Maintenance Area" means the Counties of Jefferson and Douglas, the Cities and Counties of Denver and Broomfield, Boulder County (excluding Rocky Mountain National Park), Adams County west of Kiowa Creek, and Arapahoe County west of Kiowa Creek.
- II.A.3. "Capture System" means the equipment used to contain, capture, or transport a pollutant to a control device.
- II.A.4. "Capture System Efficiency (vapor gathering system efficiency)" means the percent by weight of VOC emitted by an operation subject to this regulation, which is captured by the capture system and sent to the control device; i.e.,  $(\text{mass flow of VOC captured})/(\text{mass flow of VOC emitted by the operation}) \times 100\%$ .
- II.A.5. "Carbon Adsorption System" means a device containing adsorbent material, an inlet and outlet for exhaust gases and a system to regenerate the saturated adsorbent.
- II.A.6. "Condenser" means any heat transfer device used to liquefy vapors by removing their latent heats of vaporization. Such devices include, but are not limited to, shell and tube, coil, surface, or contact condensers.
- II.A.7. "Control Device" means a carbon adsorber, refrigeration system, condenser, flare, firebox or other device, which will reduce the concentration of VOC in a gas stream by adsorption, combustion, condensation, or other means of removal.
- II.A.8. "Control Device Efficiency" means the percent removal by weight of VOC by a control device; i.e.,  $(\text{mass flow of VOC into control device} - \text{mass flow of VOC out of control device})/(\text{mass flow of VOC into control device}) \times 100\%$ .
- II.A.9. "Gasoline" means a petroleum distillate having a Reid vapor pressure between 208 and 1040 torr (4-20 psi), which is used as fuel for internal combustion engines.
- II.A.10. "Highly Volatile Organic Compound" is defined as a Volatile Organic Compound or mixture of such compounds with a true vapor pressure in excess of 570 torr (11 psia) at 20 C.

- II.A.11. "Organic Material" means a chemical compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.
- II.A.12. ~~(State Only) "Ozone Nonattainment Area" means any area designated as not in attainment with the ozone National Ambient Air Quality Standard as determined by the Environmental Protection Agency.~~
- II.A.13. "Petroleum Refinery" means any facility engaged in producing gasoline, aromatics, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt, or other products through distillation of petroleum or through redistillation, cracking, rearrangement or reforming of unfinished petroleum derivatives.
- II.A.14. "Reid Vapor Pressure" means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquefied petroleum gases as determined by the American Society for Testing and Materials, Part 17, 1973, D-323-72 (Reapproved 1977).
- II.A.15. "True Vapor Pressure" means the equilibrium partial pressure exerted by petroleum (or other) liquid. This may be determined by the methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss from Floating Roof Tanks," 1962.
- II.A.16. "Vapor Recovery System" means a system that prevents release to the atmosphere of organic compounds emitted during the operation of any transfer, storage, or processing equipment.
- II.A.17. "Volatile Organic Compound (VOC)" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions, except those listed in Section II.B. as having negligible photochemical reactivity. VOC may be measured by a reference method, an equivalent method, an alternative method, or by procedures specified under 40 CFR Part 60 (September 14, 1989). 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 Section II.B. when determining compliance with a standard if the amount of such compounds is accurately quantified, and such exclusion is approved by the Division. As a precondition to excluding such compounds as VOC, 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 negligible-reactive compounds in the source's emissions.

## II.B. Exemptions

Emissions of the organic compounds listed as having negligible photochemical reactivity in the common provisions definition of Negligibly Reactive Volatile Organic Compound are exempt from the provisions of this regulation. However, the hydrocarbon threshold in Part D, Section I.L. and natural gas emissions standards in Part D, Sections III.C.1. and III.C.2. are used as indicators for the volatile organic compound emission reduction measures in Part D, Sections I.L., III.C.1., and III.C.2., and are enforceable provisions of this regulation.

~~(State Only) Notwithstanding the foregoing exemption, hydrocarbon emissions from oil and gas operations, including methane and ethane, are subject to this regulation as set forth in Part D.~~

II.C. General Emission Limitation

II.C.1. Existing Sources ~~(State Only: Located in any Ozone Nonattainment Area or Attainment Maintenance Area)~~

II.C.1.a. All existing sources shall comply with the requirements set forth in this regulation.

II.C.1.a.(i) Existing sources of VOC which are not subject to specific emission limitations set forth in this regulation, and which have the potential to emit 100 tons per year or more of VOC, shall utilize Reasonably Available Control Technology (RACT).

II.C.1.a.(ii) The potential to emit of such sources shall be based on design capacity or maximum production rate, whichever is greater, 8760 hours/year operation, and before add-on controls.

II.C.1.a.(iii) Owners or operators of such sources with potential emissions of 100 tons per year or more, but with actual emissions less than 100 tons per year may obtain a federally enforceable permit limiting emissions to actual rates by restricting production capacity or hours of operation, thus avoiding RACT requirements.

The owner or operator of a source not required to obtain a permit by provisions of law other than this section may apply for and shall be required to accept a permit as a condition of avoiding RACT requirements. Such permits shall contain only those conditions necessary to ensure the enforcement of the production capacity or hours of operation.

II.C.1.a.(iv) Such sources with potential emissions of 100 tons per year or more but with actual emissions of less than 50 tons per year, on a rolling 12-month total, may avoid RACT and permit requirements if the following requirements are met:

II.C.1.a.(iv)(A) The owner or operator shall submit revised Air Pollutant Emission Notices (APENs) by April 1 of each year, which demonstrate that the 50 tons per year threshold has not been exceeded.

II.C.1.a.(iv)(B) The owner or operator shall maintain records on site which include monthly VOC use and monthly VOC emissions. The records shall include calculation of total emissions for each rolling 12-month period. The records shall be made available to the Division for inspection upon request.

II.C.1.a.(v) ~~(State Only) Existing sources that are modified—undergo any physical change, or changed in the method of operation of a stationary source which increase VOC or NO<sub>x</sub> emissions—on or after March 30, 2008, shall utilize RACT control technologies pursuant to Regulation Number 7 and Regulation Number 3, Part B, Section III.D.2. upon recommencing operation.~~

II.C.1.b. Provided however, that no existing source of VOC emissions employing emission controls on or within the six-month period preceding the effective date of this regulation may reduce its level of control of VOC emissions below that level of control actually achieved, even though such source may otherwise be subject to less stringent control requirements, except that no existing source shall be required to control emissions to an extent greater than that level of control which RACT would achieve.

II.C.1.c. (State Only) Existing sources with potential emissions equal to or greater than 100 tons per year of volatile organic compound emissions shall submit a permit modification application that includes a revised APEN (or APENs) and a RACT analysis, to the Division, as follows:

II.C.1.c.(i) (State Only) By October 30, 1991 if located in what was previously designated as the Denver 1-hour ozone nonattainment or attainment maintenance area; or

II.C.1.c.(ii) (State Only) By April 30, 2009 or within one year after the date on which the area is first designated as being in nonattainment for ozone, whichever comes later, if they are located in the 8-hour Ozone Control Area and outside of the Denver 1-hour ozone nonattainment or attainment maintenance area.

II.C.1.d. (State Only) Existing sources shall utilize RACT pursuant to Regulation Number 7 and Regulation Number 3, Part B, Section III.D.2., by whichever date comes later:

II.C.1.d.(i) (State Only) October 30, 1991, if they are located in what was previously designated as the Denver 1-hour ozone nonattainment or attainment maintenance area;

II.C.1.d.(ii) (State Only) November 21, 2011, if they are located in the 8-hour Ozone Control Area, and outside of the Denver 1-hour ozone nonattainment or attainment maintenance area;

II.C.1.d.(iii) (State Only) Three years after the date on which the area is first designated as being in nonattainment for ozone; or

II.C.1.d.(iv) (State Only) Two years after Division determination of case-by-case RACT pursuant to this Section II.C.1. The Division shall be deemed to have approved the RACT analysis for purposes of this Section II.C.1.d.(iv) if it does not object after eighteen months from having received a complete permit application.

## II.C.2. New Sources

All new sources shall utilize controls representing RACT, pursuant to Regulation Number 7 and Regulation Number 3, Part B, Section III.D., upon commencement of operation.

## II.D. Alternative Control Plans and Test Methods

II.D.1. Sources subject to specific requirements of this regulation shall submit for approval as a revision to the State Implementation Plan:

II.D.1.a. Any alternative emission control plan or compliance method other than control options specifically allowed in the applicable regulation. Such alternative control plans shall provide control equal to or greater than the emission control or reduction required by the regulation, unless the source contends that the control level required by the regulation does not represent RACT for their specific source.

II.D.1.b. Any alternative test method or procedure not specifically allowed in the applicable regulation.

II.D.2. No alternative submitted pursuant to this Section II.D. is effective until the alternative is approved as a revision to the State Implementation Plan.

II.E. REPEALED

II.F. Provisions for Specific Processes

II.F.1. The Gates Rubber Company Provision — REPEALED

**Appendix A Colorado Ozone Nonattainment or Attainment Maintenance Areas**

I. Chronology of Attainment Status

**Denver Metropolitan Area Only**

1978 Denver 1-hour Ozone Nonattainment Area designation first becomes effective in 7-county Denver Metropolitan Area

10/11/01 Denver 1-hour Ozone Attainment Maintenance Area designation replaces non-attainment designation and becomes effective in 7-county Denver Metropolitan Area

9/2/05 1-hour Ozone National Ambient Air Quality Standard is Revoked in Colorado except for the Denver 1-hour Ozone Attainment Maintenance Area.

**Denver Metropolitan Area and North Front Range**

10/11/01 1-hour attainment maintenance area replaces non-attainment designation for the Denver Metro Area/North Front Range Area

4/15/04 EPA designates the Denver Metro Area/North Front Range region as an 8-hour ozone non-attainment area, designation deferred due to the implementation of the Early Action Compact

11/20/07 Denver 8-hour ozone non-attainment designation becomes effective in 9 county Denver Metropolitan Area

**PART B Storage, Transfer, and Disposal of Volatile Organic Compounds and Petroleum Liquids and Petroleum Processing and Refining**

**I. General Requirements for Storage and Transfer of Volatile Organic Compounds**

**I.A. Maintenance and Operation of Storage Tanks and Related Equipment**

All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing and monitoring shall be conducted as in Part B, Section VI.C.3.



I.B. Transfer (excluding Petroleum Liquids)

Except as otherwise provided in this regulation, all volatile organic compounds transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

I.C. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 psia actual conditions are exempt from the provisions of Section I.B.

**II. Storage of Highly Volatile Organic Compounds**

II.A. Highly volatile organic compounds shall be stored:

II.A.1. In a pressure tank which is at all times capable of maintaining working pressures sufficient to prevent vapor loss to the ambient air; or

II.A.2. With methods and/or equipment approved by the Division in writing pursuant to the request of the person owning or operating the storage facility.

II.B. Vapor loss shall be determined visually, by presence of frost or condensation at the point of leakage, or using a portable hydrocarbon analyzer. When an analyzer is used, vapor loss means a VOC concentration exceeding 10,000 ppm and testing and monitoring procedures shall be conducted as in Part B, Section VI.C.3.

**III. Disposal of Volatile Organic Compounds**

III.A. No person shall dispose of volatile organic compounds by evaporation or spillage unless RACT is utilized.

III.B. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Part B, Sections IV.C.2., IV.C.3. and VII.A.3., shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

**IV. Storage and Transfer of Petroleum Liquid**

IV.A. General Requirements

IV.A.1. No person shall build, install, or permit the building or installation of any rotating pump or compressor handling any type of petroleum liquid unless said pump or compressor is equipped with mechanical seals or other equipment of equal efficiency. If reciprocating-type pumps and compressors are used, they shall be equipped with packing glands properly installed, in good working order, and properly maintained so that no detectable emissions occur from the drain recovery systems.

IV.A.2. Definitions

For the purpose of this section, the following definitions apply:

IV.A.2.a. Repealed.

- IV.A.2.b. "Crude Oil" means a naturally occurring mixture which consists of hydrocarbons, sulfur, nitrogen or oxygen derivatives of hydrocarbons, and which is a liquid at standard conditions.
- IV.A.2.c. "Custody Transfer" means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.
- IV.A.2.d. "EFR Tank" means a storage vessel having an external floating roof.
- IV.A.2.e. "External Floating Roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.
- IV.A.2.f. "Liquid-Mounted Seal" means a primary seal mounted in continuous contact with the contained liquid and which occupies an annular space between the inner tank wall and the perimeter of the floating roof.
- IV.A.2.g. "Petroleum Liquid" means crude oil, condensate and any finished or intermediate product manufactured or extracted in a petroleum refinery.
- IV.A.2.h. "Shoe Seal" means a primary seal employing a metallic band (called a shoe) which is held against the vertical inner-wall of the tank, concentric with the perimeter of the floating roof.
- IV.A.2.i. "Vapor Balance System" means a combination of pipes or hoses that 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.
- IV.A.2.j. "Vapor Collection System" means a vapor transport system which uses direct displacement by the gasoline being transferred to force vapors from the vessel being loaded into either a vessel being unloaded or a vapor holding tank.
- IV.A.2.k. "Vapor-Mounted Seal" means a primary seal mounted so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the liquid surface, the floating roof, and the tank wall (thus excluding shoe seals).
- IV.A.2.l. "Waxy, Heavy Pour Crude Oil" means a crude oil with a pour point of 10°C (50°F) or higher as determined by the American Society for Testing and Materials Standard D97-66, "Test for Pour Point of Petroleum Oils."

#### IV.B. Storage of Petroleum Liquid

##### IV.B.1. Exemptions

- IV.B.1.a. Tanks or other containers used to store the following liquids are exempt from the provisions of Sections IV.B.2. and IV.B.3.:
- IV.B.1.a.(i) Diesel Fuels 1-D, 2-D, and 4-D as defined in ASTM D975-78.
- IV.B.1.a.(ii) Fuel Oils #1, #2, #3, #4, and #5, as defined in ASTM D396-78.

- IV.B.1.a.(iii) Gas Turbine Fuels 1-GT through 4-GT as defined in ASTM D2880-78.
- IV.B.1.b. The following underground storage facilities are exempt from Section IV.B.2.:
  - IV.B.1.b.(i) Underground tanks if the annual sum total of the volume of liquid removed from the tank plus the sum of the volume of liquid added to it does not exceed twice the operational volume of the tank (i.e., a maximum of one turnover per year is allowed).
  - IV.B.1.b.(ii) Subsurface caverns or porous rock reservoirs.
  - IV.B.1.b.(iii) Horizontal underground tanks storing JP-4 Jet Fuel.
- IV.B.2. Storage of petroleum liquid in tanks greater than 151,412 liters (40,000 gallons)
  - IV.B.2.a. Storage of petroleum liquid in fixed-roof tanks.
    - IV.B.2.a.(i) The owner or operator of a fixed-roof tank used for storage of petroleum liquids which have a true vapor pressure greater than 33.6 torr (0.65 psia) at 20°C (or, alternatively, a Reid vapor pressure greater than 1.30 pounds - (67.2 torr) but not greater than 570 torr (11.0 psia) at 20°C, and which are stored in any tank or other container of more than 151,412 liters (40,000 gallons) shall ensure that the tank at all times meets the following conditions:
      - IV.B.2.a.(i)(A) The tank has been equipped with a pontoon-type, or double-deck type, floating roof or an internal floating cover which rests on the surface of the liquid contents and which is equipped with a closure seal or seals to close the space between the edge of the floating roof (or cover) and tank walls; or
      - IV.B.2.a.(i)(B) The tank has been equipped with a vapor gathering system capable of collecting the petroleum liquid vapors discharged, together with a vapor recovery or disposal system capable of processing such vapors so as to prevent their emission into the atmosphere.
      - IV.B.2.a.(i)(C) Control devices shall meet the applicable requirements, including recordkeeping, of Part C, Sections III.A.3.a., b., c., and e., and III.A.8.a. and b.
      - IV.B.2.a.(i)(D) The applicable EPA reference methods 1 through 4, and 25, of 40 CFR Part 60 (September 14, 1989) shall be used to determine the efficiency of control devices.
      - IV.B.2.a.(i)(E) The owner or operator shall maintain records for at least two years of the type, average monthly storage temperature, and true vapor pressure of all petroleum liquids stored in tanks not equipped with an internal floating roof or cover or other control pursuant to Regulation Number 7, Sections IV.B.2.a.(i)(A) or IV.B.2.a.(i)(B) or Part A, Section II.D.

- IV.B.2.a.(ii) No owner or operator of a fixed-roof tank equipped with an internal floating roof or cover shall permit the use of such tank unless:
  - IV.B.2.a.(ii)(A) The tank is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and
  - IV.B.2.a.(ii)(B) All openings, except stub drains, are equipped with covers, lids, or seals such that:
    - IV.B.2.a.(ii)(B)(1) The cover, lid, or seal is in the closed position at all times except when in actual use;
    - IV.B.2.a.(ii)(B)(2) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
    - IV.B.2.a.(ii)(B)(3) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
- IV.B.2.a.(iii) The operator of a fixed-roof tank equipped with an internal floating roof shall:
  - IV.B.2.a.(iii)(A) Perform a routine inspection through the tank roof hatches at least once every six months;
    - IV.B.2.a.(iii)(A)(1) During the routine inspection, the operator shall measure for detectable vapor loss inside the hatch. Detectable vapor loss means a VOC concentration exceeding 10,000 ppm, using a portable hydrocarbon analyzer.
  - IV.B.2.a.(iii)(B) Perform a complete inspection of the cover and seal whenever the tank is out of service, whenever the routine inspection required in Section IV.B.2.a.(iii)(A) reveals detectable vapor loss, and at least once every ten years, and shall notify the Division in writing before such an inspection.

IV.B.2.a.(iii)(C) Ensure during inspections that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; that the cover is floating uniformly on or above the liquid surface; that there are no visible defects in the surface of the cover or liquid accumulated on the cover; and that the seal is uniformly in place around the circumference of the cover between the cover and the tank wall. If these items are not met, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this section cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Division in writing. Such a request must document that alternative storage capacity is unavailable and specify a schedule of actions the owner or operator will take that will assure that the items will be repaired or the vessel will be emptied as soon as possible;

IV.B.2.a.(iii)(D) Maintain records for at least two years of the results of all inspections.

IV.B.2.b. Above ground storage tanks used for the storage of petroleum liquid shall have all external surfaces coated with a material which has a reflectivity for solar radiation of 0.7 or more. Methods A or B of ASTM E424 shall be used to determine reflectivity. Alternatively, any untinted white paint may be used which is specified by the manufacturer for such use.

This provision shall not apply to written symbols or logograms applied to the external surface of the container for purposes of identification provided such symbols do not cover more than 20% of the exposed top and side surface area of the container or more than 18.6 square meters (200 square feet), whichever is less.

IV.B.2.c. Seals on External Floating Roof Tanks

IV.B.2.c.(i) General Provisions

IV.B.2.c.(i)(A) Applicability

This section applies to all petroleum liquid storage vessels equipped with external floating roofs, having capacities greater than 150,000 liters (40,000 gallons) that are located in ozone nonattainment areas.

IV.B.2.c.(i)(B) Exemptions

IV.B.2.c.(i)(B)(1) Total Exemption

The following categories of EFR tanks are exempt from the requirement of Section IV.B.2.c., except for the applicable recordkeeping requirements of Section IV.B.2.c.(ii)(C).

IV.B.2.c.(i)(B)(1)(a) EFR tanks which store any material whose true vapor pressure as stored never exceeds 67 torr (1.3 psia).

IV.B.2.c.(i)(B)(1)(b) Tanks less than 1,600,000 liters (10,000 barrels) which are used to store crude oil and condensate prior to custody transfer.

IV.B.2.c.(i)(B)(2) Limited Exemptions

The following are exempt from both secondary seal and secondary seal inspection requirements but shall meet the equipment/procedure provisions in Section IV.B.2.c.(ii)(A)(1), the semi-annual inspection provisions of Section IV.B.2.c.(ii)(B), and the record keeping provisions of Section IV.B.2.c.(ii)(C).

IV.B.2.c.(i)(B)(2)(a) Those tanks storing petroleum liquid between 67 and 207 torr (1.3 to 4.0 psia) maximum true vapor pressure (as stored) which are of welded construction and which have one of the following primary seals:

IV.B.2.c.(i)(B)(2)(a)(I) metallic shoe seal

IV.B.2.c.(i)(B)(2)(a)(II) liquid mounted, resilient seal

IV.B.2.c.(i)(B)(2)(a)(III) liquid mounted, liquid filled seal

IV.B.2.c.(i)(B)(2)(b) Any tank storing waxy, heavy-pour crude oil.

IV.B.2.c.(ii) General Requirements

IV.B.2.c.(ii)(A) An operator of an EFR tank storing petroleum liquids with true vapor pressure (as stored) above 67 torr (1.3 psia) shall equip the tank as follows and observe the following procedures:

IV.B.2.c.(ii)(A)(1) Equipment

IV.B.2.c.(ii)(A)(1)(a) Drains: roof drains which are designed to empty directly into the stored product shall be provided with slotted-membrane fabric covers or equivalent covers which cover at least 90 percent of the area of the opening.

IV.B.2.c.(ii)(A)(1)(b) Openings: except for automatic bleeder vents, rim space vents, and leg sleeves, all openings shall be equipped with:

IV.B.2.c.(ii)(A)(1)(b)(I) Projections into the tank which remain below the liquid surface at all times; and

IV.B.2.c.(ii)(A)(1)(b)(II) Covers, seals, or lids.

IV.B.2.c.(ii)(A)(2) Procedures

IV.B.2.c.(ii)(A)(2)(a) Covers, seals and lids shall be kept closed except when the openings are in actual use.

IV.B.2.c.(ii)(A)(2)(b) Automatic bleeder vents shall be kept closed at all times except when the roof is floated off or landed on roof leg supports.

IV.B.2.c.(ii)(A)(2)(c) Rim vents shall be set to open at the manufacturer's recommended setting or, alternatively, only when the roof is being floated off the leg supports.

IV.B.2.c.(ii)(B) Inspections

The operator of an EFR tank subject to this Section IV.B.2.c. shall:

IV.B.2.c.(ii)(B)(1) Perform routine inspections at least once every six months in order to ensure compliance with Section IV.B.2.c.(ii)(B)(2). The inspections shall include a visual inspection of the secondary seal gap if equipped with a secondary seal.

IV.B.2.c.(ii)(B)(2) Ensure that all seal closure devices meet the following requirements:

IV.B.2.c.(ii)(B)(2)(a) There are no visible holes, tears, or other openings in the seal(s) or seal fabric; and

IV.B.2.c.(ii)(B)(2)(b) The seal(s) are intact and uniformly in place around the circumference of the floating roof and the tank wall.

IV.B.2.c.(ii)(C) Records

IV.B.2.c.(ii)(C)(1) Operators shall:

IV.B.2.c.(ii)(C)(1)(a) Maintain records of the average monthly storage temperature, the Reid vapor pressure of the liquid and the type of liquid stored for all EFR tanks lacking secondary seals and receiving petroleum liquids with a true vapor pressure of 1.0 psi (7.0kPa) or greater; and

IV.B.2.c.(ii)(C)(1)(b) Maintain records of the results of the inspections required herein.

IV.B.2.c.(ii)(C)(2) Copies of all records specified by this Section IV.B.2.c.(ii)(C) shall be retained by the operator for a minimum of two years after the date on which the record was made.

IV.B.2.c.(iii) Secondary Seal Requirements

IV.B.2.c.(iii)(A) General

No owner or operator of an EFR tank (storing petroleum liquids) not specifically exempted in Section IV.B.2.c.(i)(B) shall store that petroleum liquid unless such vessel is equipped with a continuous secondary seal extending from the rim of the floating roof to the tank wall (i.e., a rim-mounted secondary seal).

IV.B.2.c.(iii)(B) Vapor-Mounted Seals

For EFR tanks required to have a secondary seal and which have a vapor-mounted primary seal:

IV.B.2.c.(iii)(B)(1) An annual inspection shall be made of the total gap area between the secondary seal and the wall of the tank in accordance with the method in IV.B.2.c.(iii)(B)(3).

IV.B.2.c.(iii)(B)(2) This total gap area shall not exceed 21.2 cm<sup>2</sup>/meter diameter (1.0 in<sup>2</sup>/ft. diameter).

IV.B.2.c.(iii)(B)(3) Method to determine gap area:

IV.B.2.c.(iii)(B)(3)(a) Physically measure the length and width of all gaps around the entire circumference of the secondary seal in each place where a 0.32 cm (1/8 in.) uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and the tank wall; and,

IV.B.2.c.(iii)(B)(3)(b) Sum the area of the individual gaps.

IV.B.3. Storage of petroleum liquid in tanks of or less than 151,412 liters (40,000 gallons) capacity

IV.B.3.a. Tanks or containers used to store liquids with true vapor pressure at 20°C of less than 78 torr (1.5 psia) or greater than 570 torr (11.0 psia) at 20°C are exempt from the provisions of this Section IV.B.3.

IV.B.3.b. The owner or operator of storage tanks at a gasoline dispensing facility (service station) or other facility not addressed in Sections IV.C.2. or IV.C.3., which receives and stores petroleum liquid, shall not allow the transfer of petroleum liquid from any delivery vessel into any tank unless the tank is equipped with a submerged fill pipe and all vapors displaced from the storage tank are transferred to the delivery vessel being unloaded using a properly maintained, functioning, and leak-tight vapor collection system, as in accordance with applicable provisions of Appendix B and Section VII., if the tank:

IV.B.3.b.(i) Has a rated manufacturer's capacity of 2,082 liters (550 gallons) or more and was installed after November 7, 1973, (except for storage tanks below 550 gallon capacity used exclusively for agricultural use; however, these must have a submerged fill pipe), or

IV.B.3.b.(ii) Has a rated manufacturer's capacity of 7,571 liters (2,000 gallons) or more and was installed before November 7, 1973.



- IV.B.3.c. Tanks equipped with a submerged fill pipe shall meet the specifications of Appendix B.
- IV.B.3.d. The owner or operator of storage tanks at a gasoline dispensing facility must install and operate one or more of the following
- IV.B.3.d.(i) A vapor collection system designed and operated in accordance with a vapor-tight line from the storage tank to delivery vessel.
- IV.B.3.d.(ii) A refrigerator-condensation system or equivalent designed to recover at least 90 percent by weight of the organic compounds in the displaced vapor.
- IV.B.3.e. The owner or operator shall ensure that operating procedures are used so that gasoline cannot be transferred into the tank unless the vapor collection system is installed and operated to ensure the system is leak-tight during gasoline transfer.
- IV.B.3.f. The vapor collection system shall meet the specifications of Appendix B and applicable requirements of Section VII.
- IV.B.3.g. Control devices shall meet the applicable requirements, including recordkeeping, of Part C, Sections I.A.3.a., b., c., and e., and I.A.8.a. and b.
- IV.B.3.h. The applicable EPA reference methods 1 through 4, and 25, of 40 CFR Part 60 (September 14, 1989) shall be used to determine the efficiency of control devices.

IV.C. Transfer of Petroleum Liquid

IV.C.1. Exemptions

Transfer operations involving petroleum liquid with true vapor pressures at 20°C of less than 78 torr (1.5 psia) or greater than 570 torr (11.0 psia) shall be exempt from the provisions of this Section IV.C.

IV.C.2. Loading Facilities Classified as Terminals

- IV.C.2.a. A terminal is defined as a petroleum liquid storage and distribution facility that has an average daily throughput of more than 76,000 liters of gasoline (20,000 gallons), which is loaded directly into transport vehicles. A rolling, 30-day average of throughput shall be used to determine the applicability of this Section IV.C.2.
- IV.C.2.b. The owner or operator of a terminal subject to this section shall equip the terminal with proper loading equipment and shall follow the loading procedures listed:
- IV.C.2.b.(i) Install dry-break loading couplings to prevent petroleum liquid loss during uncoupling from vehicles.
- IV.C.2.b.(ii) Install a vapor collection and disposal system which gathers vapor transferred from vehicles being loaded. The system shall include devices to prevent the release of vapor from vapor recovery hoses not in use.

- IV.C.2.b.(iii) Use operating procedures to ensure that petroleum liquid cannot be transferred unless the vapor collection equipment is in use.
- IV.C.2.b.(iv) Provide for the prevention of overfilling of transport vehicles with loading pump shut-offs, set stop meters, or comparable equipment.
- IV.C.2.b.(v) Operate all recovery and disposal equipment at a back pressure less than the pressure relief valve setting of transport vehicles.
- IV.C.2.b.(vi) Prevent the release of petroleum liquid on the ground from transport vehicles. Provision shall be made to remove any undelivered petroleum liquid with closed drainage devices.
- IV.C.2.b.(vii) Maintain and operate final recovery and disposal equipment or control devices so as to emit no more than 80 milligrams of volatile organic compounds per liter of gasoline being loaded. Such disposal devices shall be approved by the Division.
- IV.C.2.b.(viii) Prevent loading of petroleum liquid into transport vehicles which do not have valid leak-tight test certification as required in Section IV.D.
- IV.C.2.b.(ix) Follow all control procedures to prevent leaks as specified in Section VII.

IV.C.2.c. Control devices shall meet the applicable requirements, including recordkeeping of Part C, Sections I.A.3.a., b., c., and e., and I.A.8.a. and b.

IV.C.2.d. The applicable methods of 40 CFR 60. 503 (September 14, 1989), or EPA reference methods 1 through 4, 25A, and 25B of 40 CFR Part 60 (September 14, 1989) shall be used to determine the efficiency of control devices.

IV.C.2.e. The method set forth in Appendix A of "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals" October 1977, EPA-450/2-77-026 shall be used to test emission points other than control devices.

#### IV.C.3. Loading Facilities Classified as Bulk Plants

IV.C.3.a. A bulk plant is defined as a petroleum liquid storage and distribution facility that has an average daily throughput of 76,000 liters of gasoline (20,000 gallons) or less, which is loaded directly into transport trucks. (As used herein, "bulk plant" does not include service stations nor separate operations within petroleum liquid distribution facilities which pump only into fuel tanks fueling motor vehicles. Both such operations are regulated by Section IV.B.3.) A rolling 30-day average of throughput shall be used to determine the applicability of this regulation.

IV.C.3.b. The owner or operator of a bulk storage plant subject to this section shall install a vapor balance system to return vapors to the incoming transport trucks during the filling of tanks controlled under Section IV.B.3. The vapor balance system must be designed and operated in accord with the provisions of Appendix C.)

IV.C.3.c. The owner or operator of a bulk plant which serves storage tanks which are required to collect and recover vapor as prescribed in Section IV.B.3. shall:

IV.C.3.c.(i) Install and operate vapor collection and return equipment on any transport vehicles used to deliver to controlled tanks, and

IV.C.3.c.(ii) Install and operate vapor collection and return equipment at loading facilities to collect vapors during loading of tank compartments of outbound transport trucks and return these vapors to the bulk plant storage tanks, using a vapor balance system.

IV.C.3.c.(iii) Assure that transport trucks and loading facilities conform to the applicable provisions of Sections IV.C.2. and IV.C.4.

IV.C.3.d. The owner or operator of a bulk plant which serves only storage tanks exempted from the provisions of Section IV.B.3.b. by reason of their small size or location in an attainment area shall load outbound transport trucks using equipment that provides for top loading of the petroleum liquid into the vehicle tank compartments through an extended fill tube which reaches within 15.24 cm (6 in.) of the bottom of the tank compartment.

IV.C.3.e. The owner or operator of a bulk plant subject to this section shall ensure that petroleum liquid cannot be transferred unless the vapor collection equipment is in use.

IV.C.3.f. The owner or operator of a bulk plant subject to this section shall follow all procedures to prevent leaks as specified in Section VII.

#### IV.C.4. Transport Vehicles

IV.C.4.a. Rail cars shall be loaded only at facilities which allow for the following:

IV.C.4.a.(i) A submerged fill pipe which reaches within 15.24 cm (6 in.) of the bottom of the tank.

IV.C.4.a.(ii) Vapor collection and/or disposal equipment designated and operated to recover vapors displaced during the loading of the rail car.

IV.C.4.a.(iii) A vapor-tight seal around the tank car hatch and the loading equipment.

IV.C.4.b. The owner or operator of petroleum transport trucks which serve locations required to be equipped with vapor recovery equipment shall load only at facilities capable of disposing of collected vapors. The owner or operator shall assure that such vehicles possess the proper equipment and that work practices are followed so that:

IV.C.4.b.(i) Dry-break loading and unloading nozzles are used and are compatible with those required at loading facilities.

IV.C.4.b.(ii) Vapor recovery hoses are connected at all times during unloading or loading of petroleum distillate.

IV.C.4.b.(iii) Transport trailers and vehicle tanks are operated and maintained to prevent detectable hydrocarbon vapor loss during loading, transport and delivery.

IV.C.4.b.(iv) Compartment dome lids are closed and locked during transfers of petroleum liquid. Such lids may be opened for the purpose of certifying the accuracy of a delivery only prior to and after such delivery.

IV.C.4.b.(v) Hoses, couplings, and valves are maintained to prevent dripping, leaking, or other liquid or vapor loss during loading or unloading.

#### IV.D. Control of Volatile Organic Compound Leaks from Gasoline Transport Trucks

##### IV.D.1. General Provisions

###### IV.D.1.a. Applicability

This section is applicable to all gasoline transport trucks equipped for gasoline vapor collection which receive or dispense gasoline at terminals, bulk plants, or gasoline dispensing facilities located in the nonattainment areas.

###### IV.D.1.b. Definitions

For the purpose of this section, the following definitions apply:

IV.D.1.b.(i) "Gasoline Transport Truck" means a tank truck or tank trailer equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities (e.g., service stations), bulk gasoline plants, or gasoline terminals.

IV.D.1.b.(ii) "Vapor Collection System" means a vapor transport system which uses direct displacement by the gasoline being transferred to force vapors from the vessel being loaded into a vessel being unloaded or into a vapor holding tank.

##### IV.D.2. Provisions for Specific Processes

IV.D.2.a. No terminal operator, when monitoring the gasoline loading operation and no owner or operator of a gasoline transport truck shall allow a gasoline transport truck subject to this Section IV.D. to be filled with a VOC with Reid Vapor Pressure of 4.0 or greater unless the gasoline tank truck:

IV.D.2.a.(i) Is tested annually according to the test procedure in EPA Method 27 (40 CFR Part 60, Appendix A-8) (October 17, 2000). Testing must be completed prior to the onset of the summer ozone season (test October through April). In addition, a visual inspection, as detailed in Section IV.D.3.b. , must be performed at least once every six months.

IV.D.2.a.(i)(A) The test must be conducted using a time period (t) for the pressure and vacuum tests of 5 minutes.

IV.D.2.a.(i)(B) The initial pressure ( $P_i$ ) for the pressure test must be 460 mm H<sub>2</sub>O (18 in. H<sub>2</sub>O), gauge.

IV.D.2.a.(i)(C) The initial vacuum ( $V_i$ ) for the vacuum test must be 150 mm H<sub>2</sub>O (6 in. H<sub>2</sub>O), gauge.

IV.D.2.a.(i)(D) The maximum allowable pressure and vacuum changes must not exceed the values in Table 1.

IV.D.2.a.(i)(E) After completing the tests under Sections IV.D.2.a.(i)(A) through (D), the tank's internal vapor valve must be pressure tested.

IV.D.2.a.(i)(E)(1) Use the procedures in EPA Method 27 (40 CFR Part 60, Appendix A-8) (October 17, 2000) to repressurize the tank to 460 mm H<sub>2</sub>O (18 in. H<sub>2</sub>O), gauge.

IV.D.2.a.(i)(E)(2) Close the tank's internal vapor valve(s), thereby isolating the vapor return line and manifold from the tank.

IV.D.2.a.(i)(E)(3) Relieve the pressure in the vapor return line to atmospheric pressure, then reseal the line.

IV.D.2.a.(i)(E)(4) After 5 minutes, record the gauge pressure in the vapor return line and manifold. The maximum allowable 5-minute pressure increase is 130 mm H<sub>2</sub>O (5 in. H<sub>2</sub>O).

Cargo tank or compartment capacity, liters (gal)	Annual certification-allowable pressure or vacuum change in 5 minutes, mm H <sub>2</sub> O (in. H <sub>2</sub> O)	Allowable pressure change in 5 minutes at any time, mm H <sub>2</sub> O (in. H <sub>2</sub> O)
9,464 or more (2,500 or more)	25 (1.0)	64 (2.5)
9,463 to 5,678 (2,499 to 1,500)	38 (1.5)	76 (3.0)
5,679 to 3,785 (1,499 to 1,000)	51 (2.0)	89 (3.5)
3,782 or less (999 or less)	64 (2.5)	102 (4.0)

IV.D.2.a.(ii) Passes a retest within twenty (20) days if it does not meet the criteria of Section IV.D.2.a.(i).

IV.D.2.b. Monitoring

IV.D.2.b.(i) The Division may, at any time, monitor a gasoline tank truck vapor collection system to confirm continued compliance with Section IV.D.2.a.

IV.D.2.b.(ii) Within fifteen (15) days after an exceedance is detected a tank shall pass a pressure/vacuum test per EPA Method 27 (40 CFR Part 60, Appendix A-8 (October 17, 2000)).

IV.D.3. Testing and Monitoring

IV.D.3.a. The owner or operator of a gasoline transport truck shall at their own expense, demonstrate compliance with Section IV.D.2, by methods of EPA Method 27 (40 CFR Part 60, Appendix A-8) (October 17, 2000). All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing or gasoline transport truck maintenance.

IV.D.3.b. The owner or operator of a gasoline transport truck must conduct a visual inspection of the gasoline transport truck at least once every six months. The entire tank, including domes, dome vents, cargo tank, piping, hose connections, hoses and delivery elbows, must be inspected for wear, damage, or misadjustment that could be a potential leak source. Inspect all rubber fittings except those in piping which are not accessible. Any part found to be defective must be adjusted, repaired, or replaced as necessary.

IV.D.4. Recordkeeping and Reporting

IV.D.4.a. The owner or operator of a gasoline transport truck subject to this Section IV.D. shall maintain records of all certification testing and repairs. The records shall identify the gasoline transport truck, the date of the test or repairs and, if applicable, the type of repair and the date of retest. The written record shall include entries of any pre-test repairs, adjustments, or modifications. These shall also include the part name, number, and vendor name of any part removed and of any part installed. The records shall be maintained in legible, readily available form for at least two (2) years after the date the testing or repair was completed and shall be made available to the Division for inspection upon request.

IV.D.4.b. The records of certification tests required by Section IV.D.2.a. must, as a minimum, contain all of the following entries:

IV.D.4.b.(i) The gasoline transport truck owner's name and address;

IV.D.4.b.(ii) The gasoline transport truck/tank identification number;

IV.D.4.b.(iii) The nature of repair work and when performed in relation to vapor tightness testing.

IV.D.4.b.(iv) The following data for each test:

IV.D.4.b.(iv)(A) Test pressure.

IV.D.4.b.(iv)(B) Pressure or vacuum change, mm of water.

IV.D.4.b.(iv)(C) Time period of test.

IV.D.4.b.(iv)(D) Number of leaks found with instrument.

IV.D.4.b.(iv)(E) Leak definition.

IV.D.4.b.(v) The size of each of the compartments within the tank and whether such compartment was manifolded or was tested separately during pressure and vacuum tests.

IV.D.4.b.(vi) At the top of each report page shall be the company name and the date and location of the test results recorded on that page; and

IV.D.4.b.(vii) Name and title of the person conducting the test.

IV.D.4.b.(viii) For the vapor valve test required in Section IV.D.2.a.(ii)(A), the initial test pressure and time of reading.

IV.D.4.c. The records of the visual inspections required by Section IV.D.3.b.

IV.D.4.d. The owner or operator of a gasoline transport truck subject to this regulation must annually certify to the Division that the gasoline transport truck has been tested by the applicable method(s) referenced in Section IV.D.3. The certification must include:

IV.D.4.d.(i) The name and address of the company and the name and telephone number of responsible company representative over whose signature the certification is submitted; and,

IV.D.4.d.(ii) A copy of the information recorded to comply with Section IV.D.4.b.

IV.D.4.e. The records of certification tests must be kept with the tank or at the transport company office at all times and must be shown to Division personnel upon their request. Copies of all records and reports required by the provisions of this Section IV.D. must be made available to the Division upon oral or written request.

## **V. Crude Oil**

### **V.A. General Exemptions**

V.A.1. Storage tanks of 151,412 liters (40,000 gallons) or less used to store crude oil is exempt from the provisions of this section.

V.A.2. Storage tanks with capacities of less than 1,590 cubic meters (10,000 barrels) used to store crude oil and condensate prior to lease custody transfer are exempt from the provisions of this Regulation Number 7 other than Part D, Sections I. and II.

### **V.B. Equipment**

Pumps and compressors handling crude oil shall be subject to the provisions of Section IV.A.

### **V.C. Storage**

Except as provided in Section V.A.2., crude oil stored in tanks greater than 151,412 liters (40,000 gallons) shall be subject to the provisions of Sections IV.B.1.b. and IV.B.2.

## **VI. Petroleum Processing and Refining**

### **VI.A. Wastewater (Oil/Water) Separators**

VI.A.1. Definitions

VI.A.1.a. "Forebays" mean the primary sections of a wastewater separator.

VI.A.1.b. "Wastewater (oil/water) separator" means any device or piece of equipment which utilizes the difference in density between oil and water to remove oil and associated chemicals from water, or any device, such as a flocculation tank, clarifier, etc., which removes petroleum derived compounds from wastewater.

VI.A.2. The owner or operator of any wastewater (oil/water) separators at a petroleum refinery shall:

VI.A.2.a. Equip the forebays and separator sections of the wastewater separators with one or more of the following emission control devices, ensuring that such device is properly installed, in good working order and properly maintained:

VI.A.2.a.(i) A solid cover with all openings sealed and the liquid contents totally enclosed.

VI.A.2.a.(ii) A pontoon-type or double-deck type floating roof, or internal floating cover. The floating roof or cover must rest on the surface of the liquid contents and be equipped with a closure seal or seals to close the space between the edge of the floating roof (or cover) and the wall(s) of the compartment.

VI.A.2.a.(iii) A vapor recovery system consisting of a vapor gathering device capable of collecting the volatile organic compound vapors discharged and a vapor disposal device capable of processing such volatile organic vapors so as to prevent their emission into the atmosphere.

VI.A.2.a.(iii)(A) Control devices shall meet the applicable requirements, including recordkeeping, of Part C, Sections I.A.3.a., b., c., and e., and I.A.8.a. and b.

VI.A.2.a.(iii)(B) The applicable EPA reference methods 1 through 4, and 25, of 40 CFR Part 60 (September 14, 1989) shall be used to determine the efficiency of control devices.

VI.A.2.b. Equip all openings in covers, separators, and forebays with lids or seals such that the lids or seals are in the closed position at all times except when in actual use. Access for gauging and sampling shall be minimized.

VI.B. Emissions from Petroleum Refineries

VI.B.1. Definitions

VI.B.1.a. "Firebox" means the chamber or compartment of a boiler or furnace in which materials are burned but does not mean the combustion chamber of an incinerator.

VI.B.1.b. "Turnaround" means the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and then putting the unit back on stream.



VI.B.2. Process unit turnarounds

The owner or operator of a petroleum refinery shall develop and submit to the Division for approval a detailed procedure for minimization of volatile organic compound emissions during process unit turnaround. As a minimum, the procedure shall provide for:

VI.B.2.a. Depressurization venting of the process unit or vessel to a vapor recovery system, or to a flare or firebox which assures at least 90% combustion efficiency;

VI.B.2.b. No emission of volatile organic compounds from a process unit or vessel until its internal pressure is 17.2 psia or less; and

VI.B.2.c. Recordkeeping of the following items. Records shall be kept for at least two years and shall be made available to the Division for review upon request.

VI.B.2.c.(i) Every date that each process unit is shut down,

VI.B.2.c.(ii) The approximate vessel volatile organic compound concentration when the volatile organic compounds were first discharged to the atmosphere, and

VI.B.2.c.(iii) The approximate total quantity of volatile organic compounds emitted to the atmosphere.

VI.B.3. Venting of blowdown systems and safety pressure relief valves

All blowdown systems, process equipment vents, and pressure relief valves shall be vented to a vapor recovery system, or to a flare or firebox which assures at least 90% combustion efficiency.

VI.B.4. Vacuum-Producing Systems

VI.B.4.a. The owner or operator of any vacuum-producing system at a petroleum refinery shall not permit the emission of any noncondensable volatile organic compounds from the condensers, hot wells or accumulators of the system. This emission limit shall be achieved by:

VI.B.4.a.(i) Venting the noncondensable vapors to a flare or other combustion device, or,

VI.B.4.a.(ii) Compressing the vapors and adding them to the refinery fuel gas.

VI.B.5. All sampling, testing, and measuring ports, hatches, and access openings shall be kept in a closed sealed position except during actual sampling or access.

VI.B.6. Control devices shall meet the applicable requirements, including recordkeeping, of Part C, Sections I.A.3.a., b., c., and e., and I.A.8.a. and b.

VI.B.7. The applicable EPA reference methods 1 through 4, and 25, of 40 CFR Part 60 (September 14, 1989), shall be used to determine the efficiency of control devices.

VI.C. Petroleum Refinery Equipment Leaks

VI.C.1. Definitions

For the purpose of this section, the following definitions apply:

- VI.C.1.a. "Accessible Component" means a component which can be reached, if necessary, by safe and proper use of portable ladders such as are acceptable to OSHA, as well as by built-in ladders and walkways. "Accessible" also includes components which can be reached by the safe use of an extension on the monitoring probe.
- VI.C.1.b. "Component" means any piece of equipment, which has the potential to leak volatile organic compounds when tested in the manner described in Section VI.C.3. These sources include, but are not limited to, pumping seals, compressor seals, seal oil degassing vents, pipeline valves, flanges and other connections, pressure relief devices, process drains, and open ended pipes. Excluded from these sources are valves which are not externally regulated.
- VI.C.1.c. "Gaseous Service" means equipment which processes, transfers or contains a volatile organic compound or mixture of volatile organic compounds in the gaseous phase.
- VI.C.1.d. "In Heavy VOC Liquid Service" means that the piece of equipment is not in gaseous service or in light VOC liquid service.
- VI.C.1.e. "In Light Liquid VOC Service" Equipment is in light liquid service if the following conditions apply:
- VI.C.1.e.(i) the true vapor pressure of one or more of the components is greater than 0.3 kPa at 20°C. True vapor pressures may be obtained from standard reference texts or may be determined by ASTM D-2879.
- VI.C.1.e.(ii) the total concentration of the pure components have a true vapor pressure greater than 0.3 kPa at 20°C, is equal to or greater than 20 percent by weight; and
- VI.C.1.e.(iii) the fluid is a liquid at operating conditions.
- VI.C.1.f. "Refinery Unit" means a set of components which are a part of a basic process operation, such as, distillation, hydrotreating, cracking, or reforming of hydrocarbons.
- VI.C.1.g. "Water Draw" means a routinely used valve or system employing a valve which allows non-VOC material (usually water) to be separated from VOC.

VI.C.2. Provisions for Specific Processes

- VI.C.2.a. The owner or operator of a petroleum refinery complex subject to this regulation shall:
- VI.C.2.a.(i) Develop a monitoring program consistent with the provisions in Section VI.C.3.
- VI.C.2.a.(ii) Conduct a monitoring program consistent with the provisions in Section VI.C.4.a.

VI.C.2.a.(iii) Record all leaking components which have a VOC concentration exceeding 10,000 ppm when tested according to Section VI.C.3., and place an identifying tag on each component consistent with the provisions in Section VI.C.4.a.(iii).

VI.C.2.a.(iv) Repair and retest leaking components, as defined in Section VI.C.2.a.(iii), as soon as possible, but no later than fifteen (15) days after the leak is found, excepting those specified in Sections VI.C.2.a.(v) and VI.C.2.a.(vi).

VI.C.2.a.(v) Identify all leaking components as defined in Section VI.C.2.a.(iii), which cannot be repaired until the unit is shut down for turnaround, and repair and retest as in Section VI.C.2.a.(iv) when the unit is back on stream.

VI.C.2.a.(vi) When a component leak cannot be fixed within fifteen (15) working days solely because parts are not available, the following shall be noted in an "awaiting parts log:"

VI.C.2.a.(vi)(A) component identification and tag number

VI.C.2.a.(vi)(B) date part was ordered

VI.C.2.a.(vi)(C) date part was received

VI.C.2.a.(vi)(D) date repair was made

VI.C.2.b. Except for safety pressure relief valves, no owner or operator of a petroleum refinery shall install or operate a valve at the end of a pipe or line containing volatile organic compounds unless the pipe or line is sealed with a second valve, a blind flange, a plug, or a cap. The sealing device may be removed only when a sample is being taken or when the valve is otherwise in use.

VI.C.2.c. The Division, at its discretion, may require early unit turnaround based on the number and severity of tagged leaks awaiting turnaround provided:

VI.C.2.c.(i) The requirement does not exceed reasonable available control technology due to cost per ton of emissions reduction achieved by the early turnaround or other reasonable analysis.

VI.C.2.c.(ii) The Division provides the owner or operator of a petroleum refinery with written notification at least 180 days before requiring an early turnaround. The owner or operator will have 30 days from the date of the Division's notification to contest the requirement by submitting a demonstration that the requirement is beyond reasonable available control technology. If no demonstration is made, it will be assumed the requirement is reasonable. If a demonstration is submitted by the owner or operator, the Division will either approve the demonstration or disapprove the demonstration with a justification regarding the disapproval within 30 days of the date the demonstration is submitted to the Division.

VI.C.2.c.(iii) The requirement is not contested by the owner or operator. Should the requirement be contested, the requirement for early unit turnaround will be delayed until 180 days after the demonstration discussed in Section VI.C.2.c.(ii) is disapproved by the Division.

VI.C.2.d. Piping valves and pressure relief valves in gaseous VOC service shall be marked in some manner that will be readily obvious to both refinery personnel performing monitoring and the Division, to identify them as components which are monitored quarterly.

### VI.C.3. Testing and Monitoring Procedures

Testing and calibration procedures to determine compliance with this regulation shall be consistent with EPA reference method 21 of 40 CFR Part 60 (September 14, 1989). The reference compound may be methane or hexane. A leak is defined as a reading of 10,000 ppmv of the reference compound.

### VI.C.4. Monitoring, Recordkeeping, Reporting

#### VI.C.4.a. Monitoring

VI.C.4.a.(i) The owner or operator of a petroleum refinery subject to this regulation shall conduct a monitoring program consistent with the following provisions:

VI.C.4.a.(i)(A) Monitor yearly by the method referenced in Section VI.C.3., all:

- VI.C.4.a.(i)(A)(1) Pump seals; and
- VI.C.4.a.(i)(A)(2) Piping valves in light liquid VOC service;  
and
- VI.C.4.a.(i)(A)(3) Process drains; and
- VI.C.4.a.(i)(A)(4) Heat-exchanger body flanges; and
- VI.C.4.a.(i)(A)(5) Other accessible flanges in VOC service.
- VI.C.4.a.(i)(A)(6) Components in heavy liquid VOC service are exempt from requirements of this Section VI.C.4.a.(i)(A).

VI.C.4.a.(i)(B) Monitor quarterly by the method referenced in Section VI.C.3., all:

- VI.C.4.a.(i)(B)(1) Compressor seals; and
- VI.C.4.a.(i)(B)(2) Piping valves in gaseous service; and
- VI.C.4.a.(i)(B)(3) Pressure relief valves in gaseous service.

- VI.C.4.a.(i)(C) Monitor at least weekly by visual methods all pump seals.
- VI.C.4.a.(i)(D) Monitor within 24 hours with a VOC detector and make record of any component from which VOC liquids are observed leaking.
- VI.C.4.a.(i)(E) Components in heavy liquid VOC service shall be monitored by the method referenced in Section VI.C.3. within five days if evidence of a potential leak is found by visual, audible, olfactory, or any other detectable method.
- VI.C.4.a.(ii) Inaccessible valves and flanges shall be monitored annually or, as a minimum, at unit shutdown using the procedures of VI.C.2.a.(v). Pressure relief devices which are connected to an operating flare header or vapor recovery device, storage tank valves, and valves that are not externally regulated are exempt from the monitoring requirements in Section VI.C.4.a.(i).
- VI.C.4.a.(iii) The owner or operator of a petroleum refinery, upon the detection of a leaking component as defined in Section VI.C.2.a.(iii), shall affix a weatherproof and readily visible tag, bearing an identification number and the date the leak is located, to the leaking component. This tag shall remain in place until the leaking component is repaired. In addition, the owner or operator shall log the leak (including those leaks immediately repaired), per the requirements of Sections VI.C.4.b.(i) through (iii).
- VI.C.4.b. Recordkeeping
  - VI.C.4.b.(i) The owner or operator of a petroleum refinery shall maintain a leaking components monitoring log which shall contain at a minimum, the following data:
    - VI.C.4.b.(i)(A) The name of the process unit where the component is located.
    - VI.C.4.b.(i)(B) The type of component (e.g., valve, seal).
    - VI.C.4.b.(i)(C) The tag number of the component.
    - VI.C.4.b.(i)(D) The date on which a leaking component is discovered.
    - VI.C.4.b.(i)(E) The date on which a leaking component is repaired.
    - VI.C.4.b.(i)(F) The date and instrument reading found during the recheck procedure subsequent to repairing a leaking component.
    - VI.C.4.b.(i)(G) A record of the calibration of the monitoring instrument.
    - VI.C.4.b.(i)(H) Those leaks that cannot be repaired until turnaround.
    - VI.C.4.b.(i)(I) The total number of components checked and the total number of components found leaking.

VI.C.4.b.(i)(J) The total number of components subject to Section VI.C.2.a.(v) which upon retest were still leaking as defined in Section VI.C.3.

VI.C.4.b.(ii) Copies of the monitoring log shall be retained by the owner or operator for a minimum of two (2) years after the date on which the record was made or report prepared.

VI.C.4.b.(iii) Copies of the monitoring log shall be made available to the Division upon oral or written request.

VI.C.4.c. Reporting

The owner or operator of a petroleum refinery, upon the completion of each yearly and/or quarterly monitoring procedure, shall:

VI.C.4.c.(i) Submit a report to the Division by the 15th day of February, May, August, and November that lists all leaking components that were located during the previous three (3) calendar months (quarter), but not repaired within fifteen (15) working days, all leaking components awaiting unit turnaround, the total number of components inspected, and the total number of components found leaking.

VI.C.4.c.(ii) Submit a signed statement with the report attesting to the fact that, with the exception to those leaking components listed in Section VI.C.4.b.(i)(H), all monitoring and repairs were performed as stipulated in the monitoring program.

**VII. Control of Volatile Organic Compound Leaks from Vapor Collection Systems and Vapor Control Systems Located at Gasoline Terminals, Gasoline Bulk Plants, and Gasoline Dispensing Facilities**

VII.A. General Provisions

VII.A.1. Applicability

This section is applicable to all gasoline terminals, gasoline bulk plants, and gasoline dispensing facilities (e.g., service stations) which are located in ozone nonattainment areas and which must have a vapor collection system pursuant to Section IV. and other applicable rules.

VII.A.2. Exemptions

This section is not applicable to those operations involving transfer of gasoline from gasoline dispensing facilities to motor vehicle fuel tanks nor to other dispensing operations at such facilities.

VII.A.3. Definitions

For the purpose of this section, the following definitions apply:

VII.A.3.a. "Gasoline Dispensing Facility" means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks, (e.g., service stations, fleet pumps, etc.)

VII.A.3.b. "Gasoline Transport Truck" means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities (e.g., service stations), bulk gasoline plants or gasoline terminals.

VII.A.3.c. "Vapor Collection System" means a vapor transport system which uses direct displacement by the gasoline being transferred to force vapors from the vessel being loaded into either a vessel being unloaded or a vapor holding tank.

#### VII.B. Specific Provisions

VII.B.1. The operator of a vapor collection system at a facility subject to the provisions of this section shall operate the vapor collection system and the gasoline loading equipment in a manner that prevents:

VII.B.1.a. Gauge pressure from exceeding 33.6 torr (18 inches of H<sub>2</sub>O) and vacuum from exceeding gauge pressure of minus 11.2 torr (minus 6 inches of H<sub>2</sub>O) at the point where the vapor return line on the truck connects with the vapor collection line of the facility.

VII.B.1.b. A reading equal to or greater than 100 percent of the lower explosive limit (LEL, measured as propane) at 2.5 centimeters from a known or potential leak source when measured by the procedures described in Appendix B of "Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," December 1978, EPA-450/2-78-051, during loading or unloading operations at gasoline dispensing facilities, bulk plants, and terminals.

VII.B.1.c. Avoidable liquid or vapor leaks from the system during loading or unloading operations at gasoline dispensing facilities, bulk plants, and terminals.

VII.B.1.d. Division representatives may monitor for excessive back pressure as defined by Section VII.B.1.a. and vapor leakage as is defined by Section VII.B.1.b. or by detection methods incorporating sight, sound, and smell.

#### VII.B.2. Repairs and Modifications

VII.B.2.a. The operator shall within fifteen (15) days, repair and retest a vapor collection system that exceeds the pressure limits (Section VII.B.1.a.), excepting that;

VII.B.2.b. Should an applicable facility require modification or repairs that will take longer than fifteen (15) days to complete, the operator shall submit to the Division for approval a schedule which includes dates of commencement and completion.

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**Appendix B Criteria for Control of Vapors from Gasoline Transfer to Storage Tanks**

- I. Drop Tube Specifications. Submerged fill is specifically required. The drop tube must extend to within 15.24 cm (6 in.) of the tank bottom.
- II. Vapor Hose Return. Vapor return line and any manifold must be minimum 7.6 cm (3 in.) ID. All tanks must be provided with individual overfill protection. (Liquid must not be allowed in the vent line or vapor recovery line.) Disconnect on liquid line should assure that all liquid in the hose is drained into the storage tank. The requirements for overfill protection as specified may be waived for existing storage tanks when it is demonstrated to the satisfaction of the appropriate local Fire Marshal, and where applicable, the State Oil Inspection Office that the installation of overfill protection devices on existing tanks is physically not possible.
- III. Size of Vapor Line Connections. For separate vapor lines, nominal three inch (7.6 cm) or larger connections must be utilized at the storage tank and truck. However, short lengths of 2-inch (5.1 cm) vertical pipe no greater than 91.4 cm (3 ft.) long are permissible if the fuel delivery rate is less than 400 gallons per minute.

Where concentric (coaxial) connections are utilized, a 45 cm<sup>2</sup> (7 sq. in.) area for vapor return shall be provided. Four-inch concentric designs are acceptable only when using a venturi-shaped outer tube or where normal drop rate of 1,700 liters per minute (450 gpm) is reduced by at least 25%. Six-inch (15.24 cm) risers should be installed in new stations with concentric connections.

- IV. Type of Liquid Fill Connection. Vapor tight caps are required for the liquid fill connection for all systems. A positive closure utilizing a gasket is necessary to prevent vapors from being emitted at ground level. Cam-lock closures meet this requirement. Dry break closures are preferred.
- V. Tank Truck Inspection. Tank trucks are specifically required to be vapor-tight and to have valid leak-tight certification. The visual inspection procedure must be conducted at least once every six months to ensure properly operating manifolding and relief valves, using the test procedure of Section IV.D.3.b.
- VI. Dry Break on Underground Tank Vapor Riser. Dry-break closures are required to assure transfer of displaced vapors to the truck and to prevent ground-level, gasoline-vapor emissions caused by failure to connect the vapor return line to the underground tanks (closure on riser to mate with opening on hose). These devices keep the tank sealed until the hose is connected to the underground tank. Concentric couplers without dry-breaks are required to have a dry-break on the vapor line connection to the coupler itself, rather than on the rise pipe from the storage tank. The liquid fill riser should be provided with a gap having a positive closure (threaded or latched).
- VII. Equipment Ensuring Vapor-Hose Connection During Gasoline Deliveries. An equipment system aboard the tank truck shall insure (barring deliberate tampering) that a vapor return hose is connected from the truck's vapor return line to the tank receiving gasoline.
- VIII. Vent Line Restriction Devices. Vent line restriction devices are required. If the liquid fill line were attached to the underground tank and the vapor return line were disconnected, then dry break closures would seal the vapor return path to the truck, forcing all vapors out the vent line. In such instances, a restriction device on this vent line greatly reduces fill rate, warning the operator that the vapor line is not connected.

Pressure/vacuum (PV) vent valves installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water.



- IX. Fire and Safety Regulations. All new or modified installations must comply in their entirety with all code requirements including NFPA, Pamphlet 30 (fiberglass is preferred for new manifold lines). For any questions concerning compliance, please contact State Oil Inspection or your local Fire Marshal.
- X. State Oil Inspection. Requirements of the State Oil Inspection office make accurate measurements of the liquid in the underground tank necessary. Vapor-tight gauging devices will be required in all systems designed such that a pressure other than atmospheric will be held or maintained in the storage tank. The volume of liquid in the tanks maintained at atmospheric pressure may be determined with a stick through the submerged drop tube or through a separate submerged gauging tube extending to within 15.24 cm (6 in.) of the tank bottom.

### Appendix C Criteria for Control of Vapors from Gasoline Transfer at Bulk Plants

#### I. Storage Tank Requirements:

- A. Drop Tube Specification: Underground tanks must contain a drop tube that extends to within six inches (15.24 cm) of the tank bottom. All top loaded above-ground tanks must contain a similar drop tube. Above-ground tanks using bottom loading, where the inlet is flush with the tank bottom, must meet the submerged fill requirement.
- B. Size of Vapor Lines from Storage Tanks to Loading Rack: See nomograph (Attachment 1). NOTE: Affected sources are free to choose a pipe diameter different from the one suggested by the nomograph if sufficient justification and documentation is presented.
- C. Pressure Relief Valves: All pressure relief valves and valve connections must be checked periodically for leaks, and be repaired as required. The relief valve pressures should be set in accordance with Sections 2-2.5.1 and 2-2.7.1 inclusive of the current National Fire Protection Agency Pamphlet Number 30.
- D. Liquid Level Check Port: Access for checking liquid level by other than a vapor-tight gauging system shall be vapor-tight when not being used. Tank level shall be checked prior to filling to avoid overfills.
- E. Miscellaneous Tank Openings: All other tank openings, e.g., tank inspection hatches, must be vapor tight when not being used, and must be closed at all times during transfer of fuel.
- F. Storage Tank Overfill Protection: Except for concentric (coaxial) delivery systems, underground tanks must have ball check valves (stainless steel ball). Tanks with concentric delivery systems must have Division-approved overfill protection, (e.g., cutoff pressure-switch in vent line).

#### II. Loading Rack Requirements:

- A. Loading Specification: A vapor-tight bottom-loading or top-loading system using submerged fill with a positive seal, e.g., the Wiggins (tm) system, is required. NOTE: Bulk plants delivering solely to exempt accounts are required to have submerged fill, but loading need not be vapor-tight.
- B. Dry-Break on Storage Tank Vapor Return Line: A dry-break is required to prevent ground-level gasoline vapor emissions during periods when gasoline transfer is not being made. This device keeps the tank sealed until the vapor return hose is connected.

III. Tank Truck\* Requirements:

- A. Vapor Return Modification: Tank trucks must be modified to recover vapors during loading and unloading operations. NOTE: Tank trucks making deliveries solely to exempt accounts do not require this modification. However, 97% submerged fill is required when top loading.
- B. Loading Specifications: Bottom loading or top loading using submerged fill with a positive seal is required for tank trucks modified for vapor recovery. NOTE: When loading a tank truck with this modification without the vapor return hose connected (this is allowed at bulk plants servicing exempt accounts returning without collected vapors in the tank), the requirements of National Fire Protection Agency Pamphlet Number 385, "Loading and Unloading Venting Protection in Tank Vehicles, Section 2219, Paragraph c", must be met.
- C. Vapor Return Hose Size: A minimum three-inch (7.6 cm) ID vapor return hose is required.
- D. Tank Truck Inspection: Tank trucks are required to be vapor-tight and have valid leak-tight certification. Periodic visual inspection is necessary to insure properly operating manifolding and relief valves.

\* The term "tank truck" is meant to include all trucks with tanks used for the transport of gasoline, such as tank wagons, account trucks and transport trucks.

**PART C Surface Coating, Solvents, Asphalt, Graphic Arts and Printing, and  
Pharmaceuticals**

**I. Surface Coating Operations**

I.A. General Provisions

I.A.1. Definitions, unless otherwise specified in Sections I.B. through I.O.

I.A.1.a. "Coating" means a protective, functional or decorative film applied in a thin layer to a surface. This term often applies to paints such as lacquers or enamels, but is also used to refer to films applied to paper, plastics, or foils.

I.A.1.b. "Coating Applicator" means an apparatus used to apply a surface coating.

I.A.1.c. "Coating Line" means an operation which includes both (1) a coating applicator and (2) device(s) and/or area(s) to accomplish one or more of the following processes: flash-off, drying, curing, heat-setting and/or polymerization.

I.A.1.d. "Coating Solids" means that portion of a surface coating, which remains after volatile components have escaped.

I.A.1.e. "Final Repair Application" means that application of surface coating specifically intended to repair damage and imperfections in existing surface coats.

I.A.1.f. "Finished Coating Solids" means those coating-solids that remain on a coated substance after completion of all production processes.

I.A.1.g. "Flash-off Area" means the space between the application area and the oven.

I.A.1.h. "Prime Coat" (also termed "primer") means the first film of coating applied in a multiple-coat operation.

I.A.1.i. "Single Coat" means a single film of coating applied directly to the metal substrate, omitting the primer application.

I.A.1.j. "Surface Coating" means a liquid, liquefiable, or mastic composition which is converted to a solid (or semi-solid) protective, decorative, or adherent film or deposit after application as a thin layer or by impregnation. In a machine which has both coating and printing units, all units shall be considered as performing a printing operation. Such a machine is subject to the standards governing graphic arts, and thus is not covered by coating standards.

I.A.1.k. "Surface Coating Oven" means a chamber within which heat is used to bake, cure, polymerize, and/or dry a surface coating.

I.A.1.l. "Topcoat" means the final film of coating applied in a multiple-coat operation.

I.A.2. Abbreviations

I.A.2.a. Kg/lc shall be the abbreviation for: kilograms of solvent VOC per liter of coating (minus water and "exempt" solvents, as defined in Part A, Section II.B.).

I.A.2.b. Lb/gc shall be the abbreviation for: (avoirdupois) pounds of solvent VOC per gallon of coating (minus water and “exempt” solvents, as defined in Part A, Section II.B.).

I.A.3. Test Methods and Procedures

I.A.3.a. The owner or operator of any VOC source required to comply with this section shall, at their own expense, demonstrate compliance using EPA reference method 24 of 40 CFR Part 60 (September 14, 1989) for surface coatings, and reference method 25 and reference methods 1 through 4 (September 14, 1989) for add-on controls.

I.A.3.b. The test protocol should be in accordance with the requirements of the Air Pollution Control Division Compliance Test Manual and shall be submitted to the Division for review and approval at least thirty (30) days prior to testing. No test shall be conducted without prior approval from the Division.

I.A.3.c. The Division may use independent tests to verify test data submitted by the source operator or owner. The test methods shall be those listed in Section I.A.3.a. and the Division test results shall take precedence.

I.A.3.d. The Division may accept, instead of the testing required in this section, a certification by the manufacturer of the composition of the coatings if supported by actual batch formulation records. The owner or operator of the VOC source required to comply with this section shall obtain certification from the coating manufacturer(s) that the test method(s) used for determination of VOC content meet the requirements specified in Section I.A.3.a. The owner or operator shall have this certification readily available to Division personnel, in order to allow the results to be used in the daily compliance calculations specified in Section I.A.10.

I.A.3.e. The performance of add-on control device equipment shall be established with the required test methods of I.A.3.a. at equipment startup, and after major modification to the control equipment. Baseline operating parameters shall be established during the satisfactory (i.e. in-compliance) operation of the control equipment, including operation during all anticipated ranges of process throughput. During subsequent process operation, the owner or operator shall maintain the operating conditions of the add-on controls as close to these baseline conditions as possible. If serious operational problems with an add-on control system are evidenced from the daily monitoring required by Section I.A.8.b. (such problems may be indicated by changes from baseline conditions), repeat performance tests may be required by the Division, as necessary.

I.A.4. Sampling

To determine compliance with applicable surface coating standards, samples shall be taken from the coating as freshly delivered to the reservoir of the coating applicator.

I.A.5. Alternative compliance methods for processes and operations

For each process specified in Sections I.B. through I.N. the emission limits designated for that process shall be achieved by:

I.A.5.a. Use of coatings with proportions of VOC less than or equal to the maximums specified by the applicable section of this regulation; or

- I.A.5.b. Use of the specified equipment and procedures prescribed by the applicable section of this regulation; or
- I.A.5.c. Use of an alternative means of control which satisfies the requirements of Section I.A.5.e., I.A.5.f., and Part A, Section II.D.; or
- I.A.5.d. Use of crossline averaging. The emission trading requirements of Regulation Number 3, Part A, Section V. shall be met. In addition, the following requirements apply:
- I.A.5.d.(i) The actual reduction shall be equivalent to the actual reduction that would be achieved on a line-by-line basis.
  - I.A.5.d.(ii) Credit shall not be received for downtime, however, credit is allowed for enforceable production limits.
  - I.A.5.d.(iii) Crossline averaging shall be used only across lines in the same control technique guidance group.
  - I.A.5.d.(iv) The emission trading policy shall be met on a daily weighted average.
  - I.A.5.d.(v) Sources subject to best available control technology (BACT) and lowest achievable emission rate (LAER) requirements shall not use cross line averaging.
  - I.A.5.d.(vi) VOC emissions shall be expressed as lbs/gallons solids to determine reduction over baseline (lb VOC/lb solids for graphic arts).
  - I.A.5.d.(vii) Organisol and plastisol coatings shall not be used to bubble emissions from vinyl surface or automobile topcoating operations.
  - I.A.5.d.(viii) Before crossline averaging may be used, the control methodology shall be approved as a revision to the State Implementation Plan.
- I.A.5.e. The design, operation and efficiency of any capture system used in conjunction with any emission control system shall be certified in writing by the source owner or operator and approved by the Division. Unless the capture system meets the requirements for a total enclosure as specified in the New Source Performance Standard for the Magnetic Tape Manufacturing Industry, 53FR38892, October 3, 1988, or unless Division approved material balance techniques are used to adequately determine overall VOC capture and destruction/recovery efficiency, the efficiency of the capture system shall be determined by test methods approved as a revision to the State Implementation Plan. Testing for capture efficiency shall be performed on a case-by-case basis as required by the Division. The requirements of Sections I.A.3.e. and I.A.8.b. shall apply to the capture and control device system. When capture and control device efficiency must be independently determined, the overall VOC emission reduction rate equals the (percent capture efficiency X percent control device efficiency)/100.

I.A.5.f. Sources which use add-on controls, crossline averaging, or an approved alternative control strategy instead of low solvent technology to meet the applicable emission limit shall meet the equivalent VOC emission limit, on the basis of solids applied (lb VOC/gal solids applied, or lb VOC/lb solids applied, for graphic arts sources). Appendix E sets forth the procedure for converting emission limits and lists equivalent limits for various coating operations.

I.A.5.g. Owners or operators of sources which use a carbon adsorption system shall provide for the proper disposal or reuse of all VOC recovered.

I.A.6. Exemptions

I.A.6.a. The requirements of this Section I. do not apply to sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance, provided;

I.A.6.a.(i) the operation of the source is not an integral part of the production process; and

I.A.6.a.(ii) the emissions from the source do not exceed 363 kilograms (800 lbs.) in any calendar month; and

I.A.6.a.(iii) the exemption is approved in writing by the Division.

I.A.6.b. The requirements of Sections I.C., I.D., I.E., I.F., I.G., I.H., I.I., and I.M. are not applicable to sources whose actual emissions, including fugitive emissions, before add-on controls, are less than 6.8 kilograms (15 lbs.) per day and less than 1.4 kilograms (3 lbs.) per hour. Emissions from all sources within the same control technique guidance group shall be totaled to determine actual emissions.

I.A.7. Fugitive emission control

I.A.7.a. Control techniques and work practices shall be implemented at all times to reduce VOC emissions from fugitive sources. Control techniques and work practices include, but are not limited to:

I.A.7.a.(i) tight-fitting covers for open tanks;

I.A.7.a.(ii) covered containers for solvent wiping cloths;

I.A.7.a.(iii) proper disposal of dirty cleanup solvent.

I.A.7.b. Emissions of organic material released during clean-up operations, disposal, and other fugitive emissions shall be included when determining total emissions, unless the source owner or operator documents that the VOCs are collected and disposed of in a manner that prevents evaporation to the atmosphere.

I.A.8. Recordkeeping, Reporting, and Monitoring

I.A.8.a. If add-on control equipment is used, continuous monitors of the following parameters shall be installed, calibrated, and operated at all times that the associated control equipment is operating:

I.A.8.a.(i) exhaust gas temperature of all incinerators;

- I.A.8.a.(ii) temperature rise across a catalytic incineration bed;
  - I.A.8.a.(iii) breakthrough of VOC on a carbon adsorption unit;
  - I.A.8.a.(iv) any other monitoring and/or recording device, maintenance and/or control-media-replacement schedule(s) specified on a case-by-case basis by the Division.
- I.A.8.b. If add-on control equipment is used, in addition to the requirements of Section I.A.8.a., the following information and any other necessary information, as determined applicable for each source by the Division, shall be monitored and recorded daily in order to assure continuous compliance. The substitution of continuous recordings for daily recording may be allowed by the Division.
- I.A.8.b.(i) For the capture system: fan power use, duct flow, duct pressure.
  - I.A.8.b.(ii) For carbon adsorbers: bed temperature, bed vacuum pressure, pressure at the vacuum pump, accumulated time of operation, concentration of VOC in the outlet gas, solvent recovery.
  - I.A.8.b.(iii) For refrigeration systems: compressor discharge and suction pressures, condenser fluid temperature, solvent recovery.
  - I.A.8.b.(iv) For incinerator systems: exhaust gas temperature, temperature rise across a catalytic incinerator bed, flame temperature, accumulated time of incinerator.
- I.A.8.c. Recordkeeping procedures shall follow the guidance in "Recordkeeping Guidance Document for Surface Coating Operations and the Graphic Arts Industry," July 1989, EPA 340/1-88-003.
- I.A.9. Required and Prohibited Acts
- I.A.9.a. No owner or operator of a source of VOCs subject to this section shall operate, cause, allow or permit the operation of the source, unless:
    - I.A.9.a.(i) For each category of surface coating as specified in Sections I.B. through I.M., the owner or operator of a surface coating line or facility subject to that section does not cause, allow or permit the discharge into the atmosphere of any VOCs in excess of the specified emission limit, calculated as delivered to the coating applicator or as applied to the substrate, whichever is greater.
    - I.A.9.a.(ii) The owner or operator of a surface coating operation maintains and operates surface coating operations in a manner consistent with good air pollution control practices for minimizing emissions, such as, but not limited to, coating application methods capable of achieving a transfer efficiency achieved by HVLP spraying.
- I.A.10. Compliance Calculation Procedures
- I.A.10.a. Compliance with this section shall be determined on a daily basis. Sources may request a revision to the State Implementation Plan for longer times for compliance determination.

- I.A.10.b. Compliance calculation procedures shall follow the guidance in "Procedure for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings," December 1984, EPA-450/3-84/019. In addition, for add-on controls or other compliance alternatives, calculation procedures shall follow the guidance of Section I.A.5.f.
- I.A.11. The requirements of Sections I.A.1. through I.A.10. apply to each category of surface coating as specified in Sections I.B. through I.M. The requirements of Sections I.A.7. through I.A.10. apply to the category in Section I.N. The requirements of Sections I.A.1. through I.A.9 apply to the category in Section I.O.
- I.A.12. The Division shall approve utilization of alternative compliance methods to the following sources pursuant to this Section I.
- I.A.12.a. Lexmark International, Inc. shall be allowed to utilize the alternative compliance method of crossline averaging for processes and operations within the Manufactured Metal Parts and Metal products (Subgroup L) and within the Plastic Film Coating Operations (Subgroup J). The emission trading requirements of Regulation Number 3, Part A, Section V. shall be met, and utilization of the alternative compliance method shall be subject to the following generic conditions, which shall be written and specifically described as enforceable permit terms and conditions in its permits:
- I.A.12.a.(i) The alternative compliance method shall result in an actual reduction that is equivalent to the actual reduction that would otherwise be achieved on a line-by-line basis pursuant to this Regulation Number 7.
- I.A.12.a.(ii) Credit shall not be received for downtime; however, credit is allowed for emission reductions from enforceable production limits.
- I.A.12.a.(iii) Cross line averaging shall be used only across lines of the same control technique guidance group. Lexmark shall use cross line averaging between Metal Parts and Metal Products lines or between Plastic Film Coating lines. Lexmark shall not use cross line averaging where the emissions from Plastic film coating lines are averaged with Metal Parts and Metal Products lines.
- I.A.12.a.(iv) The emission trading policy set forth in Regulation Number 3, Part A, Section V., shall be met on a daily weighted average.
- I.A.12.a.(v) Sources subject to Best Available Control Technology (BACT), and Lowest Achievable Emission Rate (LAER) shall not use cross line averaging.
- I.A.12.a.(vi) To determine reduction over baseline, VOC emissions shall be expressed according to Section I.A.5.f., as lbs/gallons solids.
- I.A.12.a.(vii) Monthly records shall be kept at the source to verify ongoing compliance with these conditions. The recordkeeping format shall be approved by the Division.



- I.A.12.a.(viii) An annual report demonstrating ongoing compliance with this regulation and all permit terms shall be filed with the Division. The report format shall be approved by the Division and specifically described in the permit.
- I.A.12.a.(ix) The Division shall issue a permit with federally enforceable terms and conditions to Lexmark limiting Lexmark's alternative compliance method emissions to those allowable under Section I.L. and Section I.J.
- I.A.12.a.(x) Commercial and Product quality control laboratory equipment are exempt from APEN filing and construction permit requirements under Regulation Number 3, Part A, Section II.D.1.(i), and Regulation Number 3, Part B, Section II.D.1.a.; and from construction permit requirements under Regulation Number 3, Part B, Section II.D.1.(i). Qualifying sources shall be exempt from Regulation Number 7, Section I. A.6.
- I.A.12.a.(xi) Nothing in the alternative compliance method is intended to relax any emissions limitation of this Regulation Number 7.

I.B. Automobile and Light-Duty Truck Assembly Plants

I.B.1. Definitions

- I.B.1.a. "Application Area" means the area where the surface coating is applied by spraying, dipping or flow coating.
- I.B.1.b. "Automobile" means a passenger motor-vehicle or a derivative of same, capable of seating twelve (12) or fewer passengers, and having at least two driven wheels.
- I.B.1.c. "Automobile Assembly Facility" means a facility where parts (including assembled or partially assembled components) of automobiles are received, and finished automobiles are produced, partially or wholly by an assembly line.
- I.B.1.d. "Light-Duty Truck" means any motor vehicle rated at 8,500 pounds (3,855 kilograms) gross vehicle weight or less, and having at least two driven wheels, which is designed primarily for purposes of transportation of property or is a derivative of such vehicles. It includes, but is not limited to, pickup trucks, vans, and window vans rated at 8,500 pounds' gross vehicular weight or less.
- I.B.1.e. "Light-Duty Truck Assembly Facility" means a facility where parts (including assembled or partially assembled components) of light-duty trucks are received, and finished light-duty trucks are produced, partially or wholly by an assembly line.

I.B.2. Applicability

This section applies to all assembly and subassembly lines in an automobile or light-duty truck assembly facility, including those for frames, small parts, wheels, and main body parts. This section applies only to the manufacture of new vehicles.

I.B.3. Emission Limitations

	<b>Kg/lc</b>	<b>Lb/gc</b>
Prime application, flashoff area, and oven	0.23	1.9
Topcoat application area, flashoff area, and oven	0.34	2.8
Final repair application, flashoff area and oven	0.58	4.8

I.B.4. Coatings other than primer, surfacer (guidecoat), topcoat and final repair shall be considered under the miscellaneous metal parts Section I.L.

I.B.5. For topcoat application, if a complying coating is not used to meet the emission limit of Section I.B.3, then:

I.B.5.a. the alternate method shall meet an emission limit of 15.1 lb VOC/gal. solids deposited on the coated part; and

I.B.5.b. compliance shall be determined on a daily weighted average basis.

I.B.6. Topcoat operation shall include all spray booths, flash-off areas and ovens in which topcoat is applied, dried and cured, except for final offline repair.

I.C. Can Coating Operations

I.C.1. Definitions

I.C.1.a. "Can Coatings" means any coatings containing organic materials and applied -- or intended for application -- by spray, roller, or other means onto the inside and/or outside surfaces of formed cans and components of cans.

I.C.1.b. "End Sealing Compound" means a substance which is coated onto can ends and which functions as a seal when the end is assembled onto the can.

I.C.1.c. "Exterior Base Coat" means a coating applied to the exterior of a can to provide protection to the metal and/or to provide background for any lithographic or printing operation.

I.C.1.d. "Interior Base Coat" means the initial coating applied to the interior surface of a can by roller coater or spray.

I.C.1.e. "Interior Body Spray" means a coating sprayed onto the interior surface of the can body to provide a protective film between the can and its contents.

I.C.1.f. "Overvarnish" means a coating applied directly over ink to reduce the coefficient of friction, provide gloss, protect against abrasion, enhance product quality, and protect against corrosion.

I.C.1.g. "Three-Piece Can Side Seam Spray" means a coating sprayed onto the interior and/or exterior of a can body seam on a three-piece can to protect the exposed metal.

I.C.1.h. "Two-Piece Can Exterior End Coat" means a coating applied to the exterior of the bottom end of a two-piece can.

**I.C.2. Applicability**

This section applies to coating applicator(s), and oven(s) of sheet can or end coating lines involved in sheet basecoat (exterior and interior) and over varnish, two-and three-piece can interior body spray, two-piece can exterior end (spray or roll coat), three-piece can side-seam spray, and end sealing compound operations.

**I.C.3. Emission Limitations**

<b>Can Coating</b>	<b>Kg/lc</b>	<b>Lb/gc</b>
Sheet base coat (exterior and interior) and overvarnish two-piece can exterior (base coat and overvarnish)	0.34	2.8
Two and three-piece can interior body spray, two-piece can exterior end (spray or roll coat)	0.51	4.2
Three-piece can side-seam spray	0.66	5.5
End sealing compound	0.44	3.7
Any additional coats	0.51	4.2

**I.D. Coil Coating Operations**

**I.D.1. Definitions**

I.D.1.a. "Coil Coating" means any surface coating applied by spray, roller, or other means onto one or both surfaces of flat metal sheets or strips that come in rolls or coils.

I.D.1.b. "Quench Area" means a chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

**I.D.2. Applicability**

This section applies to the coating applicator(s), oven(s), and quench area(s) of coil coating operations involved in primer, intermediate, top-coat or single-coat operations.

**I.D.3. Emission Limitations:**

<b>Coil Coating</b>	<b>Kg/lc</b>	<b>Lb/gc</b>
Any coat (primer, intermediate coat, topcoat, single coat)	0.31	2.6

**I.E. Fabric Coating Operations**

**I.E.1. Definitions**

I.E.1.a. "Fabric Coating" means the process of coating or impregnating the full, usable surface of a fabric web or sheet to impart properties that are not initially present such as strength, stability, water or acid repellency, or appearance. "Fabric Coating" excludes those processes normally included under fabric finishing (e.g. dyeing, treating for stain and wrinkle resistance, etc.).

**I.E.2. Applicability**

This section applies to fabric coating lines which includes, but is not limited to, coaters and drying ovens.

**I.E.3. Emission Limitations**

	<b>Kg/lc</b>	<b>Lb/gc</b>
Fabric Coating Line	0.35	2.9

**I.F. Large Appliance Coating Operations**

**I.F.1. Definition**

I.F.1.a. "Large Appliances" includes doors, cases, lids, panels, interior support parts, and any other large (greater than one square decimeter (15.5 square inches)) coated surfaces of residential and commercial washers, dryers, ovens, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and all other products under SIC Code 363 according to the "Standard Industrial Classification Manual", Executive Office of the President, Office of Management and Budget, designated by convention of the industry as large appliances.

**I.F.2. Applicability**

This section applies to all large appliance coating lines.

**I.F.3. Emission Limitations**

	<b>Kg/lc</b>	<b>Lb/gc</b>
Large Appliance Coating Line; prime, single or topcoat application area, flashoff area, and oven	0.34	2.8

**I.G. Magnet Wire Coating Operations**

**I.G.1. Definition**

I.G.1.a. "Magnet Wire Coating" means those operations which apply a coating of electrically insulating varnish or enamel (or similar substance) to wire which is known as "magnet wire." Magnet wire is usually copper or aluminum, and is used for electric motors, generators, transformers, magnets, and related products.

I.G.2. Applicability

This section applies to, but is not limited to, coaters and drying ovens of magnet wire coating operations.

I.G.3. Emission Limitations

	<b>Kg/lc</b>	<b>Lb/gc</b>
Magnetic wire coating operation	0.20	1.7

I.H. Metal Furniture Coating Operations

I.H.1. Definitions

I.H.1.a. "Metal Furniture" means furnishings commonly considered furniture, for domestic, business, and/or institutional use, which have one or more essential, major components made of metal. "Metal furniture" includes, but is not limited to, tables, chairs, wastebaskets, beds, desks, lockers, shelving, cabinets, room dividers, clothing racks, chests of drawers, and sofas.

I.H.1.b. "Metal Furniture Coating" means applying a "surface coating" to "metal furniture" as defined. It excludes coating of non-metal components.

I.H.2. Applicability

This section applies to all metal furniture coating lines.

I.H.3. Emission Limitations

	<b>Kg/lc</b>	<b>Lb/gc</b>
Metal Furniture Coating Line: All coats (including prime, single, and topcoat)	0.36	3.0

I.I. Paper Coating Operations

I.I.1. Definition

"Paper Coating" means impregnating or applying a uniform layer of "surface coating" to paper. It includes, but is not limited to, the production of: coated, glazed, decorated, and varnished paper; carbon and pressure-sensitive copy papers; paper adhesive-labels and tapes; blue-print; photographic and copier paper. It also includes coating of metal foil such as gift wrap and packaging. Paper coating does not include impregnation using a batch dipping process.

I.I.2. Applicability

This section applies to paper coating lines, which includes, but is not limited to, coaters and drying ovens.

I.I.3. Emission Limitations

	<b>Kg/lc</b>	<b>Lb/gc</b>
Paper Coating Line	0.35	2.9

I.J. Plastic-Film Coating Operations

I.J.1. Definition

I.J.1.a. "Plastic-Film Coating" means applying a uniform layer of "surface coating" to a flexible web or sheet of thin plastic substance, excluding all rubbers and vinyl's\* (polyvinyl chloride) except for the following two categories of vinyl products: (1) vinyl tapes and (2) vinyl's coated with an adhesive or pressure-sensitive coating. It includes, but is not limited to: plastic typewriter ribbons, photographic film, adhesive tapes, and magnetic recording tapes. (\*see Section I.K.)

I.J.2. Applicability

This section applies to, but is not limited to, coaters and drying ovens of plastic-film coating lines.

I.J.3. Emission Limitations

	<b>Kg/lc</b>	<b>Lb/gc</b>
Plastic-Film Coating Line	0.35	2.9

I.K. Vinyl Coating Operations

I.K.1. Definition

"Vinyl Coating" means applying a uniform layer, decorative or protective topcoat to a vinyl (polyvinyl chloride) coated fabric or vinyl sheet. It includes printing of same. Excluded are\*: (1) the coating of same with adhesive or pressure-sensitive coatings and (2) vinyl tapes. (\*see Section I.J.)

I.K.2. Application

This section applies to vinyl coating lines which includes, but is not limited to, coaters and drying ovens.

I.K.3. Emission Limitations

	<b>Kg/lc</b>	<b>Lb/gc</b>
Vinyl Coating Line	0.45	3.8

I.L. Manufactured Metal Parts and Metal Products

I.L.1. General Provisions

I.L.1.a. Applicability

Before January 1, 2022, this section applies to the application area(s), flashoff area(s), oven(s), and drying areas including (but not limited to) air and forced air drier(s) used in the surface coating of the metal parts and products listed below where actual emissions, including fugitive emissions, before add-on controls, are greater than or equal to 6.8 kilograms (15 lbs.) per day and 1.4 kilograms (3 lbs.) per hour. This section applies to prime coat, top coat, and single coat operations.

On or after January 1, 2022, this section applies to each metal parts and product surface coating unit at a facility where the total actual VOC emissions from all metal parts and product surface coating operations, including related cleaning activities, at that facility are equal to or greater than 2.7 tons per 12-month rolling period, before consideration of controls.

This section is applicable to surface coating of manufactured metal parts and metal products which include:

- I.L.1.a.(i) Large farm machinery (harvesting, fertilizing, and planting machines, tractors, combines, etc.);
- I.L.1.a.(ii) Small-farm, lawn and garden machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);
- I.L.1.a.(iii) Small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);
- I.L.1.a.(iv) Commercial machinery (office equipment, computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);
- I.L.1.a.(v) Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);
- I.L.1.a.(vi) Fabricated metal products (metal covered doors, frames, etc.);
- I.L.1.a.(vii) Furniture hardware made of metal for use with non-metal furniture; and

I.L.1.a.(viii) Any other industrial category which coats metal parts or products under the standard industrial classification code of major group 33 (primary metal industries), major group 34 (fabricated metal products), major group 35 (non-electric machinery), major group 36 (electrical machinery), major group 37 (transportation equipment), major group 38 (miscellaneous instruments), and major group 39 (miscellaneous manufacturing industries), according to the "Standard Industrial Classification Manual" Executive Office of the President, Office of Management and Budget.

I.L.1.b. Exemptions

I.L.1.b.(i) Section I.L. does not apply to the surface coating of metal parts and products inasmuch as these are covered in Sections I.B., I.C., I.D., I.F., I.G., and I.H.

I.L.1.b.(ii) Section I.L. is not applicable to the following special purpose coatings

I.L.1.b.(ii)(A) Division-approved exemptions for high performance coatings on a case-by-case basis.

I.L.1.b.(ii)(B) Full exterior repainting of automobiles and light-duty trucks if fewer than 18 vehicles are painted per day.

I.L.1.b.(iii) Beginning January 1, 2022, Section I.L. does not apply to aerosol coatings, architectural coatings, and automobile refinish coatings regulated by 40 CFR Part 59 Subparts B (National Volatile Organic Compound Emission Standards for Automobile Refinish Coatings (August 23, 2019)), Subpart D (National Volatile Organic Compound Emission Standards for Architectural Coatings (August 23, 2019)), or Subpart E (National Volatile Organic Compound Emission Standards for Aerosol Coatings (August 23, 2019)).

I.L.1.b.(iv) Beginning January 1, 2022, Section I.L. does not apply to architectural and industrial maintenance coatings regulated by Regulation Number 21.

I.L.1.b.(v) Beginning January 1, 2022, Section I.L. does not apply to the coating of aerospace vehicles or components including, but not limited to, any fabricated part, processed part, assembly of parts, or completed unit of any aircraft including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles at aerospace manufacturing and rework operations.

I.L.1.b.(vi) Beginning January 1, 2022, Sections I.L.2 and I.L.3. do not apply to

I.L.1.b.(vi)(A) Aerosol coating products.

I.L.1.b.(vi)(B) Powder coatings.

I.L.1.b.(vi)(C) Stencil coatings.

I.L.1.b.(vi)(D) Safety-indicating coatings.



- I.L.1.b.(vi)(E) Solid-film lubricants.
- I.L.1.b.(vi)(F) Electric-insulating and thermal-conducting coatings.
- I.L.1.b.(vi)(G) Magnetic data storage disk coatings.
- I.L.1.b.(vi)(H) Plastic extruded onto metal parts to form a coating.

I.L.1.b.(vii) Beginning January 1, 2022, Section I.L.3. does not apply to touch-up coatings, repair coatings, and textured finishes.

#### I.L.1.c. Definitions

For the purpose of this section, the following definitions apply

- I.L.1.c.(i) "Air Dried Coating" means coatings which are dried by the use of air or forced warm air at temperatures up to 90°C (194°F).
- I.L.1.c.(ii) "Baked Coating" means a coating that is cured at a temperature at or above 90°C (194°F).
- I.L.1.c.(iii) "Camouflage Coating" means a coating used, principally by the military, to conceal equipment from detection.
- I.L.1.c.(iv) "Clear Coat" means a coating, which lacks color and opacity or a coating which is transparent.
- I.L.1.c.(v) "Coating Application System" means all operations and equipment which apply, convey, and dry a surface coating, including, but not limited to, spray booths, flow coaters, flashoff areas, air dryers and ovens.
- I.L.1.c.(vi) "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 for a coating unit to have an oven or flash-off area.
- I.L.1.c.(vii) "Drum" means any cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.
- I.L.1.c.(viii) "Electric-Insulating Varnish" means a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.
- I.L.1.c.(ix) "Etching Filler" means a coating that contains less than 23 percent solids by weight and at least 1/2-percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.
- I.L.1.c.(xi) "Extreme Environmental Conditions" means exposure to any of the following: temperatures consistently above 95°C, detergents, abrasive and scouring agents, solvents, and corrosive environments.

- I.L.1.c.(xii) "Extreme High-Gloss Coating" means a coating which, when tested by the American Society for Testing Material Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60° meter.
- I.L.1.c.(xiii) "Extreme Performance Coatings" means coatings designed for extreme environmental conditions (i.e., chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solutions; repeated exposure to temperatures in excess of 250°F; or repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners, or scouring agents).
- I.L.1.c.(xiv) "Heat-Resistant Coating" means a coating that must withstand a temperature of at least 400°F during normal use.
- I.L.1.c.(xv) "High-Performance Architectural Coating" means a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).
- I.L.1.c.(xv) "Metallic Coating" means a coating which contains more than 5 grams of metal particles per liter of coating as applied. "Metal particles" are pieces of a pure elemental metal or a combination of elemental metals.
- I.L.1.c.(xvi) "Military Specification Coating" means a coating which has a formulation approved by a United States Military Agency for use on military equipment.
- I.L.1.c.(xvii) "Mold-Seal Coating" means the initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.
- I.L.1.c.(xviii) "Multi-Component Coating" means a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.
- I.L.1.c.(xix) "One-Component Coating" means a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.
- I.L.1.c.(xx) "Pan Backing" means a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly o a flame or other heating elements.
- I.L.1.c.(xxi) "Prefabricated Architectural Coating" means coatings applied to metal parts and products which are to be used as an architectural structure.

- I.L.1.c.(xxii) "Repair Coating" means a coating used to re-coat portions of a previously coated product which has sustained mechanical damage to the coating following normal coating operations.
- I.L.1.c.(xxiii) "Silicone Release Coating" means any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.
- I.L.1.c.(xxiv) "Solar-Absorbent Coating" means a coating which has as its prime purpose the absorption of solar radiation.
- I.L.1.c.(xxv) "Touch-Up Coating" means a coating used to cover minor coating imperfections appearing after the main coating operation.
- I.L.1.c.(xxvi) "Vacuum-Metalizing Coating" means the undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film. Vacuum metalizing/physical vapor deposition (PVD) is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

I.L.2. Provisions for Specific Processes

I.L.2.a. Until January 1, 2022, no owner or operator of a facility or operation engaging in the surface coating of manufactured metal parts or metal products may operate a coating application system subject to this regulation that emits VOC in excess of:

- I.L.2.a.(i) Clear coatings: 0.52 kg/lc (4.3 lb/gc)
- I.L.2.a.(ii) Extreme Performance Coatings: 0.42 kg/lc (3.5 lb/gc)
- I.L.2.a.(iii) Air-Dried Coatings: 0.42 kg/lc (3.5 lb/gc)
- I.L.2.a.(iv) Other coatings and systems: 0.36 kg/lc (3.0 lb/gc) delivered to a coating applicator for all other coatings and coating application systems.

I.L.2.b. Beginning January 1, 2022, the owner or operator of a facility or operation engaging in the surface coating of manufactured metal parts or metal products must

- I.L.2.b.(i) Reduce VOC emissions from coatings and thinners with an emission control system having a control efficiency of 90% or greater,
- I.L.2.b.(ii) Use products that comply with the following VOC content limits (VOC per volume solid) in Table 1, or

Table 1 – Metal parts and products VOC content limits (kg VOC/l solids)				
Coating category	Air dried		Baked	
	kg VOC/l solids	lb VOC/gal solids	kg VOC/l solids	lb VOC/gal solids
General one component	0.54	4.52	0.40	3.35
General multi-component	0.54	4.52	0.40	3.35
Camouflage	0.80	6.67	0.80	6.67
Electric-insulating varnish	0.80	6.67	0.80	6.67
Etching filler	0.80	6.67	0.80	6.67
Extreme high-gloss	0.80	6.67	0.61	5.06
Extreme performance	0.80	6.67	0.61	5.06
Heat-resistant	0.80	6.67	0.61	5.06
High performance architectural	4.56	38.0	4.56	38.0
High temperature	0.80	6.67	0.80	6.67
Metallic	0.80	6.67	0.80	6.67
Military specification	0.54	4.52	0.40	3.35
Mold-seal	0.80	6.67	0.80	6.67
Pan backing	0.80	6.67	0.80	6.67
Prefabricated architectural multi-component	0.80	6.67	0.40	3.35
Prefabricated architectural one-component	0.80	6.67	0.40	3.35
Pretreatment coatings	0.80	6.67	0.80	6.67
Silicone release	0.80	6.67	0.80	5.06
Solar-absorbent	0.80	6.67	0.61	5.06
Vacuum-metalizing	0.80	6.67	0.80	6.67
Drum coating, new, exterior	0.54	4.52	0.54	4.52
Drum coating, new, interior	0.80	6.67	0.80	6.67
Drum coating, reconditioned, exterior	0.80	6.67	0.80	6.67
Drum coating, reconditioned, interior	1.17	9.78	1.17	9.78

I.L.2.b.(iii) Use products that comply with the following VOC content limits (excluding water and exempt compounds, as applied) in Table 2.

Table 2 – Metal parts and products VOC content limits (lb VOC/gallon coating)				
Coating category	Air dried		Baked	
	kg VOC/l coating	lb VOC/gal coating	kg VOC/l coating	lb VOC/gal coating
General one component	0.34	2.8	0.28	2.3
General multi-component	0.34	2.8	0.28	2.3
Camouflage	0.42	3.5	0.42	3.5
Electric-insulating varnish	0.42	3.5	0.42	3.5
Etching filler	0.42	3.5	0.42	3.5
Extreme high-gloss	0.42	3.5	0.36	3.0
Extreme performance	0.42	3.5	0.36	3.0
Heat-resistant	0.42	3.5	0.36	3.0
High performance architectural	0.74	6.2	0.74	6.2
High temperature	0.42	3.5	0.42	3.5
Metallic	0.42	3.5	0.42	3.5
Military specification	0.34	2.8	0.28	2.3
Mold-seal	0.42	3.5	0.42	3.5
Pan backing	0.42	3.5	0.42	3.5
Prefabricated architectural multi-component	0.42	3.5	0.28	2.3
Prefabricated architectural one-component	0.42	3.5	0.28	2.3
Pretreatment coatings	0.42	3.5	0.42	3.5
Repair and touch-up	0.42	3.5	0.36	3.0
Silicone release	0.42	3.5	0.42	3.5
Solar-absorbent	0.42	3.5	0.36	3.0
Vacuum-metalizing	0.42	3.5	0.42	3.5
Drum coating, new, exterior	0.34	2.8	0.34	2.8
Drum coating, new, interior	0.42	3.5	0.42	3.5
Drum coating, reconditioned, exterior	0.42	3.5	0.42	3.5
Drum coating, reconditioned, interior	0.50	4.2	0.50	4.2

- I.L.2.c. If more than one emission limitation in Sections I.L.2.a. I.L.2.b.(ii), or I.L.2.b.(iii) applies to a specific coating, then the least stringent emission limitation applies.
- I.L.2.d. Pioneer Metal Finishing, Inc., a surface coating operation, is authorized pursuant to Regulation Number 3, Part A, Section V. and Regulation Number 7, Part A, Section II.D.1.a. to use up to twenty (20) tons of certified emission reduction credits of volatile organic compounds (VOC) as an alternative compliance method to satisfy the surface coating emission limitations of Regulation Number 7 in accordance with and upon demonstration of the conditions set forth:
- I.L.2.d.(i) Certified emission reduction credits for VOCs (methanol) to be used in this transaction were formerly owned by the Coors Brewing Company, registered and issued in Emissions Reduction Credit Permit 91AR120R on July 25, 1994;
- I.L.2.d.(ii) Those emission reduction credits were originally obtained by Coors from Verticel, a company that produced honeycomb packaging material and was located within five miles of the PMF facility;
- I.L.2.d.(iii) The use of these VOC emission reduction credits identified shall be used to satisfy VOC limitations of certain specified surface coatings in excess of Control Technique Guidance as specified in Regulation Number 7, Section I.L.2.a. and Section I.A.6.b., and applicable to the Pioneer Metal finishing operations;
- I.L.2.d.(iv) Such emission reduction credits identified will be used by PMF to achieve compliance with Regulation Number 7 to compensate for ozone precursor emission of VOCs from non-compliant coatings which meet the emission trading requirements of Regulation Number 3, Part A, Section V. In order to satisfy the photochemical reactivity equivalency requirement of VOC trades, the methanol VOC ERCs will be reduced on a ratio of 1.1:1 for VOCs of toluene, ethylbenzene, xylene and ketones emitted from non-compliant coatings. All other VOCs involved in this transaction are considered to be of the same degree of photochemical reactivity;
- I.L.2.d.(v) The requirement in Regulation Number 3, Part A, Section V.F.2. shall not apply to this transaction;
- I.L.2.d.(vi) This transaction is only valid within the Denver/Boulder nonattainment area as described at 40 CFR 81, Subchapter C - Air Programs, Subpart C, Section 107 - Attainment Status Designations, Section 81.306 (February 16, 1995);
- I.L.2.d.(vii) This transaction shall be calculated upon a pound for pound basis and averaged over a maximum 24-hour period.
- I.L.2.d.(viii) This transaction shall be effective upon approval by the U.S. Environmental Protection Agency as a revision to the Colorado State Implementation Plan and after issuance of a State Construction Permit incorporating, but not limited to, the conditions and requirements of the Section;

- I.L.2.d.(ix) This transaction may not be used to satisfy any current or future requirements of NSPS, BACT, LAER, or MACT requirements of HAPs which may apply to PMF, except that this transaction may be used to satisfy control technique guidance or RACT requirements contained in Regulation Number 7 which are applicable to PMF;
  - I.L.2.d.(x) This transaction shall not interfere with any applicable requirement concerning attainment and reasonable further progress in the Colorado State Implementation Plan or any other applicable requirements of the Clean Air Act;
  - I.L.2.d.(xi) This transaction shall be registered and enforced through a State Construction Permit issued to Pioneer Metal Finishing, Inc. containing, but not limited to the conditions and limitations set forth in this Section;
  - I.L.2.d.(xii) Such state Construction Permit issued to Pioneer Metal Finishing, Inc. shall specify, among other, things the necessary monitoring, recordkeeping and reporting requirements to insure that the emission reduction credits are applied in accordance with the conditions and requirements of this Section;
  - I.L.2.d.(xiii) The state Construction Permit shall allow a daily maximum limitation of 160 lbs. of VOC emissions from non-compliant surface coatings and an annual limitation of 40,000 lbs. of non-compliant VOC emissions. The annual limitation shall be calculated on a 12-month rolling total calculated on the first day of each month using the previous 12 months.
  - I.L.2.d.(xiv) The state Construction Permit shall limit the VOC-HAP emissions to less than ten (10) per year of any one HAP or twenty-five (25) tons per year of any combination of HAP emissions; and
  - I.L.2.d.(xv) PMF will maintain records of daily and monthly totals of non-compliant surface coatings used in its operation and report such usages on an annual basis to the Division or as otherwise requested.
- I.L.3. Application methods. Beginning January 1, 2022, unless the owner or operator is reducing VOC emissions by complying with Section I.L.2.b.(i), the owner or operator must use one or more of the following coating application methods
- I.L.3.a. Electrostatic application.
  - I.L.3.b. High volume low pressure (HVLP) spray.
  - I.L.3.c. Flow coat.
  - I.L.3.d. Roller coat.
  - I.L.3.e. Dip coat, including electrodeposition.
  - I.L.3.f. Airless spray,
  - I.L.3.g. Air-assisted airless spray.

- I.L.3.h. Other coating application method capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.
- I.L.4. Work practices, beginning January 1, 2022, owners or operator's must
  - I.L.4.a. Store all VOC containing coatings, thinners, coating-related waste materials, cleaning materials, and used shop towels in closed containers.
  - I.L.4.b. Keep mixing and storage containers used for VOC containing coatings, thinners, coating-related water materials cleaning materials, and used shop towels closed at all times except when depositing or removing materials.
  - I.L.4.c. Minimize spills of VOC containing coatings, thinners, coating-related waste materials cleaning materials, and used shop towels.
  - I.L.4.d. Convey VOC containing coatings, thinners, coating-related water materials cleaning materials, and used shop towels in closed containers.
  - I.L.4.e. Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by cleaning equipment without atomizing the cleaning solvent and capturing spent solvent in closed containers.
- I.L.5. Recordkeeping. Beginning January 1, 2022, owners or operators must maintain the following records for five (5) years and make them available to the Division upon request
  - I.L.5.a. Records of the calendar year VOC emission estimates demonstrating whether the coating operation meets or exceeds the applicability threshold in Section I.L.1.a.
  - I.L.5.b. If applicable, monthly records such as safety data sheets or other analytical data from the coating manufacturer showing the VOC type and VOC content used to comply with the control requirements in Sections I.L.2.b. and I.L.2.c.
  - I.L.5.c. If applicable, records demonstrating that a listed exemption to this Section I.L. applies.
  - I.L.5.d. If applicable, monthly records sufficient to demonstrate compliance with the control requirement in Section I.L.2.a.
- I.M. Flat Wood Paneling Coating.
  - I.M.1. Definitions
    - I.M.1.a. "Class II Hardboard Paneling Finish" means finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.
    - I.M.1.b. "Coating Application System" means all operations and equipment which apply, convey, and dry a surface coating, including, but not limited to, spray booths, flow coaters, conveyers, flashoff areas, air dryers and ovens.
    - I.M.1.c. "Hardboard" is a panel manufactured primarily from inter-felted ligno-cellulosic fibers which are consolidated under heat and pressure in a hot press.
    - I.M.1.d. "Hardboard Plywood" is plywood whose surface layer is a veneer of hardwood.



I.M.1.e. "Natural Finish Hardwood Plywood Panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

I.M.1.f. "Printed Interior Panels" means panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

I.M.1.g. "Thin Particleboard" is a manufactured board 1/4 inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.

I.M.1.h. "Tileboard" means paneling that has a colored waterproof surface coating.

#### I.M.2. Applicability

This section applies to all flat wood manufacturing and surface finishing facilities that manufacture printed interior panels made of hardwood plywood and thin particle board; natural finish hardwood plywood panels, or hardboard paneling with Class II finishes. This section does not apply to the manufacture of exterior siding, tileboard, or particleboard used as a furniture component.

#### I.M.3. Emission Limitations

I.M.3.a. 2.9 kg per 100 square meters of coated finished product (6.0 lb/1,000 sq. ft.) from printed interior panels, regardless of the number of coats applied;

I.M.3.b. 5.8 kg per 100 square meters of coated finished product (12.0 lb/1,000 sq. ft.) from natural finish hardwood plywood panels, regardless of the number of coats applied; and

I.M.3.c. 4.8 kg per 100 square meters of coated finished product (10.0 lb/1,000 sq. ft.) from Class II finishes on hardboard panels, regardless of the number of coats applied.

#### I.N. Manufacture of Pneumatic Rubber Tires

##### I.N.1. Definitions

I.N.1.a. "Bead Dipping" means the dipping of an assembled tire bead into a solvent-based cement.

I.N.1.b. "Green Tires" means assembled tires before holding and curing have occurred.

I.N.1.c. "Green Tire Spraying" means the spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold after curing.

I.N.1.d. "Pneumatic Rubber Tire Manufacture" means the production of pneumatic rubber, passenger type tires on a mass production basis.

I.N.1.e. "Passenger Type Tire" means agricultural, airplane, industrial, mobile home, light and medium duty truck, and passenger vehicle tires with a bead diameter up to 20.0 inches and cross section dimension up to 12.8 inches.

I.N.1.f. "Tread End Cementing" means the application of a solvent-based cement to the tire tread ends.

I.N.1.g. "Undertread Cementing" means the application of a solvent-based cement to the underside of a tire tread.

I.N.1.h. "Water Based Sprays" means release compounds, sprayed on the inside and outside of green tires, in which solids, water, and emulsifiers have been substituted for organic solvents.

#### I.N.2. Applicability

This section applies to VOC emissions from the following operations in all pneumatic rubber tire facilities: undertread cementing, tread end cementing, bead dipping, and green tire spraying.

The provisions of this section do not apply to the production of specialty tires for antique or other vehicles when produced on an irregular basis or with short production runs. This exemption applies only to tires produced on equipment separate from normal production lines for passenger type tires.

#### I.N.3. Provisions for Specific Processes

I.N.3.a. The owner or operator of an undertread cementing, tread end cementing, or bead dipping operation subject to this regulation shall:

I.N.3.a.(i) Install and operate a capture system, designed to achieve maximum reasonable capture, up to 85 percent by weight of VOC emitted, from all undertread cementing, tread end cementing and bead dipping operations. Maximum reasonable capture shall be consistent with the following documents:

I.N.3.a.(i)(A) Industrial Ventilation, A Manual of Recommended Practices, 17th Edition, American Federation of Industrial Hygienists, 1982.

I.N.3.a.(i)(B) Recommended Industrial Ventilation Guidelines, U.S. Department of Health, Education and Welfare, National Institute of Occupational Safety and Health, January 1976.

I.N.3.a.(ii) Install and operate a control device that meets the requirements of one of the following:

I.N.3.a.(ii)(A) A carbon adsorption system designed and operated in a manner such that there is at least a 95.0 percent removal of VOC by weight from the gases ducted to the control device; or,

I.N.3.a.(ii)(B) An incineration system that oxidizes at least 90.0 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator to carbon dioxide and water.

I.N.4. The owner or operator of a green tire spraying operation subject to this regulation must implement one of the following means of reducing volatile organic compound emissions:

- I.N.4.a. Substitute water-based sprays for the normal solvent-based mold release compound; or,
  - I.N.4.a.(i) Install a capture system designed and operated in a manner that will capture and transfer at least 90.0 percent of the VOC emitted by the green tire spraying operation to a control device; and,
  - I.N.4.a.(ii) In addition to Section I.N.4.a.(i), install and operate a control device that meets the requirements of one of the following:
    - I.N.4.a.(ii)(A) a carbon adsorption system designed and operated in a manner such that there is at least 95.0 percent removal of VOC by weight from the gases ducted to the control device; or,
    - I.N.4.a.(ii)(B) an incineration system that oxidizes at least 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) to carbon dioxide and water.
- I.N.5. Testing of capture system efficiency shall meet the requirements of Section I.A.5.e.
- I.N.6. Control devices shall meet the applicable requirements, including recordkeeping, of Sections I.A.3.a., b., c., and e., and I.A.8.a. and b.
- I.N.7. The applicable EPA reference methods 1 through 4, and 25, of 40 CFR Part 60 (September 14, 1989), shall be used to determine the efficiency of control devices.
- I.O. Wood Products Coating
  - I.O.1. Definitions
    - I.O.1.a. "As Applied" means the VOC and solids content of the finishing material that is actually used for coating the substrate. It includes the contribution of materials used for in-house dilution of the finishing material.
    - I.O.1.b. "Cleaning Operation" means operations in which organic solvent is used to remove coating materials from equipment used in wood furniture manufacturing operations.
    - I.O.1.c. "Conventional Air Spray" means a spray coating method in which the coating is atomized by mixing it with compressed air at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization. Airless and air assisted spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workplace.
    - I.O.1.d. "Equipment Leak" means emissions of VOCs from pumps, valves, flanges, or other equipment used to transfer or apply finishing materials or organic solvents.
    - I.O.1.e. "Finishing Material" means a coating used in the wood furniture industry including, but not limited to, basecoats, stains, washcoats, sealers, and topcoats.

- I.O.1.f. "Finishing Operation" means those activities in which a finishing material, including, but not limited to, basecoats, stains, washcoats, sealers, and topcoats, is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.
- I.O.1.g. "Organic Solvent" means a liquid containing VOCs that is used for dissolving or dispersing constituents in a coating, adjusting the viscosity of a coating, cleaning, or washoff. When used in a coating, the organic solvent evaporates during drying and does not become part of the dried film.
- I.O.1.h. "Sealer" means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. Washcoats, which are used in some finishing systems to optimize aesthetics, are not sealers.
- I.O.1.i. "Strippable Booth Coating" means a coating that is applied to a booth wall to provide a protective film to receive overspray during finishing operations that is subsequently peeled off and disposed, and reduces or eliminates the need to use organic solvents to clean booth walls.
- I.O.1.j. "Topcoat" means the last film-building finishing material applied in a finishing system. Non-permanent final finishes are not topcoats.
- I.O.1.k. "Washcoat" means a transparent special purpose coating that has a solids content by weight of 12 percent or less. Washcoats are applied over initial stains to protect and control color and to stiffen the wood fibers in order to aid sanding.
- I.O.1.l. "Washoff Operation" means those operations in which organic solvent is used to remove coating from a substrate.
- I.O.1.m. "Wood Furniture" means any product made of wood, a wood product such as rattan or wicker, or an engineer wood product such as particleboard.
- I.O.1.n. "Wood Furniture Component" means any part that is used in the manufacture of wood furniture including, but not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops.
- I.O.1.o. "Wood Furniture Manufacturing Operation" means the finishing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

#### I.O.2. Applicability

This section applies to wood furniture manufacturing operations with uncontrolled actual VOC emissions greater than or equal to 25 tons per calendar year.

Beginning July 1, 2021, this section applies to other wood products coating operations with uncontrolled actual VOC emissions greater than or equal to 50 tons per year (as of January 27, 2020, located in the 8-Hour Ozone Control Area).

#### I.O.3. Emission Limitations

- I.O.3.a. The owner or operator of a wood furniture manufacturing or other wood products coating operation must limit VOC emissions from finishing operations by:

- I.O.3.a.(i) Using topcoats with a VOC content equal to or less than 0.8 lb VOC/lb solids (0.8 kg VOC/kg solids); or
- I.O.3.a.(ii) Using a finishing system of:
  - I.O.3.a.(ii)(A) Sealers with a VOC content equal to or less than 1.9 lb VOC/lb solids (1.9 kg VOC/kg solids), as applied; and
  - I.O.3.a.(ii)(B) Topcoats with a VOC content equal to or less than 1.8 lb VOC/lb solids (1.8 kg VOC/kg solids), as applied; or
- I.O.3.a.(iii) For sources using acid-cured alkyd amino vinyl sealers or acid-cured alkyd amino conversion varnish topcoats:
  - I.O.3.a.(iii)(A) Use acid-cured alkyd amino vinyl sealers with a VOC content equal to or less than 2.3 lb VOC/lb solids (2.3 kg VOC/kg solids), as applied, and an acid-cured alkyd amino conversion varnish topcoat with a VOC content equal to or less than 2.0 lb VOC/lb solids (2.0 kg VOC/kg solids), as applied; or
  - I.O.3.a.(iii)(B) Use acid-cured alkyd amino conversion varnish topcoat with a VOC content equal to or less than 2.0 lb VOC/lb solids (2.0 kg VOC/kg solids), as applied, and sealers with a VOC content equal to or less than 1.9 lb VOC/lb solids (1.9 kg VOC/kg solids); or
  - I.O.3.a.(iii)(C) Use acid-cured alkyd amino vinyl sealers with a VOC content equal to or less than 2.3 lb VOC/lb solids (2.3 kg VOC/kg solids), as applied, and topcoats with a VOC content equal to or less than 1.8 lb VOC/lb solids (1.8 kg VOC/kg solids), as applied.
- I.O.3.b. The owner or operator of a wood furniture manufacturing or other wood products coating operation must use strippable booth coatings with a VOC content equal to or less than 0.8 lb VOC/lb solids (0.8 kg VOC/kg solids), as applied.
- I.O.3.c. The owner or operator of a wood furniture manufacturing or other wood products coating operation must use compounds containing equal to or less than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, and/or metal filters, unless the spray booth is being refurbished. If the spray booth is refurbished (i.e., spray booth coating or other material used to cover the booth is being replaced), the owner or operator must use equal to or less than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating.
- I.O.4. Work Practices
  - I.O.4.a. In addition to complying with Sections I.A.7. and I.A.9., the owner or operator of a wood furniture manufacturing or other wood products coating operation must:
    - I.O.4.a.(i) Develop an operator training program that includes, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes;

- I.O.4.a.(ii) Conduct monthly visual inspections of all equipment used to transfer or apply finishing materials or organic solvents for equipment leaks and repair equipment leaks within 15 working days, or within 3 months if the leaking equipment must be replaced by a new purchase;
- I.O.4.a.(iii) Collect cleaning and washoff solvents into closed containers;
- I.O.4.a.(iv) Use conventional air spray guns only to:
  - I.O.4.a.(iv)(A) Apply finishing materials with a VOC content equal to or less than 1.0 lb VOC/lb solids (1.0 kg VOC/kg solids), as applied;
  - I.O.4.a.(iv)(B) Touch-up and repair after completion of the finishing operation, after stain and before other finishing material, or to apply stain on a part for which it is technically or economically infeasible to use any other spray application technology.

#### I.O.5. Recordkeeping

- I.O.5.a. The owner or operator of a wood furniture manufacturing or other wood products coating operation must keep the following records for five (5) years and make them available for inspection by the Division upon request:
  - I.O.5.a.(i) Records of calendar year VOC emission estimates demonstrating whether the wood furniture manufacturing operation means or exceeds the applicability threshold in Section I.O.2.;
  - I.O.5.a.(ii) Records of the operator training program;
  - I.O.5.a.(iii) Records of the date and results of the monthly equipment inspections and any repairs that were made;
  - I.O.5.a.(iv) Records such as, but not limited to, data sheets documenting how the as applied values were determined and safety data sheets or other analytical data from the manufacturer showing the VOC content of each sealer, topcoat, strippable booth coating, or cleaning booth compound subject to the emission limits in Section I.O.3.; and
  - I.O.5.a.(v) Monthly records of the quantity and type of organic cleaning and washoff solvent used.

## II. Solvent Use

### II.A. General Provisions

II.A.1. Applicability

The provisions of this section apply to cold cleaners, non-conveyorized vapor degreasers, conveyorized degreasers, industrial cleaning solvent operations, and other operations that use solvents. Open top vapor degreasers are a subset of non-conveyorized vapor degreasers. The owner or operator of a unit subject to this section shall ensure that no such unit is used unless the requirements of this section are satisfied. Section II.E. requirements are effective on January 1, 2017. Section II.F. requirements are effective on May 1, 2021.

II.A.2. Definitions

II.A.2.a. "Cold-Cleaner" means a container of non-aqueous liquid solvent held below its boiling point, which is designed, used, or intended for cleaning solid objects in a batch-loaded process. A "cold-cleaner" may have provisions for heating the solvent. It does not include vapor degreasers or continuously loaded conveyorized degreasers.

II.A.2.b. "Composite Partial Vapor Pressure" means the sum of the partial pressures of the compounds defined as VOCs. Composite partial vapor pressure is calculated as follows:

$$PP_c = \sum_{i=1}^n \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \sum_{c=1}^n \frac{W_c}{MW_c} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

- W<sub>i</sub> = Weight of the "i"th VOC compound, in grams
- W<sub>w</sub> = Weight of water, in grams
- W<sub>e</sub> = Weight of exempt compound, in grams
- MW<sub>i</sub> = Molecular weight of the "i"th VOC compound, in g/g-mole
- MW<sub>w</sub> = Molecular weight of water, in g/g-mole
- MW<sub>c</sub> = Molecular weight of exempt compound, in g/g-mole
- PP<sub>c</sub> = VOC composite partial vapor pressure at 20°C (68°F), in mm Hg
- VP<sub>i</sub> = Vapor pressure of the "i"th VOC compound at 20°C(68°F), in mm Hg

II.A.2.c. "Conveyorized Degreaser" means an apparatus that performs degreasing or other cleaning functions through the use of non-aqueous liquid solvent and/or solvent vapors within a container, and which has a conveyor mechanism allowing continuous loading of items conveyed into and out of the solvent.

II.A.2.d. "Freeboard" in a vapor degreaser means the vertical distance from the top of the vapor zone (as established by normal operations within the specifications of the degreaser manufacturer) to the top of the degreaser.

For cold-cleaners "freeboard" means the vertical distance from the surface of the solvent liquid to the top of the degreaser.

If all sides are not even, the vertical distance to the top of the lowest side shall be used to make the determination of freeboard.

II.A.2.e. "Freeboard Ratio" means the ratio of the freeboard to the width of the solvent surface.

II.A.2.f. "Industrial Cleaning Solvent" means a VOC-containing liquid used to perform industrial cleaning solvent operations.

II.A.2.g. "Industrial Cleaning Solvent Operation" means the use of an industrial cleaning solvent for cleaning industrial operations such as spray gun cleaning, spray booth cleaning, large manufactured parts cleaning, equipment cleaning, floor cleaning, line cleaning, parts cleaning, tank cleaning, and small manufactured parts cleaning. Residential and janitorial cleaning are not considered industrial cleaning solvent operations.

II.A.2.h. "Non-Conveyorized Vapor Degreaser" means an apparatus, which uses non-aqueous solvent vapors within some type of container to degrease or otherwise clean solid objects in a batch-loaded process. It excludes continuously loaded conveyorized degreasers.

II.A.2.i. "Residential and Janitorial Cleaning" means the cleaning of a building or building components including, but not limited to, floors, ceilings, wall, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment, excluding the cleaning of work areas where manufacturing or repair activity is performed.

II.A.2.j. "Solvent Metal Cleaning" means the process of cleaning soils from metal surfaces by cold cleaning, conveyorized degreasing, or non-conveyorized vapor degreasing.

#### II.A.3. Transfer of waste solvent and used solvent

In any disposal or transfer of waste or used solvent, at least 80 percent by weight of the solvent/waste liquid shall be retained (i.e., no more than 20 percent of the liquid solvent/solute mixture shall evaporate or otherwise be lost during transfers).

#### II.A.4. Storage of waste solvent and used solvent

Waste or used solvent shall be stored in closed containers unless otherwise required by law.

II.A.5. Any control device shall meet the applicable requirements of Sections I.A.3.a., b., c., e., and I.A.8.a. and b.

### II.B. Control of Solvent Cold-Cleaners

#### II.B.1. Control Equipment

##### II.B.1.a. Covers

II.B.1.a.(i) All cold-cleaners shall have a properly fitting cover.

II.B.1.a.(ii) Covers shall be designed to be easily operable with one hand under any of the following conditions:

II.B.1.a.(ii)(A) Solvent true vapor pressure is greater than 15 torr (0.3 psia) at 38°C (100°F).

II.B.1.a.(ii)(B) The solvent is agitated by an agitating mechanism.

II.B.1.a.(ii)(C) The solvent is heated.



II.B.1.b. Drainage Facility

II.B.1.b.(i) All cold-cleaners shall have a drainage facility that captures the drained liquid solvent from the cleaned parts.

II.B.1.b.(ii) For cold-cleaners using solvent which has a vapor pressure greater than 32 torr (0.62 psia) measured at 38°C (100°F) either:

II.B.1.b.(ii)(A) There shall be an internal drainage facility within the confines of the cold-cleaner, so that parts are enclosed under the (closed) cover to drain after cleaning, or if such a facility will not fit within;

II.B.1.b.(ii)(B) An enclosed, external drainage facility that captures the drained solvent liquid from the cleaned parts.

II.B.1.c. A permanent, clearly visible sign shall be mounted on or next to the cold-cleaner. The sign shall list the operating requirements.

II.B.1.d. Solvent spray apparatus shall not have a splashing, fine atomizing, or shower type action but rather should produce a solid, cohesive stream. Solvent spray shall be used at a pressure that does not cause excessive splashing.

For solvents with a true vapor pressure above 32 torr (0.62 psia) at 38°C (100°F), or, for solvents heated above 50°C (120°F), one of the following techniques shall be used:

II.B.1.d.(i) A freeboard ratio greater than or equal to 0.7.

II.B.1.d.(ii) A water or a non-volatile liquid cover. The cover liquid shall not be soluble in the solvent and shall not be denser than the solvent and the depth of the cover liquid shall be sufficient to prevent the escape of solvent vapors.

II.B.2. Operating requirements

II.B.2.a. The cold-cleaner cover shall be closed whenever parts are not being handled within the cleaner confines.

II.B.2.b. Cleaned parts shall be drained for at least 15 seconds and/or until dripping ceases. Any pools of solvent shall be tipped out on the clean part back into the tank.

II.C. Control of Non-Conveyorized Vapor Degreasers

II.C.1. Control Equipment

II.C.1.a. The non-conveyorized vapor degreaser shall have a cover which shall be designed and operated so that it can be easily opened and closed through the use of mechanical assists such as spring loading, counterweights, etc.; opening and closing the cover shall not disturb the vapor zone.

II.C.1.b. Safety Switches

The following two types of switches shall be installed on vapor degreasers:

- II.C.1.b.(i) Condenser flow switch and thermostat - (shuts off sump heat if the condenser coolant is either not circulating or is too warm); and
- II.C.1.b.(ii) Spray safety switch - (shuts off spray pump if the vapor level drops more than four (4) inches).

II.C.1.c. Control Device

- II.C.1.c.(i) For non-conveyorized vapor degreasers with an open area (with the cover open) of one square meter (10.8 ft<sup>2</sup>) or less, either the freeboard ratio shall be greater than or equal to 0.75, or one of the control devices in II.C.1.c.(ii) shall be used.
- II.C.1.c.(ii) For non-conveyorized vapor degreasers with an open area (with the cover open) greater than one (1) square meter, (10.8 ft<sup>2</sup>), at least one of the following control systems shall be used:
  - II.C.1.c.(ii)(A) Both a powered cover and a freeboard ratio greater than or equal to 0.75.
  - II.C.1.c.(ii)(B) A refrigerated chiller with a cooling capacity equivalent to or greater than the applicable specifications in Appendix C.
  - II.C.1.c.(ii)(C) An enclosed design: A system where the cover(s) or door(s) opens only when a dry part is entering or exiting the degreaser.
  - II.C.1.c.(ii)(D) A carbon adsorption system with ventilation greater than or equal to 15 cubic meters each minute per square meter (50 cfm/ft<sup>2</sup>) of air/vapor area (when the cover(s) is [are] open), exhausting less than 25 parts per million (by volume) of solvent averaged over one complete adsorption cycle.

II.C.1.d. A permanent, clearly visible sign shall be mounted on or next to the degreaser. The sign shall list the operating requirements.

II.C.2. Operating Requirements

- II.C.2.a. Keep cover closed at all times except when processing work loads into or out of the degreaser.
- II.C.2.b. The following operations shall be performed to minimize solvent carry-out:
  - II.C.2.b.(i) Rack parts to allow full drainage.
  - II.C.2.b.(ii) Move parts as slowly as is practicable in and out of the degreaser. A maximum of one foot every five seconds by hand or a maximum of 5.5 cm/sec. (10.8ft/min) for a mechanically operated system.
  - II.C.2.b.(iii) Allow the workload to clean in the vapor zone at least 30 seconds or until condensation ceases.
  - II.C.2.b.(iv) Tip out any pools of solvent that remain on the cleaned parts before removal from the vapor zone.

II.C.2.b.(v) Allow parts to dry within the degreaser at least 15 seconds and/or until visually dry.

II.C.2.c. Solvents shall not be used to clean porous or absorbent materials; for example, cloth, leather, wood, rope, etc.

II.C.2.d. Workloads shall not occupy more than half of the degreaser's open top area.

II.C.2.e. Spraying shall not be done above the vapor level.

II.C.2.f. Solvent leaks shall be repaired immediately, or the degreaser shall be shut down.

II.C.2.g. Exhaust ventilation shall not exceed twenty (20) cubic meters per minute per square meter (65.6 cfm per sq. ft.) of degreaser open area, unless greater exhaust rates are necessary to meet Occupational and Safety Health Act requirements. Ventilation fans shall not be used near the degreaser opening, unless necessary to meet Occupational and Safety Health Act requirements.

II.C.2.h. The water separator shall function so that no visible water is present in the solvent exiting the separator.

## II.D. Control of ConveyORIZED Degreasers

### II.D.1. Control Equipment

#### II.D.1.a. Control Device

For all conveyORIZED degreasers with a solvent surface area greater than two (2) square meters (21.5 square feet), the degreasing shall be controlled by at least one of the following:

II.D.1.a.(i) Carbon adsorption system, with ventilation greater or equal to 15 cubic meters per minute per square meter (49.2 cfm/ft<sup>2</sup>) of air/vapor interface for vapor degreasers (of air/liquid interface for non-vapor types) when down-time covers are open, and exhausting less than 25 parts per million of solvent (by volume) averaged over a complete adsorption cycle.

II.D.1.a.(ii) For vapor degreasers only: a refrigerated chiller with a cooling capacity equivalent to or greater than the applicable specifications in Appendix D.

#### II.D.1.b. Prevention of Carry-out

A drying tunnel, tumbling basket(s), or other demonstrably effective method(s) shall be employed to prevent cleaned parts from carrying out solvent liquid or vapor.

#### II.D.1.c. Safety Switches

II.D.1.c.(i) The following two (2) switch-circuits (or equivalent) shall be installed.

II.D.1.c.(i)(A) A spray safety switch shall shut off the spray pump and/or the conveyor if the vapor level drops more than four (4) inches.

II.D.1.c.(i)(B) A vapor level control thermostat shall shut off sump heat when the vapor level rises too high.

II.D.1.c.(ii) All conveyORIZED degreasers shall have a condenser thermostat and flow-detector switch (or equivalent) which shuts off sump heat if coolant is too warm or is not circulating.

II.D.1.d. Minimized Openings: Degreaser entrance and exit openings shall silhouette workloads so that the average clearance between parts (or parts-and the edge of the degreaser opening) is either:

II.D.1.d.(i) less than 10 centimeters (4 inches) or;

II.D.1.d.(ii) less than 10 percent of the width of the opening

II.D.1.e. Covers shall be provided to close off all the entrance(s) and exit(s) when the conveyor is not in use.

II.D.1.f. A permanent, clearly visible sign shall be mounted on or next to the degreaser. The sign shall list the operating requirements.

## II.D.2. Operating Requirements

II.D.2.a. Exhaust ventilation shall not exceed 20 m<sup>3</sup>/minute per square meter of degreaser opening (65.6 cf/m per square foot), unless necessary to meet OSHA requirements. Work place fans shall not be located near, nor directed at degreaser openings, unless necessary to meet OSHA requirements. Exhaust flow shall be measured by EPA reference methods 1 and 2 of 40 CFR Part 60 (September 14, 1989).

II.D.2.b. Carry-out emissions shall be minimized by:

II.D.2.b.(i) Racking parts in such a manner to achieve best drainage.

II.D.2.b.(ii) Maintaining the vertical component of conveyor speed at less than 3.3 meters per minute (10.8 feet per minute).

II.D.2.c. Repair solvent leaks immediately, or shut down the degreaser.

II.D.2.d. The water separator shall function with an efficiency sufficient to prevent water from being visible in the solvent exiting the separator.

II.D.2.e. Down-time cover(s) shall be placed over entrances and exits of conveyORIZED degreasers immediately after the conveyor and exhaust are shut down. Covers shall be retained in position until immediately before start-up.

## II.E. Control of Industrial Cleaning Solvent Operations

### II.E.1. Control Requirements

The owner or operator of an industrial cleaning solvent operation with total combined uncontrolled actual VOC emissions equal to or greater than three (3) tons per calendar year (excluding VOC emissions from solvents used for cleaning operations that are exempt under Section II.E.4.) must:

- II.E.1.a. Limit the VOC content of cleaning solvents to less than or equal to 0.42 lb of VOC/gal (50 grams VOC/liter); or
- II.E.1.b. Limit the composite partial vapor pressure of the cleaning solvent to 8 millimeters of mercury (mmHg) at 20 degrees Celsius (68 degrees Fahrenheit); or
- II.E.1.c. Reduce VOC emissions with an emission control system having a control efficiency of 90% or greater.

#### II.E.2. Work Practice Requirements

The owner or operator of an industrial cleaning solvent operation must implement the following work practice requirements at all times to reduce VOC emissions from fugitive sources:

- II.E.2.a. Cover open containers and used applicators in a manner that minimizes evaporation into the atmosphere;
- II.E.2.b. Properly dispose of used solvent and shop towels; and
- II.E.2.c. Implement good air pollution control practices that minimize emissions, including, but not limited to, using only volumes necessary for cleaning and maintaining cleaning equipment to be leak free.

#### II.E.3. Monitoring, Recordkeeping and Reporting Requirements

II.E.3.a. The owner or operator of an industrial cleaning solvent operation must keep the following records for two (2) years and make them available for inspection by the Division upon request:

- II.E.3.a.(i) If applicable, records demonstrating that a listed exemption to this Section II.E. applies.
- II.E.3.a.(ii) If applicable, monthly records such as safety data sheets or other analytical data from the industrial cleaning solvent manufacturer showing the VOC type and VOC content, or the composite partial vapor pressure at 20 degrees Celsius, and total amount of VOC-containing solvent used in solvent cleaning operations to demonstrate compliance with the control requirements in Sections II.E.1.a. and II.E.1.b.
- II.E.3.a.(iii) If applicable, monthly records sufficient to demonstrate compliance with the control requirement in Section II.E.1.c.
- II.E.3.a.(iv) Records of calendar year VOC emission estimates demonstrating whether the industrial cleaning solvent operation meets or exceeds the applicability threshold in Section II.E.1.

II.E.3.b. Compliance with the control requirements in Section II.E.1. must be demonstrated using one of the following methods as applicable:

- II.E.3.b.(i) Safety data sheets or other analytical data from the industrial cleaning solvent manufacturer to demonstrate compliance with Sections II.E.1.a. and II.E.1.b.;

- II.E.3.b.(ii) A manufacturer guarantee of the control equipment's emission control efficiency and operation and maintenance of control equipment according to manufacturer's specifications to demonstrate compliance with Section II.E.1.c.; or
- II.E.3.b.(iii) A performance test conducted during representative operations using one of the following methods, as applicable:
  - II.E.3.b.(iii)(A) EPA Method 24 (40 CFR Part 60, Appendix A) (November 17, 2016) to determine VOC content;
  - II.E.3.b.(iii)(B) EPA Method 18, 25, or 25A (40 CFR Part 60, Appendix A) (November 17, 2016) to determine control efficiency of the emission control equipment.

#### II.E.4. Exemptions

II.E.4.a. Industrial cleaning solvent operations are not subject to Section II.E. if they are subject to a work practice or emission control requirement in another federally enforceable section of Regulation Number 7 that establishes RACT.

II.E.4.b. The VOC control requirements in Section II.E.1. do not apply to:

- II.E.4.b.(i) Cleaning of electrical and electronic components;
- II.E.4.b.(ii) Cleaning of precision optics;
- II.E.4.b.(iii) Cleaning of numismatic dies;
- II.E.4.b.(iv) Stripping of cured inks, coatings, and adhesives;
- II.E.4.b.(v) Cleaning of resin, coating, ink, and adhesive manufacturing, mixing, molding, and application equipment;
- II.E.4.b.(vi) Cleaning of research and development laboratories;
- II.E.4.b.(vii) Cleaning of medical device or pharmaceutical manufacturing equipment;
- II.E.4.b.(viii) Performance testing to determine coating, adhesive, ink or ink performance;
- II.E.4.b.(ix) Cleaning of equipment and materials used in testing for quality control or quality assurance purposes;
- II.E.4.b.(x) Cleaning of digital printing operations; and
- II.E.4.b.(xi) Cleaning of screen printing operations.

II.E.4.c. In lieu of compliance with Section II.E.1. and II.E.2., the owner or operator of an area source aerospace facility, as defined in 40 CFR Part 63, Section 63.742 (November 17, 2016), may implement the solvent cleaning provisions of the National Emission Standards for Hazardous Air Pollutants for Aerospace Manufacturing and Rework facilities contained in 40 CFR Part 63, Section 63.744 (November 17, 2016) along with the applicable definitions contained in 40 CFR Part 63, Section 63.742 (November 17, 2016), except that:

II.E.4.c.(i) VOC-containing solvents which meet the definition of “non-HAP materials” in 40 CFR Part 63, Section 63.742 (November 17, 2016) are not excluded from the housekeeping measures contained in 40 CFR Part 63, Section 63.744(a) (November 17, 2016); and

II.E.4.c.(ii) The baseline reduction compliance option contained in 40 CFR Part 63, Section 63.744(b)(3) (November 17, 2016) is not available for purposes of compliance with this VOC control rule.

## II.F. General Solvent Use

### II.F.1. Applicability

II.F.1.a. Within the 8-Hour Ozone Control Area: As of May 1, 2021, the requirements of Section II.F. apply to operations that use solvents with uncontrolled actual VOC emissions greater than or equal to two (2) tons per year that existed at major sources of VOC (greater than or equal to 50 tpy VOC) as of [EFFECTIVE DATE OF THE RECLASSIFICATION].

~~II.F.1.b. (State Only) Outside the 8-Hour Ozone Control Area: As of May 1, 2021, the requirements of Section II.F. apply to operations that use solvents with uncontrolled actual VOC emissions greater than or equal to five (5) tons per year that existed at sources of VOC greater than or equal to 50 tpy VOC as of [EFFECTIVE DATE OF THE RECLASSIFICATION].~~

### II.F.2. Exemptions

The requirements of this Section II.F. do not apply to:

II.F.2.a. Operations that are subject to a solvent work practice or emission control requirement in another federally enforceable section of Regulation Number 7 that constitutes RACT, or;

II.F.2.b. Solvent use where the solvent does not contain VOCs.

### II.F.3. Work practice requirements

The owner or operator of operations that use solvents must implement the following work practice requirements at all times to reduce VOC emissions from fugitive sources:

II.F.3.a. Cover open containers and used applicators in a manner that minimizes evaporation into the atmosphere;

II.F.3.b. Properly dispose of used solvent and solvent contaminated waste (e.g. shop towels and carbon filtration or other control device media), and;

II.F.3.c. Implement good air pollution control practices that minimize emissions, including but not limited to:

- II.F.3.c.(i) Using low or no-VOC solvents, if possible;
- II.F.3.c.(ii) Using only volumes of solvent necessary for operations;
- II.F.3.c.(iii) Using submerged fill pipes in storage tanks and containers;
- II.F.3.c.(iv) Using closed loop systems to minimize solvent loss during transfer and use of solvents;
- II.F.3.c.(v) Maintaining solvent storage, transfer, and use operations equipment in such a way that it minimizes evaporation loss and remains leak free, and;
- II.F.3.c.(vi) Owners or operators of sources that use a carbon adsorption system must provide for the proper disposal or reuse of all VOC recovered.

#### II.F.4. Control of general solvent use

The owner or operator of operations that use solvents with uncontrolled actual VOC emissions greater than or equal to twenty five (25) tons per year on a calendar year basis, and that are located in the 8-Hour Ozone Control Area, must reduce solvent use VOC emissions by 90%.

#### II.F.5. Monitoring requirements

II.F.5.a. The owner or operator of operations that use solvents that utilize a closed-loop system for emission control must inspect the control system using audio, visual, olfactory (AVO) on a monthly basis for perceptible emissions. First attempt to repair must be made upon detection if feasible, but no later than three (3) calendar days from detection.

II.F.5.b The owner or operator of operations that use solvents that utilize a control device must operate and maintain the control device consistent with the manufacturer's specifications.

II.F.5.c. The owner or operator of operations that use solvents that are subject to the 90% control requirement in Section II.F.4. must:

II.F.5.c.(i) Complete a performance test once every three (3) years during representative operations to verify compliance with Section II.F.4. using one of the following methods, as applicable:

II.F.5.c.(i)(A) EPA Method 24 (40 CFR Part 60, Appendix A) (November 17, 2016) to determine VOC content.

II.F.5.c.(i)(B) EPA Method 18, 25, or 25A (40 CFR Part 60, Appendix A) (November 17, 2016) to determine control efficiency of the emission control equipment.



II.F.5.c.(ii) Conduct all performance tests in accordance with EPA test methods and a test protocol submitted to the Division for review at least thirty (30) days prior to testing and in accordance with AQCC Common Provisions Regulation Section II.C.

II.F.5.c.(iii) Comply with control device and monitoring system manufacturers' specifications for operation and maintenance for equipment used to demonstrate compliance with Section II.F.4.

II.F.6. Recordkeeping

II.F.6.a. Records of calendar year VOC emission estimates demonstrating whether the solvent operation meets or exceeds the applicability threshold in Section II.F.1.

II.F.6.b. If applicable, records demonstrating that an exemption to Section II.F.2. applies.

II.F.6.c. Monthly solvent losses based on beginning and ending inventories, solvent received, inventory adjustments, solvent destroyed in a control device, solvent recovered, and any volume of solvent normally retained in recovery equipment. Solvent losses must be totaled on a rolling 12-month basis.

II.F.6.d. Monthly records such as safety data sheets or other analytical data from the solvent manufacturer showing the VOC type and VOC content, or the composite partial vapor pressure at 20 degrees Celsius, and total amount of VOC-containing solvent used in solvent operations.

II.F.6.e. Records of negative pressure ranges, and other records necessary to demonstrate compliance with Section II.F.3.

II.F.6.f. Manufacturer guarantee of the control equipment's emission control efficiency to demonstrate compliance with Section II.F.4.

II.F.6.g. If applicable, monthly records of operation and maintenance of control device and monitoring system according to manufacturer's specifications to demonstrate compliance with Sections II.F.4. and II.F.5.

II.F.6.h. If applicable, Records of performance tests conducted to demonstrate compliance with Section II.F.5.

II.F.6.i. If applicable, monthly records of AVO inspections including:

II.F.6.i.(i) The date, facility name, and facility AIRS ID or facility location if the facility does not have an AIRS ID for each inspection;

II.F.6.i.(ii) A list of the leaks requiring repair,

II.F.6.i.(iii) The date of first attempt to repair the leak and, if necessary, any additional attempt to repair;

II.F.6.i.(iv) The date the leak was repaired and type of repair method applied.

II.F.6.j. Records must be maintained for two (2) years and made available for inspection by the Division upon request.

### III. Use of Cutback Asphalt

#### III.A. Definitions

III.A.1. "Asphalt or Asphalt Cement" The dark-brown to black cementitious material (solid, semi-solid, or liquid in consistency) of which the main constituents are bitumen's which occur naturally or as a residue of petroleum refining.

III.A.2. "Asphalt Concrete" A waterproof and durable paving material composed of dried aggregate, which is evenly coated with hot asphalt cement.

III.A.3. "Cutback Asphalt or Cutback Asphalt Cement" Any asphalt which has been liquefied by blending with a VOC, such as a petroleum solvent diluents or, in the case of some slow cure asphalts (Road Oils), which has been produced directly from the distillation of petroleum.

III.A.4. "Emulsified Asphalt" Asphalt emulsions produced by combining asphalt and water with emulsifying agent.

Emulsified Asphalt or any other coating or sealant, including but not limited to those produced from petroleum or coal, which contain more than five (5) percent of oil distillate as determined by ASTM Method D-244 is included in this definition.

III.A.5. "Penetrating Prime Coat" An application of low-viscosity liquid asphalt to an absorbent surface in order to prepare it for overlaying with a layer or layers of asphalt cement or asphalt emulsion and mineral aggregate paving materials.

#### III.B. Limitations

##### III.B.1. Applicability

The provisions of this Section III. apply to the use and storage of cutback asphalt for the paving and maintenance of all public roadways (including alleys), private roadways, parking lots, and driveways only within ozone nonattainment areas.

##### III.B.2. Storage

Stockpiles of aggregate mixed with cutback asphalt are permitted October 1 through February 28 (29). Such storage is not permitted March 1 through September 30 except where it can be demonstrated to the Division that such storage is necessary.

##### III.B.3. Use

Cutback asphalt may be used for any paving purpose October 1 through February 28 (29). No person shall use cutback asphalt or any coating included in the definition of cutback asphalt in Section III.A.3. March 1 through September 30 except as provided:

III.B.3.a. If used solely as a penetrating prime coat, or

III.B.3.b. If the user can demonstrate to the Division that under the conditions of its intended use, there will be no emissions of volatile organic compounds to the ambient air.

III.C. Recordkeeping

During the months of March through September, the person responsible for the use or storage of any cutback asphalt as permitted in Sections III.B.3.a., III.B.3.b., and Section III.B.2. shall keep records of same, including type and amount of solvent(s) used.

**IV. Graphic Arts and Printing**

IV.A. Packaging Rotogravure, Publication Rotogravure, and Flexographic Printing

IV.A.1. Definitions

For the purpose of this section, the following definitions apply:

IV.A.1.a. "Flexographic Printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

IV.A.1.b. "Packaging Rotogravure Printing" means rotogravure printing upon paper, paperboard, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packaging products and labels for articles to be sold.

IV.A.1.c. "Publication Rotogravure Printing" means rotogravure printing upon paper, which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

IV.A.1.d. "Roll Printing" means the application of words, designs, and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.

IV.A.1.e. "Rotogravure Printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique, which involves an intaglio or recessed image areas in the form of cells.

IV.A.2. Applicability

IV.A.2.a. This section applies to all packaging rotogravure, publication rotogravure, and flexographic printing facilities whose potential emissions of volatile organic compounds before control (determined at design capacity and 8760 hrs/year, or at maximum production, and accounting for any capacity or production limitations in a federally-enforceable permit) are equal to or more than 90,000 Kg per year (100 tons/year). Potential emissions are to be estimated by extrapolating historical records of actual consumption of solvent and ink. (e.g., the historical use of 20 gallons of ink for 4,000 annual hours would be extrapolated to 43.8 gallons for 8760 hours.)The before-control volatile organic compound emissions calculations shall be the summation of all volatile organic compounds in the inks and solvents (including cleaning liquids) used.

IV.A.3. Provisions for Specific Processes

- IV.A.3.a. No owner or operator of a facility subject to this section and employing VOC-containing ink shall operate, cause, allow, or permit the operation of the facility unless:
- IV.A.3.a.(i) The volatile fraction of ink, as it is applied to the substrate, contains 25.0 percent or less (by volume) of VOC and 75.0 percent or more (by volume) of water; or
  - IV.A.3.a.(ii) The ink (minus water) as it is applied to the substrate, contains 60.0 percent or more (by volume) non-volatile material; or
  - IV.A.3.a.(iii) The owner or operator installs and operates a control device and capture system in accordance with Sections IV.A.3.b. and IV.A.3.c.; or
  - IV.A.3.a.(iv) A combination of solvent-borne inks and low solvent inks that achieve a 70% (volume) overall reduction of solvent usage (compared to an all solvent borne ink usage) is used; or
  - IV.A.3.a.(v) Flexographic and packaging rotogravure printing facilities limit emissions to 0.5 pounds of VOC per pound of solids in the ink. The limit includes all solvent added to the ink: solvent in the purchased ink, solvent added to cut the ink to achieve desired press viscosity, and solvent added to ink on the press to maintain viscosity during the press run. (Publication rotogravure facilities shall not use this option); or
  - IV.A.3.a.(vi) Crossline averaging is used. The requirements of Section I.A.5.d. apply.
- IV.A.3.b. A capture system shall be used in conjunction with the emission control system in Section IV.A.3.a. The design and operation of a capture system shall be consistent with good engineering practice, and in conjunction with control equipment shall be required to provide for an overall reduction in volatile organic compound emissions of at least:
- IV.A.3.b.(i) 75.0 percent where a publication rotogravure process is employed;
  - IV.A.3.b.(ii) 65.0 percent where a packaging rotogravure process is employed; or
  - IV.A.3.b.(iii) 60.0 percent where a flexographic printing process is employed.
- IV.A.3.c. The design, operation, and efficiency of any capture system used in conjunction with any emission control system shall be certified in writing by the source owner or operator and approved by the Division. Testing of any capture system may be required by the Division on a case-by-case basis, in cases where a total enclosure is not used or when material balance results are questionable. Testing of capture system efficiency shall meet the requirements of Section I.A.5.e.

- IV.A.3.d. The overall reduction in VOC emissions specified in Section IV.A.3.b. shall be calculated by material balance methods approved by the Division, or by determination of capture and control device efficiencies. The overall VOC emission reduction rate equals the (percent capture efficiency X percent control device efficiency)/100.

#### IV.A.4. Testing and Monitoring

The owner or operator of a source subject to the requirements of this section is also subject to the requirements of Part C, Sections I.A.3., I.A.7, I.A.9., and I.A.10. In Part C, Section I.A.3., EPA reference method 24A shall be the test method used for publication rotogravure inks, while EPA Reference method 24 data is acceptable for all other inks. Test methods as set forth in Appendix A, Part 60, Chapter I, Title 40, of the Code of Federal Regulations (CFR), in effect July 1, 1993.

- IV.A.5. The owner or operator of a source subject to the requirements of this section is also subject to the requirements of Section I.A.8. "A Guideline for Graphic Arts Calculations" shall be used for compliance determination.

#### IV.B. Lithographic and Letterpress Printing

##### IV.B.1. General Provisions

##### IV.B.1.a. Definitions

- IV.B.1.a.(i) "Alcohol" means any of the hydroxyl-containing organic compounds with a molecular weight equal to or less than 74.12, which includes methanol, ethanol, propanol, and butanol.
- IV.B.1.a.(ii) "Alcohol substitute" means nonalcohol additives that contain VOCs and are used in the fountain solution to reduce the surface tension of water or prevent ink piling.
- IV.B.1.a.(iii) "Cleaning material" means a VOC-containing material used to remove ink and debris from the printing press area, operating surfaces of the printing press and, printing press parts. Blanket wash is a type of cleaning material.
- IV.B.1.a.(iv) "Composite partial vapor pressure" means the sum of the partial pressures of the compounds defined as VOCs. Composite partial vapor pressure is calculated as follows:

$$PP_c = \frac{\sum_{i=1}^n \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{c=1}^n \frac{W_c}{MW_c} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

- Wi = Weight of the "i"th VOC compound, in grams  
Ww = Weight of water, in grams  
Wc = Weight of exempt compound, in grams  
MWi = Molecular weight of the "i"th VOC compound, in g/g-mole  
MWw = Molecular weight of water, in g/g-mole  
MWc = Molecular weight of exempt compound, in g/g-mole  
PPc = VOC composite partial vapor pressure at 20°C (68°F), in mm Hg  
VPi = Vapor pressure of the "i"th VOC compound at 20°C(68°F), in mm Hg

IV.B.1.a.(v) "Fountain solution" means a mixture of water, nonvolatile printing chemicals, and a liquid additive that reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the non-image areas so that the ink is maintained within the image areas.

IV.B.1.a.(vi) "Heatset" means any lithographic or letterpress printing operation where printing inks are set by the evaporation of the ink oils in a heatset dryer.

IV.B.1.a.(vii) "Heatset dryer" means a hot air dryer used in heatset lithography to heat the printed substrate and to promote the evaporation of ink oils.

IV.B.1.a.(viii) "Lithographic printing" means a planographic printing process where the image and non-image areas are chemically differentiated (the image area is oil receptive and the non-image area is water receptive). This printing process differs from other conventional printing methods, where the image is a raised or recessed surface.

IV.B.1.a.(ix) "Letterpress printing" means a printing process in which the image area is raised relative to the non-image area and the paste ink is transferred to the substrate directly from the image surface.

IV.B.1.a.(x) "Non-heatset" means any printing operation where the printing inks are set without the use of heat. For the purpose of Section IV.B., ultraviolet-cured and electron beam-cured inks are considered non-heatset.

IV.B.1.a.(xi) "Offset lithographic printing" means a printing process that transfers the ink film from the lithographic plate to an intermediary surface (blanket), which in turn transfers the ink film to the substrate.

IV.B.1.a.(xii) "Press" means a printing production assembly composed of one or more print units used to produce a printed substrate including any associated coating, spray powder application, heatset web dryer, ultraviolet or electron beam curing units, or infrared heating units.

IV.B.1.a.(xiii) "Sheet-fed printing" means a printing process where individual sheets of paper or substrate are fed into the printing press.

IV.B.1.a.(xiv) "Web printing" means a printing process where continuous rolls of substrate material are fed to the press and rewound or cut to size after printing.

IV.B.1.b. Applicability

IV.B.1.b.(i) The provisions of this Section IV.B. apply to fountain solutions, cleaning materials, inks (which include varnishes) and coatings used in lithographic and letterpress printing presses. These materials are not subject to the requirements of Sections I. and II.

IV.B.1.b.(ii) The work practice requirements in Section IV.B.1.c. apply to all lithographic and letterpress printing operations.

IV.B.1.b.(iii) The VOC content limit for inks in Section IV.B.1.d. applies to lithographic and letterpress printing operations where total combined uncontrolled actual VOC emissions from each printing operation, including related cleaning materials and fountain solutions, are equal to or greater than three (3) tons per calendar year.

IV.B.1.b.(iv) The cleaning material requirements in Section IV.B.2. apply to letterpress printing operations where total combined uncontrolled actual VOC emissions from each printing operation, including related cleaning materials and fountain solutions, are equal to or greater than three (3) tons per calendar year.

IV.B.1.b.(v) The cleaning material and fountain solution requirements in Sections IV.B.2. and IV.B.3. apply to offset lithographic printing operations where total combined uncontrolled actual VOC emissions from each printing operation, including related cleaning materials and fountain solutions, are equal to or greater than three (3) tons per calendar year.

IV.B.1.b.(vi) The control requirements in Section IV.B.4. apply to each heatset web offset lithographic and heatset web letterpress printing press with the potential to emit from the dryer, prior to controls, at least 25 tons per calendar year of VOC (petroleum ink oil) from heatset inks.

IV.B.1.c. Work Practice Requirements

Lithographic and letterpress printing operations must implement the following work practices at all times to reduce VOC emissions from fugitive sources:

IV.B.1.c.(i) Cover open containers and keep cleaning materials in closed containers when not in use;

IV.B.1.c.(ii) Properly dispose of used cleaning materials, fountain solutions, and used shop towels; and

IV.B.1.c.(iii) Implement good air pollution control practices that minimize emissions, including, but not limited to, using only volumes necessary for cleaning and maintain cleaning equipment to repair cleaning materials leaks.

IV.B.1.d. VOC Content Limit for Inks

IV.B.1.d.(i) Lithographic and letterpress printing operations, excluding heatset web offset and heatset web letterpress printing operations, must use low-VOC inks, which average less than 30% (by weight) VOC on a monthly basis.

IV.B.1.d.(ii) Heatset web offset lithographic and heatset web letterpress printing operations must use low-VOC inks, which average less than 40% (by weight) VOC on a monthly basis.

IV.B.2. Offset lithographic printing and letterpress printing operations must comply with the following cleaning materials requirements;

IV.B.2.a. All cleaning materials must contain less than 70% (by weight) VOC or have a VOC composite vapor pressure less than 10 mmHg at 20°C.

IV.B.2.b. Exemptions

The following materials and operations are exempt from the cleaning material requirements in Section IV.B.2.a.:

IV.B.2.b.(i) Cleaners used on electronic components of a press.

IV.B.2.b.(ii) Pre-press cleaning operations.

IV.B.2.b.(iii) Post-press cleaning operations.

IV.B.2.b.(iv) Floor cleaning supplies (other than those used to clean dried ink).

IV.B.2.b.(v) Cleaning performed in parts washers or cold cleaners that are subject to Section II.

IV.B.2.c. Use of non-compliant cleaning materials

Cleaning materials not meeting the limits in Section IV.B.2.a. are limited to less than or equal to 110 gallons per calendar year.

IV.B.3. Offset lithographic printing operations must comply with the following fountain solution requirements:

IV.B.3.a. Heatset web offset lithographic printing operations must:

IV.B.3.a.(i) Use a fountain solution containing 1.6% alcohol (by weight) or less as applied;

IV.B.3.a.(ii) Use a fountain solution containing 3% alcohol (by weight) or less as applied if the fountain solution is refrigerated to below 60°F (15.5°C); or

IV.B.3.a.(iii) Use a fountain solution containing 5% alcohol substitute (by weight) or less as applied and no alcohol.

IV.B.3.b. Sheet-fed printing operations must

IV.B.3.b.(i) Use a fountain solution containing 5% alcohol (by weight) or less as applied;

IV.B.3.b.(ii) Use a fountain solution containing 8.5% alcohol (by weight) or less as applied if the fountain solution is refrigerated to below 60°F (15.5°C); or

IV.B.3.b.(iii) Use a fountain solution containing 5% alcohol substitute (by weight) or less as applied and no alcohol.

IV.B.3.b.(iv) The following are exempt from the fountain solution requirements in Section IV.B.3.b.:



- IV.B.3.b.(iv)(A) Fountain solution use associated with a sheet-fed printing press with maximum sheet size 11x17 inches or smaller.
- IV.B.3.b.(iv)(B) Fountain solution use associated with a sheet-fed printing press having a total fountain solution reservoir less than one (1) gallon.
- IV.B.3.c. Non-heatset web printing must use a fountain solution containing 5% alcohol substitute (by weight) or less and no alcohol.
- IV.B.4. Heatset web offset lithographic and heatset web letterpress printing operations must comply with the following control requirements:
- IV.B.4.a. Heatset web offset lithographic and heatset web letterpress printing operations must reduce VOC emissions from heatset dryers with an emission control system having a control efficiency of 90% or greater.
- IV.B.4.b. If the control device was first installed on or after January 1, 2017, heatset web offset lithographic and heatset web letterpress printing operations must reduce VOC emissions from heatset dryers with an emission control system having a control efficiency of 95% or greater.
- IV.B.4.c. Where inlet VOC concentration is low and a 90 or 95% control efficiency is not achievable due to low inlet concentrations or measurable due to equipment configuration, heatset web offset lithographic and heatset web letterpress printing operations may reduce the control device outlet concentration to 20 ppmv (as hexane on a dry basis).
- IV.B.4.d. The following are exempt from the control requirements in Section IV.B.4.:
- IV.B.4.d.(i) Heatset presses used for book printing.
- IV.B.4.d.(ii) Heatset presses with maximum web width of 22 inches or less.
- IV.B.4.d.(iii) Waterborne or radiation (ultra-violet or electron beam) cured materials that are not heatset.
- IV.B.5. Monitoring, Recordkeeping and Reporting
- IV.B.5.a. The owner or operator of a heatset web offset lithographic or heatset web letterpress printing operation required to demonstrate compliance with Section IV.B.4. must install, calibrate, maintain, and operate a temperature monitoring device, according to the manufacturer's specifications.
- IV.B.5.b. The owner or operator of a lithographic and letterpress printing operations subject to Sections IV.B.1.d. and IV.B.2. through IV.B.4. must keep the following records for two (2) years and make them available for inspection by the Division upon request:
- IV.B.5.b.(i) If applicable, records demonstrating that a listed exemption to this Section IV.B. applies.

- IV.B.5.b.(ii) If applicable, monthly records of the type, alcohol content or alcohol substitute content, and total volume of fountain solution used in printing operations.
  - IV.B.5.b.(iii) If applicable, monthly records of the type, VOC content or composite vapor pressure, and total volume of the cleaning materials used in printing operations.
  - IV.B.5.b.(iv) If applicable, monthly records of the type, VOC content, and total volume of inks (including varnishes) and coatings used in printing operations.
  - IV.B.5.b.(v) If applicable, monthly records demonstrating compliance with the control requirements in Section IV.B.4.
  - IV.B.5.b.(vi) Records of calendar year VOC emission estimates demonstrating whether the printing operation meets or exceeds the applicability thresholds in Section IV.B.1.b.
- IV.B.5.c. Compliance with control requirements must be demonstrated using the following methods as applicable:
- IV.B.5.c.(i) Safety data sheets or other analytical data from the ink, cleaning material, or fountain solution manufacturer to demonstrate compliance with VOC content limit for inks in Section IV.B.1.d., the cleaning material requirements in Section IV.B.2., and the fountain solution requirements in Section IV.B.3.;
  - IV.B.5.c.(ii) A manufacturer guarantee of the control equipment's emission control efficiency and operation and maintenance of control equipment according to manufacturer's specifications to demonstrate compliance with the control equipment requirements in Section IV.B.4.; or
  - IV.B.5.c.(iii) A performance test conducted during representative conditions using one of the following methods as applicable:
    - IV.B.5.c.(iii)(A) EPA Method 24 (40 CFR Part 60, Appendix A) (November 17, 2016) to determine VOC content for inks, fountain solutions and cleaning materials; or
    - IV.B.5.c.(iii)(B) EPA Method 18, 25, or 25A (40 CFR Part 60, Appendix A) (November 17, 2016) to determine control efficiency or outlet concentration of the emission control equipment.

## V. Pharmaceutical Synthesis

### V.A. General Provisions

#### V.A.1. Applicability

This section applies to all sources of volatile organic compounds associated with pharmaceutical manufacturing activities, including, but not limited to, reactors, distillation units, dryers, storage of VOCs, extraction equipment, filters, crystallizers, and centrifuges.

V.A.2. Exemptions

Extraction of organic substances from animal or vegetable material; fermentation and culturing; formulation and packaging of pharmaceutical or medicinal products.

V.A.3. Definitions

For the purpose of this section, the following definitions apply:

V.A.3.a. "Control System" means any number of control devices, including condensers, which are designed and operated to reduce the quantity of VOC emitted to the atmosphere.

V.A.3.b. "Pharmaceutical" means a medicine or drug which appears in the United States Pharmacopoeia National Formulary, or which is so designated by the National Drug Code of the United States FDA Bureau of Drugs.

V.A.3.c. "Production Equipment Exhaust System" means a device for collecting and directing out of the work area VOC fugitive emissions from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting workers from excessive VOC exposure.

V.A.3.d. "Reactor" means a vat or vessel, which may be jacketed to permit temperature control, designed to contain chemical reactions.

V.A.3.e. "Separation Operation" means a process that separates a mixture of compounds and solvents into two or more components. Specific mechanisms include, but are not limited to, extraction, centrifugation, filtration, distillation, and crystallization.

V.A.3.f. "Synthesized Pharmaceutical Manufacturing" means manufacture of pharmaceutical products by chemical synthesis. It includes the manufacture of chemical intermediates (of sufficient purity) which are typically used by the pharmaceutical industry as precursors to finished mixtures of chemicals. (Thus, it excludes those chemical processes which are not directed at creating finished pharmaceutical or chemical intermediates to finished pharmaceuticals.)

V.B. Provisions for Specific Processes

V.B.1. The owner or operator of a facility subject to this section shall control the volatile organic compound emissions from each vent which has the potential to emit 6.80 kg/day (15 lb./day) or more of VOC from reactors, distillation operations, crystallizers, centrifuge and vacuum dryers. Surface condensers or equivalent controls shall be used, provided that, if surface condensers are used, the condenser outlet gas temperature shall not exceed the following values:

VOCs True Vapor Pressure* at 20° in torr (and psia) from (minimum) up to ** (maximum)	Maximum temperature of Gas Stream immediately exiting the condenser
0-26(0-0.5)	35°C (95°F)
26-52(0.5-1.0)	25°C(77°F)
52-78(1.0-1.5)	10°C(50°F)
78-150(1.5-2.9)	0°C(32°F)
150-300(2.9-5.8)	-15°C(5°F)
Greater than 300(Greater than 5.8)	-25°C(-13°F)

\*The calculation methods for gases containing more than one condensable component are complex. As a simplification, the temperature necessary for control by condensation can be roughly approximated by the weighted average of the temperatures necessary for condensation of each VOC considered separately but at concentrations equal to the total organic concentration.

\*\*But not including the maximum value of the range.

- V.B.2. Division approval shall be required for control equipment used to control VOCs of 570 torr (11 psia) and above.
- V.B.3. The owner or operator of a facility subject to this section shall reduce the VOC emissions from each air dryer and production equipment exhaust system:
  - V.B.3.a. By at least 90 percent if emissions are 150 kg/day (330 lbs/day) or more of VOC, or,
  - V.B.3.b. To 15.0 kg/day (33 lb/day) or less if emissions are less than 150 kg/day (330 lb/day) of VOC.
- V.B.4. The owner or operator of a facility subject to this section shall:
  - V.B.4.a. Provide a vapor balance system or equivalent control that is at least 90.0 percent effective in reducing emissions from truck or railcar deliveries to storage tanks with capacities greater than 7,570 liters (2,000 gallons) that store VOC with true vapor pressure greater than 210 torr (4.1 psia) at 20°C; and,
  - V.B.4.b. Install pressure/vacuum conservation vents set at plus or minus 0.2 kPa on all storage tanks that store VOC with true vapor pressures greater than 10.0 kPa (1.5 psi) at 20°C.
- V.B.5. The owner or operator of a facility subject to this section shall enclose all centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface, where the liquid contains VOC and exerts a total VOC true vapor pressure of 26 torr (0.5 psia) or more at 20°C.
- V.B.6. The owner or operator of a synthesized pharmaceutical facility subject to this section shall install covers on all in-process tanks containing a volatile organic compound at any time. These covers shall remain closed unless sampling, maintenance, short-duration production procedures or inspection procedures require access.

V.B.7. The owner or operator of a facility subject to this section shall repair all leaks from which a liquid, containing VOC, can be observed running or dripping. The repair shall be completed the first time the equipment is off-line for a period of time long enough to complete the repair, except that no leak shall go unrepaired for more than 14 days after initial detection unless the Division issues written approval.

V.B.8. Each surface condenser shall have at least one temperature indicator with its sensor located in the outlet gas stream.

V.C. Testing and Monitoring

V.C.1. Sources subject to the requirements of this section are also subject to the requirements of Sections I.A.3., I.A.7., I.A.8., and I.A.9.

**Appendix D Minimum Cooling Capacities for Refrigerated Freeboard Chillers on Vapor Degreasers**

The specifications in this Appendix apply only to vapor degreasers that have both condenser coils and refrigerated freeboard chillers. (The coolant in the condenser coils is normally water.) The amount of refrigeration capacity is expressed in Calories/Hour per meter of perimeter. This perimeter is measured at the air/vapor interface.

For refrigerated chillers operated below 0°C., the following requirements apply:

DEGREASER WIDTH	*CALORIES/HR METER OF PERIMETER	BTU/HR FOOT OF PERIMETER
Less than 1.1 meters (3.5 ft.)	165	200
1.1 - 1.8 meters (3.5 - 6.0 ft.)	250	300
1.8 - 2.4 meters (6.0 - 8.0 ft.)	335	400
2.4 - 3.0 meters (8.0 - 10.0 ft.)	145	500
Greater than 3.0 meters (10 ft.)	500	600

\* Kilocalories (1 Kilocalorie = 4184.0 joules)

For refrigerated chillers operating above 0°C., there shall be at least 415 Calories/Hr. - meter of perimeter (500 BTU/Hr-ft.), regardless of size.

Definition:

"Air/Vapor Interface" - means the surface defined by the top of the solvent vapor layer within the confines of a vapor degreaser.

**Appendix E Emission Limit Conversion Procedure**

The following procedure shall be used to convert emission limits expressed as lb VOC/gallon coating less water and exempt solvents to limits expressed as lb VOC/gallon solids. This example uses the emission limit of 3.7 lb VOC/gallon coating.

Assume VOC density of the 'Presumptive' RACT coating is 7.36 pounds per gallon because this same value was used to determine the "Presumptive" recommended RACT emission limits from volume solids data.

$(3.7) \text{ LB VOC} / \text{ GAL COATING LESS WATER} \times 100 / 7.36 \text{ LB VOC} = (50) \text{ VOL\% VOC}$

$100 - (50) \text{ VOL\% VOC} = (50) \text{ VOL\% SOLIDS}$

$(3.7) \text{ LB VOC} / \text{ GAL COATING LESS H}_2\text{O} \times 100 \text{ GAL COATING} / (50) \text{ GAL SOLIDS} = (7.4) \text{ LB VOC} / \text{ GAL SOLIDS}$

See "A Guideline For Surface Coating Calculations" EPA - 340/1-86-016 for additional examples.

The following table lists equivalent mass VOC/volume solids emission limits for various coating operations.

**Equivalency Data for Surface Coating Processes**

(VOC Density = 7.36 lb/gal)

Industrial Finishing Categories	Lb VOC per Gallon Coating less water	Lb VOC per Gallon of Solids	Kg VOC per Liter of Solids
<i>Can Industry</i>			
Sheet Basecoat (Exterior and Interior) and over-varnish; two-piece can exterior (base-coat and over-varnish)	2.8	4.5	0.55
Two- and three-piece can interior body spray, two-piece can exterior end spray or roll coat	4.2	9.8	1.19
Three-piece can side-seam spray	5.5	21.7	2.61
End sealing compound	3.7	7.4	0.88
Any additional coats	4.2	9.8	1.19
<i>Coil Coating</i>			
Any coat	2.6	4.0	0.48
<i>Fabric Coating</i>			
Fabric coating line	2.9	4.8	0.58
Vinyl coating line	3.8	7.9	0.93
<i>Paper Coating</i>			
Coating line	2.9	4.8	0.58

<i>Automotive and Light-Duty Truck Assembly Plant</i>			
Primer (electrodeposition) application, flashoff area and oven	1.9	2.6	0.31
Topcoat application, flashoff area and oven	2.8	4.5	0.55
Final repair application, flashoff area and oven	4.8	13.8	1.67
<i>Metal Furniture</i>			
Coating line	3.0	5.1	0.61
<i>Magnet Wire</i>			
Wire coating operation	1.7	2.2	0.26
<i>Large Appliances</i>			
Prime, single, or topcoat application area, flashoff area and oven	2.8	4.5	0.55
<i>Miscellaneous Metal Parts and Products</i>			
Air-dried items	3.5	6.7	0.80
Clear-coated items	4.3	10.3	1.25
Extreme performance coatings	3.5	6.7	0.80
Other coatings and systems	3.0	5.1	0.61
<i>Plastic Film Coating</i>			
Plastic film coating line	2.9	4.8	0.58

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**PART D Oil and Natural Gas Operations**

**I. Volatile Organic Compound Emissions from Oil and Gas Operations**

**I.A. Applicability**

I.A.1. Except as provided in Section I.A.2., this section applies to oil and gas operations that collect, store, or handle hydrocarbon liquids or produced water in the 8-hour Ozone Control Area (~~State Only; or any ozone nonattainment or attainment/maintenance area~~) and that are located at or upstream of a natural gas plant.

I.A.2. Oil refineries are not subject to Section I.

**I.B. Definitions specific to Section I.**

I.B.1. "Affected Operations" means oil and gas exploration and production operations, natural gas compressor stations and natural gas drip stations, to which Section I. applies.

I.B.2. "Air Pollution Control Equipment", as used in Section I., means a combustion device or vapor recovery unit. Air pollution control equipment also means alternative emissions control equipment, pollution prevention devices, and processes that comply with the requirements of Section I.D.4. that are approved by the Division.

I.B.3. "Approved Instrument Monitoring Method" means an infra-red camera, EPA Method 21, or other instrument based monitoring method or program approved in accordance with Section I.L.8. If an owner or operator elects to use Division approved continuous emission monitoring, the Division may approve a streamlined inspection, recordkeeping, and reporting program for such operations.

I.B.4. "Atmospheric Storage Tanks or Atmospheric Condensate Storage Tanks" means a type of condensate storage tank that vents, or is designed to vent, to the atmosphere.

I.B.5. "Auto-Igniter" means a device which will automatically attempt to relight the pilot flame in the combustion chamber of a control device in order to combust volatile organic compound emissions.

I.B.6. "Calendar Week" means a week beginning with Sunday and ending with Saturday.

I.B.7. "Commencement of operation" means when a source first conducts the activity that it was designed and permitted for. In addition, for oil and gas well production facilities, commencement of operation is the date any permanent production equipment is in use and product is consistently flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback).

I.B.8. "Condensate Storage Tank" means any tank or series of tanks that store condensate and are either manifolded together or are located at the same well pad.

I.B.9. "Centrifugal Compressor" means any machine used for raising the pressure of natural gas by drawing in low pressure natural gas and discharging significantly higher pressure natural gas by means of mechanical rotating vanes or impellers. Screw, sliding vane, and liquid ring compressors are not centrifugal compressors.



- I.B.10. "Component" means each pump seal, flange, pressure relief device (including thief hatches or other openings on a controlled storage tank), connector, and valve that contains or contacts a process stream with hydrocarbons, except for components in process streams consisting of glycol, amine, produced water, or methanol.
- I.B.11. "Connector" means flanged, screwed, or other joined fittings used to connect two pipes or a pipe and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors.
- I.B.12. "Custody Transfer" means the transfer of crude oil or natural gas after processing and/or treatment in the producing operations or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation.
- I.B.13. "Downtime" means the period of time when a well is producing and the air pollution control equipment is not in operation.
- I.B.14. "Existing" means any atmospheric condensate storage tank that began operation before February 1, 2009, and has not since been modified.
- I.B.15. "Glycol Natural Gas Dehydrator" means any device in which a liquid glycol (including, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water.
- I.B.16. "Hydrocarbon liquids" means any naturally occurring, unrefined petroleum liquid. Hydrocarbon liquids does not include produced water.
- I.B.17. "Infra-red Camera" means an optical gas imaging instrument designed for and capable of detecting hydrocarbons.
- I.B.18. "Modified or Modification" means any physical change or change in operation of a stationary source that results in an increase in actual uncontrolled volatile organic compound emissions from the previous calendar year that occurs on or after February 1, 2009. For atmospheric condensate storage tanks (and beginning March 1, 2020, for all storage tanks), a physical change or change in operation includes but is not limited to drilling wells and recompleting, refracturing or otherwise stimulating existing wells.
- I.B.19. "Natural Gas Compressor Station" means a facility, located downstream of well production facilities, which contains one or more compressors designed to compress natural gas from well pressure to gathering system pressure prior to the inlet of a natural gas processing plant.
- I.B.20. "Natural Gas-Driven Diaphragm Pump" means a positive displacement pump powered by pressurized natural gas that uses the reciprocating action of flexible diaphragms in conjunction with check valves to pump a fluid. A pump in which a fluid is displaced by a piston driven by a diaphragm is not considered a diaphragm pump. A lean glycol circulation pump that relies on energy exchange with the rich glycol from the contactor is not considered a diaphragm pump.
- I.B.21. "Natural Gas Processing Plant" means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. A Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not a natural gas processing plant.

- I.B.22. "New" means any atmospheric condensate storage tank that began operation on or after February 1, 2009.
- I.B.23. "Produced Water" means water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction.
- I.B.24. "Reciprocating Compressor" means a piece of equipment that increases the pressure of process gas by positive displacement, employing linear movement of the piston rod.
- I.B.25. "Stabilized" when used to refer to stored hydrocarbon liquids, means that the hydrocarbon liquids have reached substantial equilibrium with the atmosphere and that any emissions that occur are those commonly referred to within the industry as "working and breathing losses".
- I.B.26. "Storage tank" means any fixed roof storage vessel or series of storage vessels that are manifolded together via liquid line. Storage tanks may be located at a well production facility or other location.
- I.B.27. "Storage vessel" means a tank or other vessel that contains an accumulation of hydrocarbon liquids or produced water and is constructed primarily of nonearthed materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. A well completion vessel that receives recovered liquids from a well after commencement of operation for a period which exceeds 60 days is considered a storage vessel. Storage vessel does not include vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges, or ships) and are intended to be located at the site for less than 180 consecutive days; process vessels such as surge control vessels, bottom receivers, or knockout vessels; or pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.
- ~~I.B.28. (State Only) "Surveillance System" means monitoring pilot flame presence or temperature in a combustion device either by visual observation or with an electronic device to record times and duration of periods where a pilot flame is not detected at least once per day.~~
- I.B.29. "System-Wide Control Strategy" means the collective emissions and emission reductions from all atmospheric condensate storage tanks under common ownership within the 8-hour Ozone Control Area for which uncontrolled actual volatile organic compound emissions are equal to or greater than two tons per year.
- I.B.30. "Well Production Facility" means all equipment at a single stationary source directly associated with one or more oil wells or natural gas wells upstream of the natural gas processing plant. This equipment includes, but is not limited to, equipment used for storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline.
- I.C. General Provisions
- I.C.1. General Requirements

- I.C.1.a. All air pollution control equipment used to demonstrate compliance with this Section I. must be operated and maintained consistent with manufacturer specifications and good engineering and maintenance practices. The owner or operator must keep manufacturer specifications on file. In addition, all such air pollution control equipment must be adequately designed and sized to achieve the control efficiency rates required by this Section I. and to handle reasonably foreseeable fluctuations in emissions of volatile organic compounds. Fluctuations in emissions that occur when the separator dumps into the tank are reasonably foreseeable.
- I.C.1.b. All hydrocarbon liquids and produced water collection, storage, processing, and handling operations, regardless of size, must be designed, operated, and maintained so as to minimize emission of volatile organic compounds to the atmosphere to the maximum extent practicable.
- I.C.1.c. All air pollution control equipment used to demonstrate compliance with Sections I.D., I.J., and I.K. must meet a control efficiency of at least 95%. Failure to properly install, operate, and maintain air pollution control equipment is a violation of this regulation.
- I.C.1.d. If a flare or other combustion device is used to control emissions of volatile organic compounds to comply with Sections I.D., I.J., and I.K. it must be enclosed, have no visible emissions, and be designed so that an observer can, by means of visual observation from the outside of the enclosed flare or combustion device, or by other convenient means, such as a continuous monitoring device, approved by the Division, determine whether it is operating properly.
- I.C.1.e. All combustion devices used to control emissions of volatile organic compounds to comply with Sections I.D., I.J., and I.K. must be equipped with and operate an auto-igniter as follows:
- I.C.1.e.(i) ~~(State Only) For condensate storage tanks that are constructed or modified after May 1, 2009, and before January 1, 2017, and controlled by a combustion device, auto-igniters must be installed and operational, beginning the date of first production after any new tank installation or tank modification.~~
- I.C.1.e.(ii) ~~(State Only) For all existing condensate storage tanks controlled by a combustion device in order to comply with the emissions control requirements of Section I.D.1., auto-igniters must be installed and operational beginning May 1, 2009, for condensate storage tanks with actual uncontrolled emissions of greater than or equal to 50 tons per year, and beginning May 1, 2010, for all other existing condensate storage tanks controlled by a combustion device, or within 180 days from first having installed the combustion device, whichever date comes later.~~
- I.C.1.e.(iii) All combustion devices installed on or after January 1, 2017, must be equipped with an operational auto-igniter upon installation of the combustion device.
- I.C.1.e.(iv) All combustion devices installed on or after January 1, 2018, and used to comply with Sections I.J. or I.K. must be equipped with an operational auto-igniter upon installation of the combustion device.

~~I.C.1.f. (State Only) If a combustion device is used to control emissions of volatile organic compounds, surveillance systems must be employed and operational as follows:~~

~~I.C.1.f.(i) (State Only) Beginning May 1, 2010, for all existing condensate storage tanks with uncontrolled actual emissions of 100 tons per year or more based on data from the previous twelve consecutive months.~~

~~I.C.1.f.(ii) (State Only) For all new and modified condensate storage tanks controlled by a combustion device for the first 90 days surveillance systems must be employed and operational beginning 180 days from commencement of operation after the tank was newly installed, or after the well was newly drilled, re-completed, re-fractured or otherwise stimulated, if uncontrolled actual emissions projected for the first twelve months based on data from the first 90 days of operation from the condensate storage tank are 100 tons or more of uncontrolled VOCs.~~

I.C.2. The emission estimates and emission reductions required by Section I.D. must be demonstrated using one of the following emission factors:

I.C.2.a. In the 8-Hour Ozone Control Area

I.C.2.a.(i) For atmospheric condensate storage tanks at oil and gas exploration and production operations, a default emission factor of 13.7 pounds of volatile organic compounds per barrel of condensate must be used unless a more specific emission factor has been established pursuant to Section I.C.2.a.(iii). The Division may require a more specific emission factor that complies with Section I.C.2.a.(iii).

I.C.2.a.(ii) For atmospheric condensate storage tanks at natural gas compressor stations and natural gas drip stations a source may use a specific emissions factor that was used for reporting emissions from the source on APENs filed on or before February 28, 2003. The Division may, however, require the source to develop and use a more recent specific emission factor pursuant to Section I.C.2.a.(iii) if such a more recent emission factor would be more reliable or accurate.

I.C.2.a.(iii) Except as otherwise provided in Section I.C.2.a.(i), a specific emission factor is one for which the Division has no objection, and which is based on collection and analysis of a representative sample of the hydrocarbon liquids or produced water pursuant to a test method approved by the Division.

I.C.2.a.(iv) For storage tanks storing produced water or hydrocarbon liquids other than condensate, the most recent Division-approved default emission factors must be used unless a more specific emission factor has been established pursuant to Section I.C.2.a.(iii).

I.C.2.a.(v) If the Division has reason to believe that a specific emission factor is no longer representative, or if it deems it otherwise necessary, the Division may require the use of an alternative emission factor that complies with Section I.C.2.a.(iii).

~~I.C.2.b. (State Only) For any other Ozone Nonattainment Area or Attainment/Maintenance Areas~~

- I.C.2.b.(i) (State Only) For storage tanks at oil and gas exploration and production operations, the source must use a default basin-specific uncontrolled volatile organic compound emission factor established by the Division unless a site-specific emission factor has been established pursuant to Section I.C.2.b.(iii). If the Division has established no default emission factor, if the Division has reason to believe that the default emission factor is no longer representative, or if it deems it otherwise necessary, the Division may require use of an alternative emission factor that complies with Section I.C.2.b.(iii).
- I.C.2.b.(ii) (State Only) For storage tanks at natural gas compressor stations and natural gas drip stations, the source must use a site-specific volatile organic compound emission factor established pursuant to Section I.C.2.b.(iii). If the Division has reason to believe that the site-specific emission factor is no longer representative, or if it deems it otherwise necessary, the Division may require use of an alternative emission factor that complies with Section I.C.2.b.(iii).
- I.C.2.b.(iii) (State Only) Establishment of or Updating Approved Emission Factors
- I.C.2.b.(iii)(A) (State Only) The Division may require the source to develop and/or use a more recent default basin-specific or site-specific volatile organic compound emission factor pursuant to Section I.C.2.b., if such emission factor would be more reliable or accurate.
- I.C.2.b.(iii)(B) (State Only) For storage tanks at oil and gas exploration and production operations, the source may use a site-specific volatile organic compound emission factor for which the Division has no objection, and which is based on collection and analysis of a representative sample of hydrocarbon liquids or produced water pursuant to a test method approved by the Division.
- I.C.2.b.(iii)(C) (State Only) For storage tanks at natural gas compressor stations and natural gas drip stations, a source may use a volatile organic compound emissions factor that was used for reporting emissions from the source on APENs filed on or before February 28, 2003, or an alternative site-specific volatile organic compound emission factor established pursuant to Section I.C.2.b.
- I.C.2.b.(iii)(D) (State Only) A default basin-specific volatile organic compound emissions factor must be one for which the Division has no objection, and which is based on collection and analysis of a representative sample of hydrocarbon liquids or produced water or an alternative method, pursuant to a test method approved by the Division, except as otherwise provided in I.C.2.b.(i).
- I.C.2.b.(iii)(E) (State Only) A site-specific volatile organic compound emissions factor must be one for which the Division has no objection, and which is based on collection and analysis of a representative sample of hydrocarbon liquids or produced water pursuant to a test method approved by the Division.

I.D. Storage Tank Emission Controls

I.D.1. System-Wide Control Strategy for Condensate Storage Tanks

I.D.1.a. Beginning May 1, 2011, through April 30, 2020, owners and operators of all atmospheric condensate storage tanks that emit greater than or equal to two tons per year of actual uncontrolled volatile organic compounds must employ air pollution control equipment to reduce emissions of volatile organic compounds from atmospheric condensate storage tanks by 90% from uncontrolled actual emissions on a calendar weekly basis May 1 through September 30 and 70% from uncontrolled actual emissions on a calendar monthly basis during October 1 through April 30.

Emission reductions are not required for each and every unit, but instead shall be based on overall reductions in uncontrolled actual emissions from all the atmospheric condensate storage tanks associated with the affected operations for which the owner or operator filed, or was required to file, an APEN pursuant to Regulation Number 3, Part A, due to either having exceeded reporting thresholds or retrofitting with air pollution control equipment in order to comply with the system-wide control strategy.

I.D.1.b. The system-wide control strategy does not apply to natural gas-processing plants subject to Section I.G. or qualifying natural gas compressor stations subject to Section I.I.

I.D.1.c. The system-wide control strategy does not apply to any owner or operator where the APENs for all of the atmospheric condensate storage tanks associated with the affected operations owned or operated by such person in calendar year 2019 or January 1, 2020, through April 30, 2020, reflect a total of less than 30 tons-per-year of actual uncontrolled emissions of VOCs in the 8-Hour Ozone Control Area.

I.D.2. New and Modified Condensate Tanks

I.D.2.a. Beginning February 1, 2009, through March 1, 2020, owners or operators of any new or modified atmospheric condensate storage tank at exploration and production sites shall collect and control emissions by routing emissions to and operating air pollution control equipment pursuant to Section I.D. The air pollution control equipment shall have a control efficiency of at least 95%, and shall control volatile organic compounds during the first 90 calendar days after commencement of operation of the storage tank, or after the well was re-completed, re-fractured or otherwise stimulated. The air pollution control equipment and associated monitoring equipment required pursuant to Section I.C.1. may be removed after the first 90 calendar days as long as the source can demonstrate compliance with the applicable system-wide standard.

I.D.3. Storage Tank Control Strategy

I.D.3.a. Applicability

I.D.3.a.(i) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than four (4) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a VOC control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for VOC, except where the combustion device has been authorized by permit prior to March 1, 2020.

~~I.D.3.a.(ii) (State Only) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than two (2) tons per year based on a rolling twelve-month total and not subject to Section I.D.3.a.(i) must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a VOC control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for VOC, except where the combustion device has been authorized by permit prior to March 1, 2020.~~

#### I.D.3.b. Compliance Deadlines

I.D.3.b.(i) A storage tank subject to Section I.D.3.a.(i) and constructed on or after March 1, 2020, must be in compliance by commencement of operation of that storage tank.

~~I.D.3.b.(ii) (State Only) A storage tank subject to Section I.D.3.a.(ii) and constructed on or after March 1, 2020, must be in compliance by commencement of operation of that storage tank.~~

I.D.3.b.(iii) A storage tank subject to Section I.D.3.a.(i) and constructed before March 1, 2020, must be in compliance by May 1, 2020, or by commencement of operation of the storage tank, whichever comes later.

~~I.D.3.b.(iv) (State Only) A storage tank subject to Section I.D.3.a.(ii) and constructed before March 1, 2020, must be in compliance by May 1, 2020, or by commencement of operation of the storage tank, whichever comes later.~~

I.D.3.b.(v) A storage tank subject to Section I.D.3.a.(i) and not otherwise subject to Sections I.D.3.b.(i). or I.D.3.b.(iii) that increases uncontrolled actual emissions to four (4) tons per year VOC or more on a rolling twelve-month basis after March 1, 2020, must be in compliance within sixty (60) days of the first day of the month after which the storage tank VOC emissions exceeded four (4) tons per year on a rolling twelve-month basis.

~~I.D.3.b.(vi) (State Only) A storage tank subject to Section I.D.3.a.(ii) and not otherwise subject to Sections I.D.3.b.(ii) or I.D.3.b.(iv) that increases uncontrolled actual emissions to two (2) tons per year VOC based on a rolling twelve-month basis after March 1, 2020, must be in compliance within sixty (60) days of the first day of the month after which the storage tank VOC emissions exceeded two (2) tons per year on a rolling twelve-month basis.~~

I.D.3.b.(vii) If air pollution control equipment is not installed by the applicable compliance date in Sections I.D.3.b.(iii) or I.D.3.b.(v), compliance with Section I.D.3.a.(i) may alternatively be demonstrated by shutting in all wells producing into that storage tank by the date in Sections I.D.3.b.(iii) or I.D.3.b.(v) so long as production does not resume from any such well until the air pollution control equipment is installed and operational.

~~I.D.3.b.(viii) (State Only) If air pollution control equipment is not installed by the applicable compliance date in Sections I.D.3.b.(iv) or I.D.3.b.(vi), compliance with Section I.D.3.a.(ii) may alternatively be demonstrated by shutting in all wells producing into that storage tank by the date in Sections I.D.3.b.(iv) or I.D.3.b.(vi) so long as production does not resume from any such well until the air pollution control equipment is installed and operational.~~

I.D.3.b.(ix) This Section I.D.3. does not apply to storage tanks at natural gas-processing plants subject to Section I.G. or qualifying natural gas compressor stations subject to Section I.I.

I.D.4. Alternative emissions control equipment and pollution prevention devices and processes installed and implemented after June 1, 2004, shall qualify as air pollution control equipment, and may be used in lieu of, or in combination with, combustion devices and/or vapor recovery units to achieve the emission reductions required by this Section I.D., if the following conditions are met:

I.D.4.a. The owner or operator obtains a construction permit authorizing such use of the alternative emissions control equipment or pollution prevention device or process. The proposal for such equipment, device or process shall comply with all regulatory provisions for construction permit applications and shall include the following:

I.D.4.a.(i) A description of the equipment, device or process;

I.D.4.a.(ii) A description of where, when and how the equipment, device or process will be used;

I.D.4.a.(iii) The claimed control efficiency and supporting documentation adequate to demonstrate such control efficiency;

I.D.4.a.(iv) An adequate method for measuring actual control efficiency; and

I.D.4.a.(v) Description of the records and reports that will be generated to adequately track emission reductions and implementation and operation of the equipment, device or process, and a description of how such matters will be reflected in the records and reports required by Section I.F.

I.D.4.b. Public notice of the application is provided pursuant to Regulation Number 3, Part B, Section III.C.4.

I.D.4.c. EPA approves the proposal. The Division shall transmit a copy of the permit application and any other materials provided by the applicant, all public comments, all Division responses and the Division's permit to EPA Region 8. If EPA fails to approve or disapprove the proposal within 45 days of receipt of these materials, EPA shall be deemed to have approved the proposal.



I.E. Monitoring of Storage Tanks and Air Pollution Control Equipment

I.E.1. Applicability

I.E.1.a. The owner or operator of any storage tank that is being controlled pursuant to this Section I. (except storage tanks subject to Section I.D.3.a.(ii)).

~~I.E.1.b. (State Only) The owner or operator of any storage tank subject to Section I.D.3.a.(ii).~~

I.E.2. Monitoring Requirements

I.E.2.a. The owner or operator of any storage tank controlled by air pollution control equipment other than a combustion device must follow manufacturer's recommended maintenance. Air pollution control equipment must be periodically inspected to ensure proper maintenance and operation according to the Division-approved operation and maintenance plan.

I.E.2.b. Beginning January 1, 2017, through April 30, 2020, owners or operators of atmospheric condensate storage tanks with uncontrolled actual emissions of VOCs equal to or greater than six (6) tons per year based on a rolling twelve-month total must conduct and document audio, visual, olfactory (AVO) inspections of the storage tank at the same frequency as liquids are loaded out from the storage tank. These inspections are not required more frequently than every seven (7) days but must be conducted at least every thirty-one (31) days.

I.E.2.c. Weekly Monitoring Requirements

The owner or operator must inspect or monitor the air pollution control equipment at least weekly to ensure that it is operating properly. The inspection must include and document the following

I.E.2.c.(i) For combustion devices, a check that the pilot light is lit by either visible observation or other means approved by the Division. For devices equipped with an auto-igniter, a check that the auto-igniter is properly functioning.

I.E.2.c.(ii) For combustion devices, a check that the valves for piping of gas to the pilot light are open.

~~I.E.2.c.(iii) (State Only) In addition to complying with Sections I.E.2.c.(i) and I.E.2.c.(ii), the owner or operator of tanks controlled pursuant to Section I.D. that have installed combustion devices may use a surveillance system to maintain records on combustion device operation.~~

I.E.2.c.(iv) For combustion devices, the owner or operator must visually check for the presence or absence of smoke and that the burner tray is not visibly clogged.

I.E.2.c.(v) For vapor recovery units, the owner or operator must check that the unit is operating and that vapors from the storage tank are being routed to the unit.

I.E.2.c.(vi) For all control devices, the owner or operator must check that the valves for the piping from the storage tank to the air pollution control equipment are open.

I.E.2.c.(vii) For all storage tanks, the owner or operator must check that the thief hatch is closed and latched, the pressure relief valve is properly seated, and all vent lines are closed.

I.E.2.c.(viii) Beginning May 1, 2020, or the applicable compliance date in Section I.D.3.b., whichever comes later, owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than four (4) tons per year based on a rolling twelve-month total must conduct audio, visual, olfactory (AVO) inspections of the storage tank.

~~I.E.2.c.(ix) (State Only) Beginning May 1, 2020, or the applicable compliance date in Section I.D.3.b., whichever comes later, owners or operators of storage tanks subject to Section I.D.3.a.(ii) must conduct audio, visual, olfactory (AVO) inspections of the storage tank.~~

~~I.E.2.d. (State Only) For storage tanks equipped with a surveillance system or other Division approved monitoring system, the owner or operator must check weekly that the system is functioning properly and that necessary information is being collected. Any loss of data or failure to collect required data may be treated by the Division as if the data were not collected.~~

### I.E.3. Performance testing requirements

I.E.3.a. Each storage vessel that has the potential for VOC emissions equal to or greater than six (6) tons per year (controlled actual emissions) must conduct periodic performance testing of the control device used to comply with Section I.D.3.a.(i). The potential for VOC emissions must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for the 30-day period of production prior to May 1, 2022. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local, or tribal authority. Any vapor from the storage vessel that is recovered and routed to a process through a VRU with a cover and closed vent system is not required to be included in the determination of VOC potential to emit for purposes of determining applicability.

I.E.3.a.(i) Conduct a performance test in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(b) (June 3, 2016) by May 1, 2023, and subsequent performance tests no longer than 60 months following the previous performance test.

I.E.3.a.(ii) Control device models tested in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) and demonstrating continuous compliance in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(e)(1) (June 3, 2016) are not subject to the performance test requirement in Section I.E.3.a.(i).

I.E.3.a.(iii) Maintain records of performance tests conducted pursuant to Section I.E.3.a.(i) or manufacturer demonstrations and associated inlet gas flow rate records specified in Section I.E.3.a.(ii) for five (5) years and make records available to the Division upon request.

I.F. Storage Tank Recordkeeping and Reporting

I.F.1. Recordkeeping and Reporting for Tanks Subject to the System-Wide Control Strategy  
(through April 30, 2020)

The owner or operator shall, at all times, track the emissions and specifically volatile organic compound emissions reductions on a calendar weekly and calendar monthly basis to demonstrate compliance with the applicable emission reduction requirements of the system-wide control strategy. This shall be done by maintaining a Division-approved spreadsheet of information describing the affected operations, the air pollution control equipment being used, and the emission reductions achieved, as follows.

I.F.1.a. The Division-approved spreadsheet shall:

- I.F.1.a.(i) List all atmospheric condensate storage tanks subject to the system-wide control strategy by name and AIRS number, or if no AIRS number has been assigned the site location. The spreadsheet also shall list the monthly production volumes for each tank. The spreadsheet shall list the most recent measurement of such production at each tank, and the time period covered by such measurement of production.
- I.F.1.a.(ii) List the emission factor used for each atmospheric condensate storage tank. The emission factors shall comply with Section I.C.2.
- I.F.1.a.(iii) List the location and control efficiency value for each unit of air pollution control equipment. Each atmospheric condensate storage tank being controlled shall be identified by name and an AIRS number.

- I.F.1.a.(iv) List the production volume for each tank, expressed as a weekly and monthly average based on the most recent measurement available. The weekly and monthly average shall be calculated by averaging the most recent measurement of such production, which may be the amount shown on the receipt from the refinery purchaser for delivery of condensate from such tank, over the time such delivered condensate was collected. The weekly and monthly average from the most recent measurement will be used to estimate weekly and monthly volumes of controlled and uncontrolled actual emissions for all weeks and months following the measurement until the next measurement is taken.
- I.F.1.a.(v) Show the calendar weekly and calendar monthly-uncontrolled actual emissions and the calendar weekly and calendar monthly controlled actual emissions for each atmospheric condensate storage tank.
- I.F.1.a.(vi) Show the total system-wide calendar weekly and calendar monthly-uncontrolled actual emissions and the total system-wide calendar weekly and calendar monthly controlled actual emissions.
- I.F.1.a.(vii) Show the total system-wide calendar weekly and calendar monthly percentage reduction of emissions.
- I.F.1.a.(viii) Note any downtime of air pollution control equipment, and shall account for such downtime in the weekly control efficiency value and emission reduction totals. The notations shall include the date, time and duration of any scheduled downtime. For any unscheduled downtime, the spreadsheet shall record the date and time the downtime was discovered and the date and time the air pollution control equipment was last observed to be operating.
- I.F.1.a.(ix) Be maintained in a manner approved by the Division and shall include any other information requested by the Division that is reasonably necessary to determine compliance with the system-wide control strategy.
- I.F.1.a.(x) Be updated on a calendar weekly and calendar monthly basis and shall be promptly provided by e-mail or fax to the Division upon its request. The U.S. mail may also be used if acceptable to the Division.
- I.F.1.b. Failure to properly install, operate, and maintain air pollution control equipment at the locations indicated in the spreadsheet shall be a violation of this regulation.
- I.F.1.c. A copy of each calendar weekly and calendar monthly spreadsheet shall be retained for five years. A spreadsheet may apply to more than one week if there are no changes in any of the required data and the spreadsheet clearly identifies the weeks it covers. The spreadsheet may be retained electronically. However, the Division may treat any loss of data or failure to maintain the Division-approved spreadsheet, as if the data were not collected.

I.F.1.d. Each owner or operator shall maintain records of the inspections required pursuant to Section I.E. and retain those records for five years. These records shall include the time and date of the inspection, the person conducting the inspection, a notation that each of the checks required under Sections I.C. and I.E. were completed and a description of any problems observed during the inspection, and a description and date of any corrective actions taken.

~~I.F.1.e. (State Only) Each owner or operator shall maintain records of required surveillance system or other monitoring data and shall make these records available promptly upon Division request.~~

~~I.F.1.f. (State Only) Each owner or operator shall maintain records on when an atmospheric condensate storage tank is newly installed, or when a well is newly drilled, re-completed, re-fractured or otherwise stimulated. Records shall be maintained per well associated with each tank and the date of first production associated with these activities.~~

I.F.1.g. Reporting for Tanks Subject to the System-Wide Control Strategy.

On or before April 30, 2020, each owner or operator shall submit a report describing the air pollution control equipment used during calendar year 2019 and how each company complied with the system-wide control strategy during calendar year 2019. On or before August 30, 2020, each owner or operator must submit a report describing the air pollution control equipment used from January 1, 2020, through April 30, 2020, and how each company complied with the system-wide control strategy during that time period. Such reports shall be submitted to the Division on a Division-approved form provided for that purpose.

I.F.1.g.(i) The report shall list all condensate storage tanks subject or used to comply with the system-wide control strategy and the production volumes for each tank. Production volumes may be estimated by the amounts shown on the receipt from refinery purchasers for delivery of condensate from such tanks.

I.F.1.g.(ii) The report shall list the emission factor used for each tank. The emission factors shall comply with Section I.C.2.

I.F.1.g.(iii) The report shall list the location and control efficiency value for each piece of air pollution control equipment, and shall identify the atmospheric condensate storage tanks being controlled by each.

I.F.1.g.(iv) The April 30 report shall show the calendar monthly-uncontrolled actual emissions and the controlled actual emissions for each atmospheric condensate storage tank for January 1 through April 30, May 1 through September 30 and October 1 through December 31 of the previous year. The August 30, 2020, report must show the calendar monthly-uncontrolled actual emissions and the controlled actual emissions for each atmospheric condensate storage tank for January 1 through April 30, 2020.

- I.F.1.g.(v) The April 30 report shall show the calendar monthly total system-wide uncontrolled actual emissions and the total system-wide controlled actual emissions for January 1 through April 30, May 1 through September 30 and October 1 through December 31 of the previous year. The August 30, 2020, report must show the calendar monthly total system-wide uncontrolled actual emissions and the total system-wide controlled actual emissions for January 1 through April 30, 2020.
- I.F.1.g.(vi) The April 30 report shall show the calendar monthly total system-wide percentage reduction of emissions for May 1 through September 30 of the previous year, and for the combined periods of January 1 through April 30 and October 1 through December 31 of the previous year. The August 30, 2020, report must show the calendar monthly total system-wide percentage reduction of emissions for January 1 through April 30, 2020.
- I.F.1.g.(vii) The report shall note any downtime of air pollution control equipment, and shall account for such downtime in the weekly control efficiency value and emission reduction totals. The notations shall include the date, time and duration of any scheduled downtime. For any unscheduled downtime, the date and time the downtime was discovered and the last date the air pollution control equipment was observed to be operating should be recorded in the report.
- I.F.1.g.(viii) The report shall state whether the required emission reductions were achieved on a calendar monthly basis during the preceding year for the April 30 report and for January 1 through April 30, 2020, for the August 30 report. If the required emission reductions were not achieved, the report shall state why not, and shall identify steps being taken to ensure subsequent compliance.
- I.F.1.g.(ix) The report shall include any other information requested by the Division that is reasonably necessary to determine compliance with this Section I.
- I.F.1.g.(x) A copy of each semi-annual report shall be retained for five years.
- I.F.1.g.(xi) In addition to submitting the semi-annual reports, on or before the 30th of each month commencing in June 2007 and ending April 30, 2020, the owner or operator of any condensate storage tank that is required to control volatile organic compound emissions pursuant to Sections I.A. and I.D. shall notify the Division of any instances where the air pollution control equipment was not properly functioning during the previous month. The report shall include the time and date that the equipment was not properly operating, the time and date that the equipment was last observed operating properly, and the date and time that the problem was corrected. The report shall also include the specific nature of the problem, the specific steps taken to correct the problem, the AIRS number of each of the condensate tanks being controlled by the equipment or if no AIRS number has been assigned the site name, and the estimated production from those tanks during the period of non-operation.

I.F.1.g.(xii) Commencing in 2007, on or before April 30 of each year (ending on April 30, 2020), the owner or operator shall submit a list identifying by name and AIRS number or if no AIRS number has been assigned the site name, each condensate storage tank that is being controlled to meet the requirements set forth in Section I.D.1. On the 30th of each month during ozone season (May through September) and on November 30 and February 28 (ending on February 28, 2020), the owner or operator shall submit a list identifying any condensate storage tank whose control status has changed since submission of the previous list.

~~I.F.1.g.(xiii) (State Only) Semi-annual report submittals shall be signed by a responsible official who shall also sign the Division approved compliance certification form for atmospheric condensate storage tanks. The compliance certification shall include both a certification of compliance with all applicable requirements of Section I. If any non-compliance is identified, citation, dates and durations of deviations from this Section I., associated reasoning, and compliance plan and schedule to achieve compliance. Compliance certifications for state only conditions shall be identified separately from compliance certifications required under the State Implementation Plan.~~

~~I.F.1.g.(xiv) (State Only) Each Division approved self-certification form, and compliance certification submitted pursuant to Section I. shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.~~

I.F.1.h. The record-keeping and reporting required in Sections I.F.1. shall not apply to the owner or operator of any natural gas compressor station or natural gas drip station that is authorized to operate pursuant to a construction permit or Title V operating permit issued by the Division if the following criteria are met:

I.F.1.h.(i) Such permits are obtained by the owner or operator on or after the effective date of this provision and contain the provisions necessary to ensure the emissions reductions required by Section I.D.;

I.F.1.h.(ii) The owners and operators of such natural gas compressor stations or natural gas drip stations do not own or operate any exploration and production operation(s); and

I.F.1.h.(iii) Total emissions from atmospheric condensate storage tanks associated with such natural gas compressor stations or drip stations subject to APEN reporting requirements under Regulation Number 3, Part A owned or operated by the same person do not exceed 30 tons per year in the 8-hour Ozone Control Area.

I.F.2. Recordkeeping for storage tanks subject to Section I.D.3.

I.F.2.a. The owner or operator of any storage tank subject to control pursuant to Section I.D.3. (except storage tanks subject to Section I.D.3.a.(ii)) must maintain records and make them available to the Division upon request.

~~I.F.2.b. (State Only) The owner or operator of any storage tank subject to Section I.D.3.a.(ii) must maintain records and make them available to the Division upon request.~~

I.F.2.c. Records maintained under this Section I.F.2. must include:

I.F.2.c.(i) The AIRS number for the storage tank. The AIRS number assigned by the Division must be marked on all storage tanks required to file an APEN.

I.F.2.c.(ii) If air pollution control equipment is required to comply with Section I.D.3. visible signage must be located with the control equipment identifying the AIRS number for each storage tank that is being controlled by that equipment.

I.F.2.c.(iii) Records of the inspections required in Section I.E.

I.F.2.c.(iii)(A) The time and date of each inspection.

I.F.2.c.(iii)(B) The person conducting the inspection.

I.F.2.c.(iii)(C) A notation that each of the checks required under Section I.E. were completed.

I.F.2.c.(iii)(D) A description of any problems observed during the inspection, description and date of any corrective actions taken, and name of individual performing corrective actions.

I.F.2.c.(iv) The calendar monthly uncontrolled actual and controlled actual emissions of VOC and the rolling twelve-month totals for each storage tank subject to control under Section I.D.3.

I.F.2.c.(v) The emission factor used for each storage tank. The emission factors must comply with Section I.C.2. and the owner or operator must use the most recent emission factor on file with the Division (i.e., either the default emission factor or the specific emission factor established pursuant to Section I.C.2.a.(iii)).

I.F.2.c.(vi) The control efficiency of each unit of air pollution control equipment and the AIRS number of the storage tank being controlled.

~~I.F.2.d. (State Only) The owner or operator of each storage tank subject to Section I.D.3. must maintain records of~~

~~I.F.2.d.(i) The monthly production volumes for each storage tank, based on the most recent measurement available. The monthly average must be calculated by averaging the most recent measurement of such production, which may be the amount shown on the receipt from the purchaser for delivery of hydrocarbon liquids or produced water from such tank, over the time such delivered hydrocarbon liquids or produced water was collected. The monthly average from the most recent measurement will be used to estimate monthly volumes of controlled and uncontrolled actual emissions for all weeks and months following the measurement until the next measurement is taken.~~



~~I.F.2.d.(ii) Any downtime of air pollution control equipment, including the date, time and duration of any scheduled downtime. For any unscheduled downtime, the date and time the downtime was discovered and the date and time the air pollution control equipment was last observed to be operating.~~

~~I.F.2.d.(iii) Any required surveillance system or other monitoring data.~~

~~I.F.2.d.(iv) When a storage tank is installed, or when a well is drilled, re-completed, re-fractured, or otherwise stimulated. Records must be maintained per well associated with each storage tank and the date of commencement of operation associated with these activities.~~

I.F.3. Reporting for storage tanks subject to Section I.D.3.

I.F.3.a. On or before April 30, 2021, and April 30 of each year thereafter, each owner or operator of storage tanks (except storage tanks subject to Section I.D.3.a.(ii)) must submit a report using Division-approved format. A copy of each report must be retained for a period of five (5) years.

~~I.F.3.b. (State Only) On or before April 30, 2021, and April 30 of each year thereafter, each owner or operator of storage tanks subject to Section I.D.3.a.(ii) must submit a report using Division-approved format. A copy of each report must be retained for a period of five (5) years.~~

I.F.3.c. The report under this Section I.F.3. must include:

I.F.3.c.(i) The report must list all storage tanks (by AIRS number and location name) controlled pursuant to Section I.D.3. during the previous calendar year (starting calendar year 2020) and

I.F.3.c.(i)(A) The calendar monthly uncontrolled actual and controlled actual emissions of VOC and the rolling twelve-month total for each storage tank.

I.F.3.c.(i)(B) The emission factor used for each storage tank for each month.

I.F.3.c.(i)(C) The control efficiency for the air pollution control equipment for each storage tank.

~~I.F.3.c.(ii) (State Only) The report must identify any storage tank whose control status has changed, and the date of the change, since submission of the previous report.~~

~~I.F.3.c.(iii) (State Only) The report must list the production volume for each storage tank. Production volumes may be estimated by the amounts shown on the receipt from the purchaser.~~

~~I.F.3.c.(iv) (State Only) The report must list any downtime of air pollution control equipment, including the date, time, and duration of any scheduled downtime. For any unscheduled downtime, the date and time the downtime was discovered and the last date the air pollution control equipment was observed to be operating must be recorded in the report.~~

- I.F.3.c.(v) ~~(State Only) The report must list any instances where the air pollution control equipment was not properly functioning, including the date and time the equipment was not properly operating, the date and time the equipment was last observed operating properly, and the date and time the problem was corrected. The report must also include the specific nature of the problem, the specific steps taken to correct the problem, the AIRS number, or site name if no AIRS number has been assigned, of each storage tank being controlled by the equipment and the estimated production from these storage tanks during the period of non-operation.~~
- I.F.3.c.(vi) ~~(State Only) Reports must be signed by a responsible official who must also sign the Division approved compliance certification form for storage tanks. The compliance certification includes both a certification of compliance with all applicable requirements of Section I. If any non-compliance is identified, the certification must include the citation, dates and durations of deviations from this Section I., associated reasoning, and compliance plan and schedule to achieve compliance. Compliance certifications for state only conditions must be identified separately from compliance certifications required under the State Implementation Plan.~~
- I.F.3.c.(vii) ~~(State Only) Each Division approved self certification form, and compliance certification submitted pursuant to Section I. must contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.~~
- I.G. Natural gas-processing plants located in the 8-hour Ozone Control Area ~~(State Only: or any specific Ozone Nonattainment or Attainment/Maintenance Area)~~ shall comply with requirements of this Section I.G., as well as the requirements of Sections I.B., I.C.1.a., I.C.1.b., I.H., I.J., I.K., and Part E, Section I.A. through C.
- I.G.1. For fugitive volatile organic compound emissions from leaking equipment, the leak detection and repair (LDAR) program as provided at 40 CFR Part 60, Subpart OOOO (July 1, 2017) applies, regardless of the date of construction of the affected facility, unless subject to the LDAR program provided at 40 CFR Part 60, Subpart OOOOa (July 1, 2017).
- I.G.2. Air pollution control equipment shall be installed and properly operated to reduce emissions of volatile organic compounds from any atmospheric condensate storage tank (or tank battery) used to store condensate that has not been stabilized that has uncontrolled actual emissions of greater than or equal to two tons per year. Such air pollution control equipment shall have a control efficiency of at least 95%.
- I.G.3. Natural gas processing plants within the 8-hour Ozone Control Area constructed before January 1, 2018, must comply with the requirements of Section I.G. beginning January 1, 2019. ~~(State Only: Existing natural gas processing plants within any new Ozone Nonattainment or Attainment/Maintenance Area shall comply with this regulation within three years after the nonattainment designation.)~~

I.G.4. The provisions of Sections I.B., I.C.1.a., I.C.1.b., I.G., I.H., I.J., I.K., and Part E, Section I.A. through C., apply upon the commencement of operations to any natural gas processing plant that commences operation in the 8-Hour Ozone Control Area or Ozone Nonattainment (~~State Only: or Attainment/Maintenance Area~~) after the effective date of this section.

I.H. Emission Reductions from glycol natural gas dehydrators

I.H.1. Beginning May 1, 2005, still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator located at an oil and gas exploration and production operation, natural gas compressor station, drip station or gas-processing plant in the 8-Hour Ozone Control Area and subject to control requirements pursuant to Section I.H.3., shall reduce uncontrolled actual emissions of volatile organic compounds by at least 90 percent on a rolling twelve-month basis through the use of a condenser or air pollution control equipment.

~~I.H.2. (State Only) Beginning January 30, 2009, still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator located at an oil and gas exploration and production operation, natural gas compressor station, drip station or gas-processing plant in any Ozone Nonattainment or Attainment/Maintenance Area and subject to control requirements pursuant to Section I.H.3., shall reduce uncontrolled actual emissions of volatile organic compounds by at least 90 percent on a rolling twelve-month basis through the use of a condenser or air pollution control equipment.~~

I.H.3. The control requirements of Sections I.H.1. and I.H.2. apply where:

I.H.3.a. Actual uncontrolled emissions of volatile organic compounds from the glycol natural gas dehydrator are equal to or greater than one ton per year; and

I.H.3.b. The sum of actual uncontrolled emissions of volatile organic compounds from any single glycol natural gas dehydrator or grouping of glycol natural gas dehydrators at a single stationary source is equal to or greater than 15 tons per year. To determine if a grouping of dehydrators meets or exceeds the 15 tons per year threshold, sum the total actual uncontrolled emissions of volatile organic compounds from all individual dehydrators at the stationary source, including those with emissions less than one ton per year.

I.H.4. For purposes of Section I.H., emissions from still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator shall be calculated using a method approved in advance by the Division.

I.H.5. Monitoring and recordkeeping

I.H.5.a. Beginning January 1, 2017, owners or operators of glycol natural gas dehydrators subject to the control requirements of Sections I.H.1. or I.H.2. must check on a weekly basis that any condenser or air pollution control equipment used to control emissions of volatile organic compounds is operating properly, and document:

I.H.5.a.(i) The date of each inspection;

I.H.5.a.(ii) A description of any problems observed during the inspection of the condenser or air pollution control equipment; and

I.H.5.a.(iii) A description and date of any corrective actions taken to address problems observed during the inspection of the condenser or air pollution control equipment.

I.H.5.b. The owner or operator must check and document on a weekly basis that the pilot light on a combustion device is lit, that the valves for piping of gas to the pilot light are open, and visually check for the presence or absence of smoke.

I.H.5.c. The owner or operator must document the maintenance of the condenser or air pollution control equipment, consistent with manufacturer specifications or good engineering and maintenance practices.

I.H.5.d. The owner or operator must retain records for a period of five years and make these records available to the Division upon request.

#### I.H.6. Reporting

I.H.6.a. On or before November 30, 2017, and semi-annually by April 30 and November 30 of each year thereafter, the owner or operator must submit the following information for the preceding calendar year (April 30 report) and for May 1 through September 30 (November 30 report) using Division-approved format

I.H.6.a.(i) A list of the glycol natural gas dehydrator(s) subject to Section I.H.;

I.H.6.a.(ii) A list of the condenser or air pollution control equipment used to control emissions of volatile organic compounds from the glycol natural gas dehydrator(s); and

I.H.6.a.(iii) The date(s) of inspection(s) where the condenser or air pollution control equipment was found not operating properly or where smoke was observed.

I.I. The requirements of Sections I.D. through I.F. do not apply to the owner or operator of any natural gas compressor station or natural gas drip station located in an Ozone Nonattainment or Attainment/Maintenance Area if:

I.I.1. Air pollution control equipment is installed and properly operated to reduce emissions of volatile organic compounds from all atmospheric condensate storage tanks (or tank batteries) that have uncontrolled actual emissions of greater than or equal to two tons per year;

I.I.2. The air pollution control equipment is designed to achieve a VOC control efficiency of at least 95% on a rolling 12-month basis and meets the requirements of Sections I.C.1.a. and I.C.1.b;

I.I.3. The owner or operator of such natural gas compressor station or natural gas drip station does not own or operate any exploration and production facilities in the Ozone Non-attainment or Attainment-maintenance Area; and

I.I.4. The owner or operator of such natural gas compressor station or natural gas drip station does the following and maintains associated records and reports for a period of five years:

- I.I.4.a. Documents the maintenance of the air pollution control equipment according to manufacturer specifications;
  - I.I.4.b. Conducts an annual opacity observation once each year on the air pollution control equipment to verify opacity does not exceed 20% during normal operations;
  - I.I.4.c. Maintains records of the monthly stabilized condensate throughput and monthly actual VOC emissions; and
  - I.I.4.d. Reports compliance with these requirements to the Division annually.
  - I.I.5. A natural gas compressor station or natural gas drip station subject to Section I.I. at which a glycol natural gas dehydrator and/or natural gas-fired stationary or portable engine is operated is subject to Sections I.H., I.J., and/or Part E, Section I. A natural gas compressor station subject to Section I.I. is also subject to Section I.L.
- I.J. Compressors
- I.J.1. Centrifugal compressor
    - I.J.1.a. Beginning January 1, 2018, uncontrolled actual volatile organic compound emissions from wet seal fluid degassing systems on wet seal centrifugal compressors located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment must be reduced by at least 95%. A centrifugal compressor located at a well production facility, or an adjacent well production facility and servicing more than one well production facility, is not subject to Section I.J.1.
    - I.J.1.b. If the owner or operator uses a control device or routes emissions to a process to reduce emissions, the owner or operator must equip the wet seal fluid degassing system with a continuous, impermeable cover that is connected through a closed vent system that routes the emissions from the wet seal fluid degassing system to the process or control device.
    - I.J.1.c. The owner or operator must conduct annual visual inspections of the cover and closed vent system for defects that could result in air emissions. Defects of the closed vent system include, but are not limited to, visible cracks, holes, gaps in piping, loose connections, liquid leaks, or broken or missing caps or other closure devices. Defects of the cover include, but are not limited to, visible cracks, holes, gaps in the cover or between the cover and separator wall, broken or damaged seals or gaskets on closure devices, broken or missing hatches or other closure devices.
    - I.J.1.d. The owner or operator must conduct annual EPA Method 21 inspections of the cover and closed vent system to determine whether the cover and closed vent system operates with volatile organic compound emissions less than 500 ppm.
    - I.J.1.e. In the event that a defect that could result in air emissions or leak is detected, the owner or operator must make a first attempt to repair no later than five (5) days after detecting the defect or leak and complete repair no later than thirty (30) days after detecting the defect or leak.
    - I.J.1.f. Owners or operators may delay inspection or repair of a cover or closed vent system if:

- I.J.1.f.(i) Repair is technically infeasible without a shutdown. If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.
- I.J.1.f.(ii) The cover or closed vent system is unsafe to inspect or repair because personnel would be exposed to an immediate danger as a consequence of completing the inspection or repair.
- I.J.1.f.(iii) The cover or closed vent system is difficult to inspect or repair because personnel must be elevated more than two (2) meters above a supported surface or are unable to inspect or repair via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.
- I.J.1.f.(iv) The cover or closed vent system is inaccessible to inspect or repair because the cover or closed vent system is buried, insulated, or obstructed by equipment or piping that prevents access.

I.J.1.g. The owner or operator must conduct monthly inspections of a combustion device used to reduce emissions to ensure the device is operating with no visible emissions. If smoke is observed, either the equipment must be immediately shut-in to investigate the potential cause for smoke and perform repairs, as necessary, or EPA Method 22 must be conducted. Devices fail the visible emissions test if a Method 22 observation documents visible emissions are present for more than one minute in any 15-minute period. Devices failing the visible emissions test must follow manufacturer's repair instructions, if available, or best combustion engineering practice to return the unit to compliant operation. Following return to operation, the owner or operator must complete a Method 22 visual observation where there are less than one minute of visible emissions in any 15-minute period.

I.J.1.h. For a combustion device used to reduce VOC emissions from wet seal fluid degassing systems on wet seal centrifugal compressors, the owner or operator must conduct a performance test in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(b) (June 3, 2016) by May 1, 2023, and subsequent performance tests no longer than 60 months following the previous performance test. Control device models tested in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) and demonstrating continuous compliance in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(e)(1) (June 3, 2016) are not subject to the performance test requirement.

I.J.1.i. Recordkeeping

- I.J.1.i.(i) Owners or operators must maintain the following records for at least five (5) years and make records available to the Division upon request:
- I.J.1.i.(i)(A) Identification of each centrifugal compressor using a wet seal system;
  - I.J.1.i.(i)(B) Each combustion device visible emissions inspection and any resulting responsive actions;
  - I.J.1.i.(i)(C) Each cover and closed vent system inspection and any resulting responsive actions; and
  - I.J.1.i.(i)(D) Each cover or closed vent system on the delay of inspection or repair list, the reason for and duration of the delay of inspection or repair, and the schedule for inspecting or repairing such cover or closed vent system.
  - I.J.1.i.(i)(E) Each performance test or manufacturer demonstration of control device model performance test, and associated inlet gas flow rate records.
  - I.J.1.i.(i)(F) Records of visual inspections conducted pursuant to Section I.J.1.g., including the time and date of each inspection and a description of any problems observed, description and date of any corrective action(s) taken, and name of employee or third party performing corrective action(s).
- I.J.1.j. As an alternative to the inspection, repair, and recordkeeping provisions in Sections I.J.1.c. through I.J.1.f., I.J.1.h.(i)(C), and I.J.1.h.(i)(D), the owner or operator may inspect, repair, and document the cover and closed vent system in accordance with the leak detection and repair program in Section I.L., including the inspection frequency.
- I.J.1.k. As an alternative to the emission control, inspection, repair, and recordkeeping provisions described in Sections I.J.1.a. through I.J.1.i., the owner or operator may comply with wet seal centrifugal compressors emission control, monitoring, recordkeeping, and reporting requirements of a New Source Performance Standard in 40 CFR Part 60 (November 16, 2017).

I.J.2. Reciprocating compressor

I.J.2.a. Beginning January 1, 2018, the rod packing on reciprocating compressors located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment must be replaced every 26,000 hours of operation or every thirty-six (36) months. A reciprocating compressor located at a well production facility, or an adjacent well production facility and servicing more than one well production facility, is not subject to Section I.J.2.

I.J.2.a.(i) Owners or operators of reciprocating compressors located at a natural gas processing plant and constructed before January 1, 2018, must

I.J.2.a.(i)(A) Begin monitoring the hours of operation starting January 1, 2018; or

I.J.2.a.(i)(B) Conduct the first rod packing replacement required under Section I.J.2. prior to January 1, 2021.

I.J.2.a.(ii) Owners or operators of reciprocating compressors located at a natural gas processing plant and constructed after January 1, 2018, must begin monitoring the hours or months of operation upon commencement of operation of the reciprocating compressor.

I.J.2.b. As an alternative to the requirement described in Section I.J.2.a., beginning May 1, 2018, the owner or operator may collect rod packing volatile organic compound emissions using a rod packing emissions collection system that operates under negative pressure and routes the rod packing emissions through a closed vent system to a process.

I.J.2.b.(i) The owner or operator must conduct annual visual inspections of the cover and closed vent system for defects that could result in air emissions. Defects of the closed vent system include, but are not limited to, visible cracks, holes, gaps in piping, loose connections, liquid leaks, or broken or missing caps or other closure devices. Defects of the cover include, but are not limited to, visible cracks, holes, gaps in the cover or between the cover and separator wall, broken or damaged seals or gaskets on closure devices, broken or missing hatches or other closure devices.

I.J.2.b.(ii) The owner or operator must conduct annual EPA Method 21 inspections of the cover and closed vent system to determine whether the cover and closed vent system operates with volatile organic compound emissions less than 500 ppm.

I.J.2.b.(iii) In the event that a defect that could result in air emissions or leak is detected, the owner or operator must make a first attempt to repair no later than five (5) days after detecting the defect or leak and complete repair no later than thirty (30) days after detecting the defect or leak.

I.J.2.b.(iv) Owners or operators may delay inspection or repair of a cover or closed vent system if:



I.J.2.b.(iv)(A) Repair is technically infeasible without a shutdown. If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.

I.J.2.b.(iv)(B) The cover or closed vent system is unsafe to inspect or repair because personnel would be exposed to an immediate danger as a consequence of completing the inspection or repair.

I.J.2.b.(iv)(C) The cover or closed vent system is difficult to inspect or repair because personnel must be elevated more than two (2) meters above a supported surface or are unable to inspect or repair via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.

I.J.2.b.(iv)(D) The cover or closed vent system is inaccessible to inspect or repair because the cover or closed vent system is buried, insulated, or obstructed by equipment or piping that prevents access.

I.J.2.c. Recordkeeping

I.J.2.c.(i) Owners or operators must maintain the following records for at least five (5) years and make records available to the Division upon request:

I.J.2.c.(i)(A) Identification of each reciprocating compressor;

I.J.2.c.(i)(B) The hours of operation or the number of months since the previous rod packing replacement, or a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure;

I.J.2.c.(i)(C) The date of each rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system;

I.J.2.c.(i)(D) Each cover and closed vent system inspection and any resulting responsive actions; and

I.J.2.c.(i)(E) Each cover or closed vent system on the delay of inspection or repair list, the reason for and duration of the delay of inspection or repair, and the schedule for inspecting or repairing such cover or closed vent system.

I.J.2.d. As an alternative to the inspection, repair, and recordkeeping provisions in Sections I.J.2.b., I.J.2.c.(i)(D), and I.J.2.c.(i)(E), the owner or operator may inspect, repair, and document the cover and closed vent system in accordance with the leak detection and repair program in Section I.L., including the inspection frequency.

I.J.2.e. As an alternative to the emission control, inspection, repair, and recordkeeping provisions described in Sections I.J.2.a. through I.J.2.d., the owner or operator may comply with reciprocating compressor emission control, monitoring, recordkeeping, and reporting requirements of a New Source Performance Standard in 40 CFR Part 60 (November 16, 2017).

I.K. Pneumatic pumps

I.K.1. Beginning May 1, 2018, the owner or operator of each natural gas-driven diaphragm pneumatic pump located at a natural gas processing plant must ensure the pneumatic pump has a volatile organic compound emission rate of zero.

I.K.2. Beginning May 1, 2018, the owner or operator of each natural gas-driven diaphragm pneumatic pump located at a well production facility must reduce volatile organic compound emissions from the pneumatic pump by 95% if it is technically feasible to route emissions to an existing control device or process at the well production facility. Natural gas-driven diaphragm pneumatic pumps that are in operation during any period of time during a calendar day less than 90 days per calendar year are not subject to Section I.K.2.

I.K.2.a. If the control device available onsite is unable to achieve a 95% emission reduction and it is not technically feasible to route the emissions to a process at the well production facility, the owner or operator must still route the pneumatic pump emissions to the existing control device.

I.K.2.b. If the owner or operator subsequently installs a control device or it becomes technically feasible to route the emissions to a process, the owner or operator must reduce volatile organic compound emissions from the pneumatic pump by 95% within thirty (30) days of startup of the control device or of the feasibility of routing emissions to a process at the well production facility.

I.K.2.c. The owner or operator is not required to control pneumatic pump emissions if, through an engineering assessment by a qualified professional engineer, routing a pneumatic pump to a control device or process at the well production facility is shown to be technically infeasible.

I.K.2.d. If the owner or operator uses a control device or routes emissions to a process to reduce emissions, the owner or operator must connect the pneumatic pump through a closed vent system that routes the pneumatic pump emissions to the process or control device.

I.K.2.e. The owner or operator must conduct annual visual inspections of the closed vent system for defects that could result in air emissions. Defects of the closed vent system include, but are not limited to, visible cracks, holes, gaps in piping, loose connections, liquid leaks, or broken or missing caps or other closure devices.

I.K.2.f. The owner or operators must conduct annual EPA Method 21 inspections of the closed vent system to determine whether the closed vent system operates with volatile organic compound emissions less than 500 ppm.

I.K.2.g. In the event that a defect that could result in air emissions or leak is detected, the owner or operator must make a first attempt to repair no later than five (5) days after detecting the defect or leak and complete repair no later than thirty (30) days after detecting the defect or leak.

I.K.2.h. Owners or operators may delay inspection or repair of a closed vent system if:

I.K.2.h.(i) Repair is technically infeasible without a shutdown. If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.

I.K.2.h.(ii) The closed vent system is unsafe to inspect or repair because personnel would be exposed to an immediate danger as a consequence of completing the inspection or repair.

I.K.2.h.(iii) The closed vent system is difficult to inspect or repair because personnel must be elevated more than two (2) meters above a supported surface or are unable to inspect or repair via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.

I.K.2.h.(iv) The closed vent system is inaccessible to inspect or repair because the closed vent system is buried, insulated, or obstructed by equipment or piping that prevents access.

### I.K.3. Recordkeeping

I.K.3.a. Owners or operators must maintain the following records for at least five (5) years and make records available to the Division upon request:

I.K.3.a.(i) Identification of each natural gas-driven diaphragm pneumatic pump;

I.K.3.a.(ii) For natural gas-driven diaphragm pneumatic pumps in operation less than 90 days per calendar year, records of the days of operation each calendar year;

I.K.3.a.(iii) Records of control devices designed to achieve less than 95% emission reduction, including an evaluation or manufacturer specifications indicating the percentage reduction the control device is designed to achieve;

I.K.3.a.(iv) Records of the engineering assessment and certification by a qualified professional engineer that routing natural gas-driven diaphragm pneumatic pump emissions to a control device or process is technically infeasible;

I.K.3.a.(v) Each closed vent system inspection and any resulting responsive actions; and

I.K.3.a.(vi) Each closed vent system on the delay of inspection or repair list, the reason for and duration of the delay of inspection or repair, and the schedule for inspecting or repairing such closed vent system.

I.K.4. As an alternative to the inspection, repair, and recordkeeping provisions in Sections I.K.2.e. through I.K.2.h., I.K.3.a.(v), and I.K.3.a.(vi), the owner or operator may inspect, repair, and document the closed vent system in accordance with the leak detection and repair program in Section I.L., including the inspection frequency.

- I.K.5. As an alternative to the emission control, inspection, repair, and recordkeeping provisions described in Sections I.K.1. through I.K.4., the owner or operator may comply with natural gas-driven diaphragm pneumatic pump emission control, monitoring, recordkeeping, and reporting requirements of a New Source Performance Standard in 40 CFR Part 60 (November 16, 2017).
- I.L. Leak detection and repair program for well production facilities and natural gas compressor stations located in the 8-hour Ozone Control Area.
- I.L.1. Natural gas compressor stations
- I.L.1.a. Beginning June 30, 2018, owners or operators of natural gas compressor stations must inspect components for leaks using an approved instrument monitoring method at least quarterly.
- I.L.1.b. Owners or operators of natural gas compressor stations constructed on or after June 30, 2018, must conduct an initial inspection for leaks from components using an approved instrument monitoring method no later than ninety (90) days after the facility commences operation. Thereafter, approved instrument monitoring method inspections must be conducted at least quarterly.
- I.L.2. Well production facilities
- I.L.2.a. Beginning June 30, 2018, owners or operators of well production facilities with uncontrolled actual volatile organic compound emissions greater than or equal to one (1) ton per year and less than or equal to six (6) tons per year, based on a rolling twelve-month total, must inspect components for leaks using an approved instrument monitoring method at least annually.
- I.L.2.b. Beginning June 30, 2018, owners or operators of well production facilities with uncontrolled actual volatile organic compound emissions greater than six (6) tons per year, based on a rolling twelve-month total, must inspect components for leaks using an approved instrument monitoring method at least semi-annually.
- I.L.2.c. For purposes of Sections I.L.2.a. and I.L.2.b., the estimated uncontrolled actual volatile organic compound emissions from the highest emitting storage tank at the well production facility determines the frequency at which inspections must be performed. If no storage tanks storing oil or condensate are located at the well production facility, owners or operators must rely on the facility emissions (controlled actual volatile organic compound emissions from all permanent equipment, including emissions from components determined by utilizing the emission factors defined as less than 10,000 ppmv of Table 2-8 of the 1995 EPA Protocol for Equipment Leak Emission Estimates).
- I.L.2.d. Owners or operators of well production facilities constructed on or after June 30, 2018, must conduct an initial inspection for leaks from components using an approved instrument monitoring method no sooner than fifteen (15) days and no later than thirty (30) days after the facility commences operation. Thereafter, approved instrument monitoring method inspections must be conducted in accordance with Sections I.L.2.a. and I.L.2.b.
- I.L.3. If a component is unsafe, difficult, or inaccessible to monitor, the owner or operator is not required to monitor the component until it becomes feasible to do so.

- I.L.3.a. Difficult to monitor components are those that cannot be monitored without elevating the monitoring personnel more than two (2) meters above a supported surface or are unable to be reached via a wheeled scissor-lift or hydraulic type scaffold that allows access to components up to 7.6 meters (25 feet) above the ground.
  - I.L.3.b. Unsafe to monitor components are those that cannot be monitored without exposing monitoring personnel to an immediate danger as a consequence of completing the monitoring.
  - I.L.3.c. Inaccessible to monitor components are those that are buried, insulated, or obstructed by equipment or piping that prevents access to the components by monitoring personnel.
- I.L.4. Leaks requiring repair: Only leaks from components exceeding the thresholds in Section I.L.4. require repair under Section I.L.5.
- I.L.4.a. For EPA Method 21 monitoring, repair is required for leaks with any concentration of hydrocarbon above 500 ppm not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation.
  - I.L.4.b. For infra-red camera monitoring, repair is required for leaks with any detectable emissions not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation.
  - I.L.4.c. For other approved instrument monitoring methods or programs, leak identification requiring repair will be established as set forth in an approval under Section I.L.8.
  - I.L.4.d. For leaks identified using an approved non-quantitative instrument monitoring method, owners or operators have the option of either repairing the leak in accordance with the repair schedule set forth in Section I.L.5. or conducting follow-up monitoring using EPA Method 21 within five (5) working days of the leak detection. If the follow-up EPA Method 21 monitoring shows that the emission is a leak requiring repair as set forth in Section I.L.4.a., the leak must be repaired and remonitored in accordance with Section I.L.5.
  - I.L.4.e. Owners or operators must maintain and operate approved non-quantitative instrument monitoring methods according to manufacturer recommendations.
- I.L.5. Repair and remonitoring
- I.L.5.a. First attempt to repair a leak must be made no later than five (5) working days after discovery and completed no later than thirty (30) working days after discovery, unless parts are unavailable, the equipment requires shutdown to complete repair, or other good cause exists.
    - I.L.5.a.(i) If parts are unavailable, they must be ordered promptly and the repair must be made within fifteen (15) working days of receipt of the parts.
    - I.L.5.a.(ii) If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.

I.L.5.a.(iii) If delay is attributable to other good cause, repairs must be completed within fifteen (15) working days after the cause of delay ceases to exist.

I.L.5.b. Within fifteen (15) working days of completion of a repair the leak must be remonitored using an approved instrument monitoring method to verify that the repair was effective.

I.L.5.c. Leaks discovered pursuant to the leak detection methods of Section I.L.4. are not subject to enforcement by the Division unless the owner or operator fails to perform the required repairs in accordance with Section I.L.5. or keep required records in accordance with Section I.L.6.

#### I.L.6. Recordkeeping

I.L.6.a. Documentation of the initial approved instrument monitoring method inspection for well production facilities and natural gas compressor stations;

I.L.6.b. The date, facility name, and facility AIRS ID or facility location if the facility does not have an AIRS ID for each inspection;

I.L.6.c. A list of the leaks requiring repair and the monitoring method(s) used to determine the presence of the leak;

I.L.6.d. The date of first attempt to repair the leak and, if necessary, any additional attempt to repair;

I.L.6.e. The date the leak was repaired and type of repair method applied;

I.L.6.f. The delayed repair list, including the date and duration of any period where the repair of a leak was delayed due to unavailable parts, required shutdown, or delay for other good cause, the basis for the delay, and the schedule for repairing the leak. Delay of repair beyond thirty (30) days after initial discovery due to unavailable parts must be reviewed, and a record kept of that review, by a representative of the owner or operator with responsibility for leak detection and repair compliance functions. This review will not be made by the individual making the initial determination to place a part on the delayed repair list;

I.L.6.g. The date the leak was remonitored and the results of the remonitoring; and

I.L.6.h. A list of components that are designated as unsafe, difficult, or inaccessible to monitor, as described in Section I.L.3., an explanation stating why the component is so designated, and the schedule for monitoring such component(s).

I.L.6.i. Records must be maintained for a minimum of five years and made available to the Division upon request.

I.L.7. Reporting: The owner or operator of each facility subject to the leak detection and repair requirements in Section I.L. must submit a single annual report on or before May 31st of each year (beginning May 31st, 2019) that includes, at a minimum, the following information regarding leak detection and repair activities at their subject facilities conducted the previous calendar year:

I.L.7.a. The total number of well production facilities and total number of natural gas compressor stations inspected;

- I.L.7.b. The total number of inspections performed per inspection frequency tier of well production facilities and the total number of inspections performed at natural gas compressor stations;
  - I.L.7.c. The total number of identified leaks requiring repair broken out by component type, monitoring method, and inspection frequency tier of well production facility as reported in Section I.L.7.b. and the total number of identified leaks requiring repair at natural gas compressor stations broken out by component type and monitoring method;
  - I.L.7.d. The total number of leaks repaired for each inspection frequency tier of well production facilities as reported in Section I.L.7.b. and the total number of leaks repaired for natural gas compressor stations;
  - I.L.7.e. The total number of leaks on the delayed repair list as of December 31st broken out by component type, inspection frequency tier of well production facility as reported in Section I.L.7.b. or natural gas compressor station, and the basis for each delay of repair;
  - I.L.7.f. The record of all reviews conducted for delayed repairs due to unavailable parts extending beyond 30 days for the previous calendar year; and
  - I.L.7.g. Each report shall be accompanied by a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- I.L.8. Alternative approved instrument monitoring methods may be used in lieu of, or in combination with an infra-red camera, EPA Method 21, or other approved instrument monitoring method to inspect for leaks as required by Section I.L., if the following conditions are met:
- I.L.8.a. The proponent of the alternative approved instrument monitoring method applies for a determination of an alternative approved instrument monitoring method or program. The application must include, at a minimum, the following:
    - I.L.8.a.(i) The proposed alternative approved instrument monitoring method manufacturer information;
    - I.L.8.a.(ii) A description of the proposed alternative approved instrument monitoring method including, but not limited to:
      - I.L.8.a.(ii)(A) Whether the proposed alternative approved instrument monitoring method is a quantitative detection method, and how emissions are quantified, or qualitative leak detection method;
      - I.L.8.a.(ii)(B) Whether the proposed alternative approved instrument monitoring method is commercially available;
      - I.L.8.a.(ii)(C) Whether the proposed alternative approved instrument monitoring method is approved by other regulatory authorities and for what application (e.g., pipeline monitoring, emissions detected);

- I.L.8.a.(ii)(D) The leak detection capabilities, reliability, and limitations of the proposed alternative approved instrument monitoring method, including, but not limited to, the ability to identify specific leaks or locations, detection limits, and any restrictions on use, as well as supporting data;
  - I.L.8.a.(ii)(E) The frequency of measurements and data logging capabilities of the proposed alternative approved instrument monitoring method;
  - I.L.8.a.(ii)(F) Data quality indicators for precision and bias of the proposed alternative approved instrument monitoring method;
  - I.L.8.a.(ii)(G) Quality control and quality assurance procedures necessary to ensure proper operation of the proposed alternative approved instrument monitoring method;
  - I.L.8.a.(ii)(H) A description of where, when, and how the proposed alternative approved instrument monitoring method will be used; and
  - I.L.8.a.(ii)(I) Documentation (e.g., field or test data, modeling) adequate to demonstrate the proposed alternative approved instrument monitoring method or program is capable of achieving emission reductions that are at least as effective as the emission reductions achieved by the leak detection and repair provisions in Section I.L.
- I.L.8.a.(iii) The Division will transmit a copy of the complete application and any other materials provided by the applicant to EPA.
  - I.L.8.a.(iv) Public notice of the application is provided pursuant to Regulation Number 3, Part B, Section III.C.4.
  - I.L.8.a.(v) The Division and the EPA approves the proposal. The Division will transmit a copy of the application and any other materials provided by the applicant, all public comments, all Division responses and the Division's approval to EPA Region 8. If EPA fails to approve or disapprove the proposal within six (6) months of receipt of these materials, EPA will be deemed to have approved the proposal.



**II. (State Only) Statewide Controls for Oil and Gas Operations**

**II.A. (State Only) Definitions**

- II.A.1. "Air Pollution Control Equipment," as used in this Section II., means a combustion device or vapor recovery unit. Air pollution control equipment also means alternative emissions control equipment and pollution prevention devices and processes intended to reduce uncontrolled actual emissions that comply with the requirements of Section II.B.2.e.
- II.A.2. "Approved Instrument Monitoring Method," means an infra-red camera, EPA Method 21, or other Division approved instrument based monitoring method or program. If an owner or operator elects to use Division approved continuous emission monitoring, the Division may approve a streamlined inspection and reporting program for such operations.
- II.A.3. "Auto-Igniter" means a device which will automatically attempt to relight the pilot flame in the combustion chamber of a control device in order to combust VOC emissions.
- II.A.4. "Centrifugal Compressor" means any machine used for raising the pressure of natural gas by drawing in low pressure natural gas and discharging significantly higher pressure natural gas by means of mechanical rotating vanes or impellers. Screw, sliding vane, and liquid ring compressors are not centrifugal compressors.
- II.A.5. "Commencement of operation" means when a source first conducts the activity that it was designed and permitted for. In addition, for oil and gas well production facilities, commencement of operation is the date any permanent production equipment is in use and product is consistently flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback).
- II.A.6. "Component" means each pump seal, flange, pressure relief device (including thief hatches or other openings on a controlled storage tank), connector, and valve that contains or contacts a process stream with hydrocarbons, except for components in process streams consisting of glycol, amine, produced water, or methanol.

II.B.3.a. Beginning January 1, 2015, each open-ended valve or line at well production facilities and natural gas compressor stations must be equipped with a cap, blind flange, plug, or a second valve that seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirement to seal the open end of the valve or line. Alternatively, an open-ended valve or line may be treated as if it is a "component" as defined in Section II.A.7., and may be monitored under the provisions of Section II.E.

II.B.3.b. Beginning January 1, 2015, uncontrolled actual hydrocarbon emissions from wet seal fluid degassing systems on wet seal centrifugal compressors must be reduced by at least 95%, unless the centrifugal compressor is subject to 40 CFR Part 60, Subpart OOOO (February 23, 2014) on that date or thereafter.

II.B.3.c. Beginning January 1, 2015, the rod packing on any reciprocating compressor located at a natural gas compressor station must be replaced every 26,000 hours of operation or every thirty six (36) months, unless the reciprocating compressor is subject to 40 CFR Part 60, Subpart OOOO (February 23, 2014) on that date or thereafter. The measurement of accumulated hours of operation (26,000) or months elapsed (36) begins on January 1, 2015.

I.B.4. Oil refineries are not subject to Section II.

I.B.5. Glycol natural gas dehydrators that are subject to an emissions control requirement in a federal maximum achievable control technology ("MACT") standard under 40 CFR Part 63 (December 17, 2006), a Best Available Control Technology ("BACT") limit, or a New Source Performance Standard ("NSPS") under 40 CFR Part 60 (December 17, 2006) are not subject to Section II., except for the leak detection and repair requirements in Section II.E.

II.C. Emission reduction from storage tanks at oil and gas exploration and production operations, well production facilities, natural gas compressor stations, and natural gas processing plants.

II.C.1. Control and monitoring requirements for storage tanks

II.C.1.a. (State Only) Beginning May 1, 2008, owners or operators of all storage tanks storing condensate with uncontrolled actual emissions of VOCs equal to or greater than twenty (20) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that has a control efficiency of at least 95% for VOCs.

II.C.1.b. (State Only) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than six (6) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a hydrocarbon control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons, except where the combustion device has been authorized by permit prior to May 1, 2014.

II.C.1.b.(i) (State Only) Control requirements of Section II.C.1.b. must be achieved in accordance with the following schedule:

II.C.1.b.(i)(A) A storage tank constructed on or after May 1, 2014, must be in compliance within ninety (90) days of the date that the storage tank commences operation.

II.C.1.b.(i)(B) A storage tank constructed before May 1, 2014, must be in compliance by May 1, 2015.

II.C.1.b.(i)(C) A storage tank not otherwise subject to Sections II.C.1.b.(i)(A) or II.C.1.b.(i)(B) that increases uncontrolled actual emissions to six (6) tons per year VOC or more on a rolling twelve month basis after May 1, 2014, must be in compliance within sixty (60) days of discovery of the emissions increase.

II.C.1.b.(ii). Control requirements within ninety (90) days of commencement of operation.

II.C.1.b.(ii)(A) Beginning May 1, 2014, through March 1, 2020, owners or operators of storage tanks at well production facilities must collect and control emissions by routing emissions to operating air pollution control equipment during the first ninety (90) calendar days after commencement of operation. The air pollution control equipment must achieve a hydrocarbon control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons. This control requirement does not apply to storage tanks that are projected to have emissions less than 1.5 tons of VOC during the first ninety (90) days after commencement of operation.

II.C.1.b.(ii)(B) The air pollution control equipment and any associated monitoring equipment required pursuant to Section II.C.1.c.(i) may be removed at any time after the first ninety (90) calendar days as long as the source can demonstrate that uncontrolled actual emissions from the storage tank will be below the threshold in Section II.C.1.b.

~~II.C.1.c. (State Only) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than two (2) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a hydrocarbon control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons, except where the combustion device has been authorized by permit prior to March 1, 2020.~~

~~II.C.1.c.(i) Control requirements of Section II.C.1.c. must be achieved in accordance with the following schedule~~

~~II.C.1.c.(i)(A) A storage tank constructed on or after March 1, 2020, must be in compliance by commencement of operation of that storage tank.~~

~~II.C.1.c.(i)(B) A storage tank constructed before March 1, 2020, that is not already controlled under Sections I.D. or II.C.1.b. must be in compliance by May 1, 2021.~~

II.F. Control of emissions from well production facilities

Well Operation and Maintenance: On or after August 1, 2014, gas coming off a separator, produced during normal operation from any newly constructed, hydraulically fractured, or recompleted oil and gas well, must either be routed to a gas gathering line or controlled from commencement of operation by air pollution control equipment that achieves an average hydrocarbon control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons.

II.G. (State Only) Emissions during downhole well maintenance, well liquids unloading events, and well plugging

II.G.1. Beginning May 1, 2014, owners or operators must use best management practices to minimize hydrocarbon emissions and the need for emissions from the well associated with downhole well maintenance, well liquids unloading, and well plugging (beginning January 31, 2020), unless emitting is necessary for safety.

II.G.1.a. During liquids unloading events, any means of creating differential pressure must first be used to attempt to unload the liquids from the well without emitting. If these methods are not successful in unloading the liquids from the well, the well may emit in order to create the necessary differential pressure to bring the liquids to the surface.

II.G.1.b. The owner or operator must be present on-site during any planned downhole well maintenance, well liquids unloading, or well plugging event and must ensure that any emissions from the well associated with the event are limited to the maximum extent practicable.

II.G.2. Recordkeeping

II.G.2.a. Through January 31, 2020, the owner or operator must keep records of the cause, date, time, and duration of venting events under Section II.G. Records must be kept for two (2) years and made available to the Division upon request.

II.G.2.b. Beginning January 31, 2020, or the date specified in Section II.G.2.b.(iii), the owner or operator must keep the following records for two (2) years and make records available to the Division upon request.

II.G.2.b.(i) The cause of emissions (i.e., downhole well maintenance, well liquids unloading, well plugging), date, time, and duration of emissions under Section II.G.

II.G.2.b.(ii) The best management practices used to minimize hydrocarbon emissions or the safety needs that prevented the use of best management practices.

II.G.2.b.(iii) Beginning July 1, 2020, the emissions associated with well liquids unloading, downhole well maintenance, and well plugging.

II.G.3. Reporting

II.G.3.a. The owner or operator must submit a single annual report using a Division-approved format on or before June 30th of each year (beginning June 30th, 2021) that includes the following information regarding each downhole well maintenance, well liquids unloading, and well plugging event conducted the previous calendar year that resulted in emissions.

- ~~II.G.3.a.(i) The API number of the well and the AIRS number of any associated storage tanks.~~
- ~~II.G.3.a.(ii) Whether the emissions occurred due to downhole well maintenance, well liquids unloading, or well plugging.~~
- ~~II.G.3.a.(iii) The date, time, and duration of the downhole well maintenance, well liquids unloading, or well plugging event.~~
- ~~II.G.3.a.(iv) The best management practices used to minimize emissions.~~
- ~~II.G.3.a.(v) Safety needs that prevented the use of best management practices to minimize emissions, if applicable.~~
- ~~II.G.3.a.(vi) An estimate of the volume of natural gas, VOC, NO<sub>x</sub>, CO, ethane, and methane emitted from the well associated with well liquid unloading activities, downhole well maintenance, and well plugging event and the emission factor or calculation methodology used to determine the volume of natural gas and emissions.~~

### **III. Natural Gas-Actuated Pneumatic Controllers Associated with Oil and Gas Operations**

#### **III.A. Applicability**

This section applies to pneumatic controllers that are actuated by natural gas, and located at, or upstream of natural gas processing plants (upstream activities include: oil and gas exploration and production operations and natural gas compressor stations).

#### **III.B. Definitions**

- III.B.1. "Affected Operations" means pneumatic controllers that are actuated by natural gas, and located at, or upstream of natural gas processing plants (upstream activities include: oil and gas exploration and production operations and natural gas compressor stations).
  - III.B.2. "Continuous Bleed" means a continuous bleed rate of natural gas from a pneumatic controller that is designed to bleed natural gas continuously.
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- III.B.3. "Custody Transfer" means the transfer of crude oil or natural gas after processing and/or treatment in the producing operations or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation.
- ~~III.B.4. (State Only) "Enhanced Response" means to return a pneumatic controller to proper operation and includes but is not limited to, cleaning, adjusting, and repairing leaking gaskets, and seals; tuning to operate over a broader range of proportional band; and eliminating unnecessary valve positioners.~~
- III.B.5. "High-Bleed Pneumatic Controller" means a continuous bleed pneumatic controller that is designed to have a continuous bleed rate that emits in excess of 6 standard cubic feet per hour (scfh) of natural gas to the atmosphere.
- ~~III.B.6. (State Only) "Intermittent pneumatic controller" means a pneumatic controller that is not designed to have a continuous bleed rate, but is designed to only release natural gas to the atmosphere as part of the actuation cycle.~~
- III.B.7. "Low-Bleed Pneumatic controller" means a continuous bleed pneumatic controller that is designed to have a continuous bleed rate that emits less than or equal to 6 scfh of natural gas to the atmosphere.
- III.B.8. "Natural Gas Processing Plant" means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. A Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not a natural gas processing plant.
- III.B.9. "No-Bleed Pneumatic Controller" means any pneumatic controller that is not using hydrocarbon gas as the valve's actuating gas.
- ~~III.B.10. (State Only) "Non-emitting Controller" means a device that monitors a process parameter such as liquid level, pressure or temperature and sends a signal to a control valve in order to control the process parameter and does not emit natural gas to the atmosphere. Examples of non-emitting controllers include but are not limited to: no-bleed pneumatic controllers, electric controllers, mechanical controllers and routed pneumatic controllers.~~
- III.B.11. "Pneumatic Controller" means a device that monitors a process parameter such as liquid level, pressure, or temperature and uses pressurized gas (which may be released to the atmosphere during normal operation) to send a signal to a control valve in order to control the process parameter. Controllers that do not utilize pressurized gas are not pneumatic controllers.
- ~~III.B.12. (State Only) "Routed Pneumatic Controller" means a pneumatic controller that releases natural gas to a process, sales line or to a combustion device instead of directly to the atmosphere.~~
- III.B.13. "Self-contained Pneumatic Controller" means a pneumatic controller that releases gas to a process or sales line instead of to the atmosphere.
- ~~III.B.14. (State Only) "Wellhead" means the piping, casing, tubing and connected valves supporting or controlling the operation of an oil and/or natural gas well. The wellhead does not include other process equipment at the wellhead site.~~

III.C. Emission Reduction Requirements

Owners and operators of affected operations shall reduce emissions of volatile organic compounds from pneumatic controllers associated with affected operations as follows:

III.C.1. Continuous bleed, natural gas-driven pneumatic controllers in the 8-Hour Ozone Control Area and located from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline:

III.C.1.a. All pneumatic controllers placed in service on or after February 1, 2009, must emit natural gas emissions in an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Section III.C.1.c.

III.C.1.b. All high-bleed pneumatic controllers in service prior to February 1, 2009 shall be replaced or retrofit such that natural gas emissions are reduced to an amount equal to or less than a low-bleed pneumatic controller, by May 1, 2009, unless allowed pursuant to Section III.C.1.c.

III.C.1.c. All high-bleed pneumatic controllers that remain in service due to safety and/or process purposes must comply with Sections III.D. and III.E.

III.C.1.c.(i) For high-bleed pneumatic controllers in service prior to February 1, 2009, the owner/operator must submit justification for high-bleed pneumatic controllers to remain in service due to safety and /or process purposes by March 1, 2009.

III.C.1.c.(ii) For high-bleed pneumatic controllers placed in service on or after February 1, 2009, the owner/operator must submit justification for high-bleed pneumatic controllers to be installed due to safety and /or process purposes thirty (30) days prior to installation.

III.C.2. Continuous bleed, natural gas-driven pneumatic controllers in the 8-Hour Ozone Control Area and located at a natural gas processing plant:

- III.C.2.a. All pneumatic controllers placed in service on or after January 1, 2018, must have a natural gas bleed rate of zero, unless allowed pursuant to Section III.C.2.c.
- III.C.2.b. All pneumatic controllers with a bleed rate greater than zero in service prior to January 1, 2018, must be replaced or retrofit such that the pneumatic controller has a natural gas bleed rate of zero by May 1, 2018, unless allowed pursuant to Section III.C.2.c.
- III.C.2.c. All pneumatic controllers with a natural gas bleed rate greater than zero that remain in service due to safety and/or process purposes must comply with Sections III.D. and III.E.
- III.C.2.c.(i) For pneumatic controllers with a natural gas bleed rate greater than zero in service prior to January 1, 2018, the owner or operator must submit justification for pneumatic controllers to remain in service due to safety and /or process purposes by May 1, 2018.
- III.C.2.c.(ii) For pneumatic controllers with a natural gas bleed rate greater than zero placed in service on or after January 1, 2018, the owner or operator must submit justification for pneumatic controllers to be installed due to safety and /or process purposes thirty (30) days prior to installation.

III.C.3. (State Only) Statewide:

- III.C.3.a. Owners or operators of all pneumatic controllers placed in service on or after May 1, 2014, must:
- III.C.3.a.(i) Utilize no-bleed pneumatic controllers where on-site electrical grid power is being used and use of a no-bleed pneumatic controller is technically and economically feasible.
- III.C.3.a.(ii) If on-site electrical grid power is not being used or a no-bleed pneumatic controller is not technically and economically feasible, utilize pneumatic controllers that emit natural gas emissions in an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Section III.C.3.c.
- III.C.3.a.(iii) For purposes of Section III.C.3.a.(ii), instead of a low-bleed pneumatic controller, owners or operators may utilize a natural gas-driven intermittent pneumatic controller.
- III.C.3.a.(iv) Utilizing self-contained pneumatic controllers satisfies Section III.C.3.a.(i).
- III.C.3.b. All high-bleed pneumatic controllers in service prior to May 1, 2014, must be replaced or retrofitted by May 1, 2015, such that natural gas emissions are reduced to an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Section III.C.3.c.
- III.C.3.c. All high-bleed pneumatic controllers that must remain in service due to safety and/or process purposes must comply with Sections III.D. and III.E.



~~III.C.3.c.(i) For high bleed pneumatic controllers in service prior to May 1, 2014, the owner/operator must submit justification for high bleed pneumatic controllers to remain in service due to safety and/or process purposes by March 1, 2015.~~

~~III.C.3.c.(ii) For high bleed pneumatic controllers placed in service on or after May 1, 2014, the owner/operator must submit justification for high bleed pneumatic controllers to be installed due to safety and/or process purposes thirty (30) days prior to installation.~~

### III.D. Monitoring

This section applies to pneumatic controllers identified in Sections III.C.1.c. and III.C.2.c. (~~State Only: and in Section III.C.3.e.~~).

III.D.1. In the 8-Hour Ozone Control Area and located from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline:

III.D.1.a. Effective May 1, 2009, each high-bleed pneumatic controller must be physically tagged by the owner or operator identifying it with a unique high-bleed pneumatic controller number that is assigned and maintained by the owner or operator.

III.D.1.b. Effective May 1, 2009, the owner or operator must inspect each high-bleed pneumatic controller on a monthly basis, perform necessary maintenance (such as cleaning, tuning, and repairing leaking gaskets, tubing fittings, and seals; tuning to operate over a broader range of proportional band, eliminating unnecessary valve positioners), and maintain the pneumatic controller according to manufacturer specifications to ensure that the controller's natural gas emissions are minimized.

III.D.2. In the 8-Hour Ozone Control Area and located at a natural gas processing plant:

III.D.2.a. Effective May 1, 2018, each pneumatic controller with a natural gas bleed rate greater than zero must be physically tagged by the owner or operator identifying it with a unique pneumatic controller number that is assigned and maintained by the owner or operator.

III.D.2.b. Effective May 1, 2018, the owner or operator must inspect each pneumatic controller with a natural gas bleed rate greater than zero on a monthly basis, perform necessary maintenance (such as cleaning, tuning, and repairing leaking gaskets, tubing fittings, and seals; tuning to operate over a broader range of proportional band; eliminating unnecessary valve positioners), and maintain the pneumatic controller according to manufacturer specifications to ensure that the controller's natural gas emissions are minimized.

~~III.D.3. (State Only) Statewide:~~

~~III.D.3.a. Effective May 1, 2015, each high bleed pneumatic controller must be physically tagged by the owner or operator identifying it with a unique high bleed pneumatic controller number that is assigned and maintained by the owner or operator.~~

III.D.3.b. Effective May 1, 2015, the owner or operator must inspect each high-bleed pneumatic controller on a monthly basis, perform necessary maintenance (such as cleaning, tuning, and repairing leaking gaskets, tubing fittings, and seals; tuning to operate over a broader range of proportional band; eliminating unnecessary valve positioners), and maintain the pneumatic controller according to manufacturer specifications to ensure that the controller's natural gas emissions are minimized.

III.E. Recordkeeping

III.E.1. In the 8-Hour Ozone Control Area:

III.E.1.a. Continuous bleed, natural gas-driven pneumatic controllers located from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline:

III.E.1.a.(i) By January 1, 2019, owners or operators must compile an estimate of the total number of continuous bleed, natural gas-driven pneumatic controllers in service prior to January 1, 2018, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is less than or equal to 6 standard cubic feet of gas per hour.

III.E.1.a.(ii) Beginning January 1, 2018, the owner or operator must maintain records of the make and model of each type of continuous bleed, natural gas-driven pneumatic controllers placed in service on or after January 1, 2018, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is less than or equal to 6 standard cubic feet of gas per hour. Owners or operators must use this information to update the estimate required in Section III.E.1.a.(i) every three years (i.e., by January 1, 2022, January 1, 2025, etc.).

III.E.1.b. Continuous bleed, natural gas-driven pneumatic controllers located at a natural gas processing plant:

III.E.1.b.(i) By January 1, 2019, owners or operators must compile an estimate of the total number of continuous bleed, natural gas-driven pneumatic controllers in service prior to January 1, 2018, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is zero.

III.E.1.b.(ii) Beginning January 1, 2018, the owner or operator must maintain records of the make and model of each type of continuous bleed, natural gas-driven pneumatic controllers placed in service on or after January 1, 2018, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is zero. Owners or operators must use this information to update the estimate required in Section III.E.1.b.(i) every three years (i.e., by January 1, 2022, January 1, 2025, etc.).

III.E.1.c. Records must be maintained for a minimum of five years and made available to the Division upon request.

III.E.2. This section applies only to pneumatic controllers identified in Sections III.C.1.c. and III.C.2.c. (~~State Only: and in Section III.C.3.c.~~)

III.E.2.a. The owner or operator must maintain a log of the total number of pneumatic controllers and their associated controller numbers per facility, the total number of pneumatic controllers per company and the associated justification that the pneumatic controllers must be used pursuant to Sections III.C.1.c. and III.C.2.c. (~~State Only; and in Section III.C.3.e.~~). The log shall be updated on a monthly basis.

III.E.2.b. The owner or operator must maintain a log of necessary maintenance which shall include, at a minimum, inspection dates, the date of the maintenance activity, pneumatic controller number, description of the maintenance performed, results and date of any corrective action taken, and the printed name and signature of the individual performing the maintenance. The log shall be updated on a monthly basis.

III.E.2.c. Records of maintenance of pneumatic controllers shall be maintained for a minimum of three years and readily made available to the Division upon request.

III.F. (State Only) Pneumatic Controller Inspection and Enhanced Response

III.F.1. General Requirements

III.F.1.a. Beginning January 1, 2018, owners or operators of natural gas-driven pneumatic controllers in the 8-Hour Ozone Control Area must operate and maintain pneumatic controllers consistent with manufacturer's specifications, if available, or good engineering and maintenance practices.

III.F.1.b. Beginning May 1, 2020, owners or operators of natural gas-driven pneumatic controllers state-wide must operate and maintain pneumatic controllers consistent with manufacturer's specifications, if available, or good engineering and maintenance practices.

III.F.2. Pneumatic controller inspection

III.F.2.a. Beginning June 30, 2018, through calendar year 2019, owners or operators of natural gas-driven pneumatic controllers at well production facilities in the 8-Hour Ozone Control Area must inspect pneumatic controllers using an approved instrument monitoring method at least

III.F.2.a.(i) Annually at well production facilities with uncontrolled actual volatile organic compound emissions greater than or equal to one (1) ton per year and less than or equal to six (6) tons per year, based on a rolling twelve-month total.

III.F.2.a.(ii) Semi-annually at well production facilities with uncontrolled actual volatile organic compound emissions greater than six (6) tons per year and less than or equal to twelve (12) tons per year, based on a rolling twelve-month total.

III.F.2.a.(iii) Quarterly at well production facilities with uncontrolled actual volatile organic compound emissions greater than twelve (12) tons per year and less than or equal to twenty (20) tons per year, based on a rolling twelve-month total, or fifty (50) tons per year if no storage tanks storing oil or condensate are located at the well production facility, based on a rolling twelve-month total.

V.C.2.q.	Non-road internal combustion engines.
V.C.2.r.	Pipeline segments between facilities.
V.C.2.s.	Process heaters.
V.C.2.t.	Produced water storage tanks.
V.C.2.u.	Produced water loadout.
V.C.2.v.	Reciprocating compressor leaks or vents, aggregated per facility.
V.C.2.w.	Separators (e.g., two-phase separators, three-phase separators, high/low pressure separators, heater-treaters, vapor recovery towers, etc.).
V.C.2.x.	Stationary combustion turbines.
V.C.2.y.	Stationary compression ignition internal combustion engines.
V.C.2.z.	Stationary spark ignition internal combustion engines.
V.C.2.aa.	Temporary completion and/or workover equipment (e.g., tanks).
V.C.2.bb.	Thermal oxidizing units, where not otherwise reported in the emissions of another emissions source category.
V.C.2.cc.	Well completions.
V.C.2.dd.	Well workovers.
V.C.2.ee.	Wellhead casinghead and bradenhead.

**PART E Combustion Equipment and Major Source RACT**

**I. Control of Emissions from Engines**

**I.A. Requirements for new and existing engines.**

- I.A.1. The owner or operator of any natural gas-fired stationary or portable reciprocating internal combustion engine with a manufacturer's design rate greater than 500 horsepower commencing operations in the 8-hour Ozone Control Area on or after June 1, 2004 shall employ air pollution control technology to control emissions, as provided in Section I.B.
- I.A.2. Any existing natural gas-fired stationary or portable reciprocating internal combustion engine with a manufacturer's design rate greater than 500 horsepower, which existing engine was operating in the 8-hour Ozone Control Area prior to June 1, 2004, shall employ air pollution control technology on and after May 1, 2005, as provided in Section I.B.
- I.A.3. Stationary natural gas fired reciprocating internal combustion engines state-wide with a manufacturer's design rate greater than or equal to 1000 horsepower are subject to Section I.D.5.

**I.B. Air pollution control technology requirements**

- I.B.1. For rich burn reciprocating internal combustion engines, a non-selective catalyst reduction and an air fuel controller shall be required. A rich burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of less than 2% by volume.
- I.B.2. For lean burn reciprocating internal combustion engines, an oxidation catalyst shall be required. A lean burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of 2% by volume, or greater.
- I.B.3. The emission control equipment required by this Section I.B shall be appropriately sized for the engine and shall be operated and maintained according to manufacturer specifications.

**I.C. The air pollution control technology requirements in Sections I.A. and I.B. do not apply to:**

- I.C.1. Non-road engines, as defined in Regulation Number 3, Part A, Section I.B.31.
- I.C.2. Reciprocating internal combustion engines that the Division has determined will be permanently removed from service or replaced by electric units on or before May 1, 2007. The owner or operator of such an engine shall provide notice to the Division of such intent by May 1, 2005 and shall not operate the engine identified for removal or replacement in the 8-hour Ozone Control Area after May 1, 2007.
- I.C.3. Any emergency power generator exempt from APEN requirements pursuant to Regulation Number 3, Part A.

- I.C.4. Any lean burn reciprocating internal combustion engine operating in the 8-hour Ozone Control Area prior to June 1, 2004, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$5,000 per ton of VOC emission reduction. Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or operator must submit an application making such a demonstration, together with all supporting documents, to the Division by May 1, 2005. Any reciprocating internal combustion engine qualifying for this exemption shall not be moved to any other location within the 8-hour Ozone Control Area.
- I.D. Control of emissions from new, modified, existing, and relocated natural gas fired reciprocating internal combustion engines.
- I.D.1. ~~(State Only) Exemptions~~
- I.D.1.a. ~~The requirements of this Section I.D. do not apply to any engine having actual uncontrolled emissions below permitting thresholds listed in Regulation Number 3, Part B.~~
- I.D.1.b. ~~Internal combustion engines that are subject to an emissions control requirement in a federally maximum achievable control technology (MACT) standard under 40 CFR Part 63, a Best Available Control Technology (BACT) limit, or a New Source Performance Standard (NSPS) under 40 CFR Part 60 are not subject to Section I.D.3.~~
- I.D.2. ~~(State Only) General Provisions~~
- I.D.2.a. ~~At all times, including periods of start up and shutdown, engines and their associated equipment must be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operation and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, opacity observations, review of operation and maintenance procedures, and inspection of the source.~~
- I.D.2.b. ~~All engines and their associated equipment must be operated and maintained pursuant to the manufacturing specifications or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices. The owner or operator must keep manufacturer specifications or equivalent on file.~~
- I.D.2.c. ~~Any of the effective dates for installation of controls on internal combustion engines as required in Section I.D.3. may be extended at the Division's discretion for good cause shown.~~
- I.D.3. ~~(State Only) New, Modified and Relocated Natural Gas Fired Reciprocating Internal Combustion Engines~~

~~I.D.3.a. Except as provided in Section I.D.3.b., the owner or operator of any natural gas fired reciprocating internal combustion engine that is either constructed or relocated to the state of Colorado from another state, on or after the date listed in Table 1 shall operate and maintain each engine according to the manufacturer's written instructions or procedures to the extent practicable and consistent with technological limitations and good engineering and maintenance practices over the entire life of the engine so that it achieves the emission standards required in Section I.D.3.b. Table 1.~~

~~I.D.3.b. Actual emissions from natural gas fired reciprocating internal combustion engines shall not exceed the emission performance standards in Table 1 as expressed in units of grams per horsepower hour (G/hp-hr)~~

TABLE 1				
Maximum Engine Hp	Construction or Relocation Date	Emission Standards in G/hp-hr		
		NOx	CO	VOG
< 100 Hp	Any	NA	NA	NA
≥ 100 Hp and < 500 Hp	On or after January 1, 2008	2.0	4.0	1.0
	On or after January 1, 2011	1.0	2.0	0.7
≥ 500 Hp	On or after July 1, 2007	2.0	4.0	1.0
	On or after July 1, 2010	1.0	2.0	0.7

*\*These engines may also be subject to emission standards under Section I.D.5.*

#### I.D.4. Existing Natural Gas Fired Reciprocating Internal Combustion Engines

##### I.D.4.a. (Regional Haze SIP) Rich Burn Reciprocating Internal Combustion Engines

I.D.4.a.(i) Except as provided in Sections I.D.4.a.(i)(B) and (C) and I.E.4.a.(ii), all rich burn reciprocating internal combustion engines with a manufacturer's name plate design rate greater than 500 horsepower, constructed or modified before February 1, 2009 shall install and operate both a non-selective catalytic reduction system and an air fuel controller by July 1, 2010. A rich burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of less than 2% by volume.

I.D.4.a.(i)(A) All control equipment required by this Section I.D.4.a. shall be operated and maintained pursuant to manufacturer specifications or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices. The owner or operator shall keep manufacturer specifications or equivalent on file.

I.D.4.a.(i)(B) Internal combustion engines that are subject to an emissions control requirement in a federal maximum achievable control technology ("MACT") standard under 40 CFR Part 63 (January 1, 2011), a Best Available Control Technology ("BACT") limit, or a New Source Performance Standard under 40 CFR Part 60 (January 1, 2011) are not subject to this Section I.D.4.a.

I.D.4.a.(i)(C) The requirements of this Section I.D.4.a. do not apply to any engine having actual uncontrolled emissions below permitting thresholds listed in Regulation Number 3, Part B.

I.D.4.a.(ii) Any rich burn reciprocating internal combustion engine constructed or modified before February 1, 2009, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$ 5,000 per ton of combined volatile organic compound and nitrogen oxides emission reductions (this value shall be adjusted for future applications according to the current day consumer price index) is exempt complying with Section I.D.4.a. Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or operator must submit an application making such a demonstration, together with all supporting documents, to the Division by August 1, 2009.

**I.D.4.b. (State Only) Lean Burn Reciprocating Internal Combustion Engines**

~~I.D.4.b.(i) Except as provided in Section I.D.4.b.(ii), all lean burn reciprocating internal combustion engines with a manufacturer's nameplate design rate greater than 500 horsepower shall install and operate an oxidation catalyst by July 1, 2010. A lean burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of 2% by volume, or greater.~~

~~I.D.4.b.(ii) Any lean burn reciprocating internal combustion engine constructed or modified before February 1, 2009, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$ 5,000 per ton of volatile organic compound emission reduction (this value shall be adjusted for future applications according to the current day consumer price index) is exempt complying with Section I.D.4.b.(i). Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or operator must submit an application making such a demonstration, together with all supporting documents, to the Division by August 1, 2009.~~

**I.D.5. (State Only) Additional Requirements for Natural Gas Fired Reciprocating Internal Combustion Engines**

**I.D.5.a. Applicability**

~~I.D.5.a.(i) This Section I.D.5. applies to stationary natural gas fired reciprocating internal combustion engines state wide with a manufacturer's design rate greater than or equal to 1000 horsepower.~~



I.D.5.f.(vi)(C) If the owner or operator conducts the combustion process adjustment according to the manufacturer recommended procedures and schedule and the manufacturer specifies a combustion process adjustment on an operation time schedule, the hours of operation since the last combustion process adjustment and the procedures followed. The owner or operator must retain documentation of any relied upon manufacturer recommended procedures, specifications, and maintenance schedule for five years after the owner or operator ceases to rely upon it.

I.D.5.f.(vi)(D) If the owner or operator conducts the combustion process adjustment according to a New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants, what standard applied and what procedures were followed.

I.D.5.g. Reporting. Beginning on the date specified below and by May 1 of each year thereafter, the owner or operator of each engine subject to this Section I.D.5. must submit the following information covering the preceding calendar year:

I.D.5.g.(i) Beginning May 1, 2021, a statement of the status of performance testing required under Section I.D.5.d, and the date and results of that testing;

I.D.5.g.(ii) Beginning May 1, 2022, an identification of any engines placed in service, modified, relocated, or replaced, including AIRS number, serial number, location, engine configuration, and a certification as to whether the emission standards in Table 2 are met;

I.D.5.g.(iii) Beginning May 1, 2022, the date on which the monitoring required by Sections I.D.5.e.(iv) was performed;

I.D.5.g.(iv) Beginning May 1, 2023, the date that all required semi-annual portable analyzer testing was performed under Section I.D.5.e.(i), and the results of that testing.

**II. Control of Emissions from Stationary and Portable Combustion Equipment in the 8-Hour Ozone Control Area**

**II.A. Requirements for major sources of NO<sub>x</sub>**

**II.A.1. Applicability.**

II.A.1.a. Except as provided in Section II.A.2., the requirements of this Section II. apply to owners and operators of any stationary combustion equipment that existed at a major source of NO<sub>x</sub> (greater than or equal to 100 tpy NO<sub>x</sub>) as of June 3, 2016, located in the 8-Hour Ozone Control Area.

II.A.1.b. Except as provided in Section II.A.2., the requirements of Section II. apply to owners and operators of any stationary combustion equipment that existed at a major source of NO<sub>x</sub> (greater than or equal to 50 tpy NO<sub>x</sub>) as of January 27, 2020, located in the 8-Hour Ozone Control Area, that is not already subject as provided under Section II.A.1.a.

~~II.A.1.c. (State Only) Except as provided in Section II.A.2., the requirements of Section II. apply to owners and operators of process heaters that existed at source that emits, or has the potential to emit, NO<sub>x</sub> emissions greater than or equal to 25 tpy NO<sub>x</sub> as of July 20, 2021, located in the 8 Hour Ozone Control Area, that is not already subject as provided under Sections II.A.1.a. or II.A.1.b.~~

II.A.2. Exemptions. The following stationary combustion equipment are exempt from the emission limitation requirements of Section II.A.4., the compliance demonstration requirements in Section II.A.5., and the related recordkeeping and reporting requirements of Sections II.A.7.a-e. and II.A.8, but these sources must maintain any and all records necessary to demonstrate that an exemption applies. These records must be maintained for a minimum of five years and made available to the Division upon request. Qualifying for an exemption in this section does not preclude the combustion process adjustment requirements of Section II.A.6., when required by II.A.6.a.

Once stationary combustion equipment no longer qualifies for any exemption, the owner or operator must comply with the applicable requirements of this Section II.A. as expeditiously as practicable but no later than 36 months after any exemption no longer applies. Additionally, once stationary combustion equipment that is not equipped with CEMS or CERMS no longer qualifies for any exemption, the owner or operator must conduct a performance test using EPA test methods within 180 days and notify the Division of the results and whether emission controls will be required to comply with the emission limitations of Section II.A.4.

II.A.2.a. Any stationary combustion equipment whose utilization is less than:

II.A.2.a.(i) 20% of its capacity factor on an annual average basis over a 3-year rolling period for boilers; or

II.A.2.a.(ii) 10% of its capacity factor on an annual average basis over a 3-year rolling period for stationary combustion turbines and compression ignition reciprocating internal combustion engines.

II.A.2.b. An engine testing operation or process line.

II.A.2.c. Any gaseous fuel fired stationary combustion equipment used to control VOC emissions from a commercial or industrial process.

II.A.2.d. Any stationary combustion equipment with total uncontrolled actual emissions less than 5 tpy NO<sub>x</sub> on a calendar year basis.

II.A.2.e. Any natural gas-fired reciprocating internal combustion engines subject to a work practice or emission control requirement contained in this Regulation 7, Sections I.A. or I.B.

II.A.2.f. Any stationary combustion equipment subject to a federally enforceable work practice or emission control requirement contained in this Regulation 7, Sections III.A. through III.B. or Regulation 23.

II.A.3. Definitions

II.A.3.a. "Affected unit" means any stationary combustion equipment that is subject to or becomes subject to an emission limitation in Section II.A.4.

- II.A.3.b. “Boiler” means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water.
- II.A.3.c. “Capacity factor” means the ratio of the amount of fuel burned by an emissions unit in a calendar year to the amount of fuel it could have burned if it had operated at the designed heat input rating for 8,760 hours during the calendar year. Alternatively, for electric generating units, capacity factor can mean the ratio of the unit’s actual annual electric output (expressed in MWe/hr) to the electric output the unit could have achieved if it operated at its nameplate capacity (or maximum observed hourly gross load (expressed in MWe/hr) if greater than the nameplate capacity) for 8,760 hours during the calendar year.
- II.A.3.d. “Ceramic kiln” means equipment used for the curing or firing of ceramic products or glaze on ceramic products. A kiln may operate continuously or by batch process.
- II.A.3.e. “Continuous emission monitoring system” (“CEMS”) or “Continuous emission rate monitoring system” (“CERMS”) means the total equipment required to sample, condition (if applicable), analyze, and provide a written record of such emissions and/or emission rates, expressed on a continuous basis in terms of an applicable emission limitation. Such equipment includes, but is not limited to, sample collection and calibration interfaces, pollutant analyzers, a diluent analyzer (oxygen or carbon dioxide), stack gas volumetric flow monitors (if appropriate for CERMS), and data recording and storage devices.
- II.A.3.f. “Compression ignition reciprocating internal combustion engine (RICE)” means a type of stationary RICE that is liquid fuel-fired and not ignited with a spark plug or other sparking device.
- II.A.3.g. “Digester gas” means any gaseous byproduct of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and carbon dioxide.
- II.A.3.h. “Duct burner” means a device that combusts fuel and is placed in the exhaust duct from another source (e.g., stationary combustion turbine, internal combustion engine, or kiln) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.
- II.A.3.i. “Dryer” means a device that is used to reduce or evaporate moisture content or remove organic contaminants.
- II.A.3.j. “Furnace” means an enclosed device that is an integral component of a manufacturing process and that uses thermal treatment to accomplish recovery of materials or energy.
- II.A.3.k. “Gaseous fuel” means natural gas, landfill gas, refinery fuel gas, digester gas, methane, ethane, propane, butane, or any gas stored as a liquid at high pressure such as liquefied petroleum gas.
- II.A.3.l. “Glass melting furnace” means an emissions unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass.

- II.A.3.m. "Kiln" means the equipment used to remove combined (chemically bound) water and/or gases from mineral material through direct or indirect heating.
- II.A.3.n. "Lightweight aggregate" means the expanded, porous product from heating shales, clays, slates, slags, or other natural materials in a kiln.
- II.A.3.o. "Liquid fuel" means any fuel which is a liquid at standard conditions including but not limited to distillate oils, kerosene and jet fuel. Liquefied gaseous fuels are not liquid fuels.
- II.A.3.p. "Process heater" means an enclosed device using controlled flame and a primary purpose to transfer heat indirectly to a process material or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials.
- II.A.3.q. "Reciprocating internal combustion engine" means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not used to propel a motor vehicle or a vehicle used solely for competition.
- II.A.3.r. "Stationary combustion equipment" means an emissions unit that combusts solid, liquid, or gaseous fuel, generally for the purposes of producing electricity, generating steam, or providing useful heat or energy for industrial, commercial, or institutional use. Stationary combustion equipment includes, but is not limited to, boilers, duct burners, engines, glass melting furnaces, kilns, process heaters, stationary combustion turbines, dryers, furnaces, and ceramic kilns.
- II.A.3.s. "Stationary combustion turbine" means a non-mobile, enclosed fossil or other fuel-fired device that is comprised of a compressor, a combustor and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine. Stationary combustion turbines can be simple cycle or combined cycle and they may or may not include a duct burner.

II.A.4. Emission limitations.

By October 1, 2021, or the applicable date in Section II.A.4.g. for process heaters, no owner or operator of stationary combustion equipment specified in Section II.A.1.a. may cause, allow, or permit NO<sub>x</sub> to be emitted in excess of the following emission limitations. When demonstrating compliance using continuous emissions monitoring pursuant to Section II.A.5.b.(i), the following emission limitations are on a 30-day rolling average basis, unless otherwise specified.

By July 20, 2021, or the applicable date in Section II.A.4.g. for process heaters, no owner or operator of stationary combustion equipment specified in Section II.A.1.b. may cause, allow, or permit NO<sub>x</sub> to be emitted in excess of the following emission limitations. When demonstrating compliance using continuous emissions monitoring pursuant to Section II.A.5.b.(i), the following emission limitations are on a 30-day rolling average basis, unless otherwise specified.

~~(State Only) By May 1, 2022, or May 1 2023, as specified in Section II.A.4.g., no owner or operator of process heaters specified in Section II.A.1.c. may cause, allow, or permit NO<sub>x</sub> to be emitted in excess of the following emission limitations. Compliance with the applicable emission limitations contained in Section II.A.4. must be determined according to the applicable methods contained in Sections II.A.5. When demonstrating compliance using continuous emissions monitoring pursuant to Section II.A.5.b.(i), the following emission limitations are on a 30-day rolling average basis, unless otherwise specified.~~

II.A.4.a. Boilers.

II.A.4.a.(i) For a gaseous fuel-fired boiler with a maximum design heat input capacity equal to or greater than 100 MMBtu/hr, 0.2 lb/MMBtu of heat input or less than 165 parts per million dry volume corrected to 3% oxygen.

II.A.4.a.(ii) For a liquid fuel-fired boiler with a maximum design heat input capacity equal to or greater than 100 MMBtu/hr, 0.2 lb/MMBtu of heat input or less than 165 parts per million dry volume corrected to 3% oxygen.

II.A.4.a.(iii) For a liquid or gaseous fuel-fired boiler at a major source of NO<sub>x</sub> (greater than or equal to 50 tpy NO<sub>x</sub> as of January 27, 2020) with a maximum design heat input capacity equal to or greater than 100 MMBtu/hr, 0.2 lb/MMBtu of heat input or less than 165 parts per million dry volume corrected to 3% oxygen.

II.A.4.a.(iv) For a liquid or gaseous fuel-fired boiler at a major source of NO<sub>x</sub> (greater than or equal to 50 tpy NO<sub>x</sub> as of January 27, 2020) with a maximum design heat input capacity equal to or greater than 50 MMBtu/hr but less than 100 MMBtu/hr, 0.1 lb/MMBtu of heat input or less than 83 parts per million dry volume corrected to 3% oxygen.

II.A.4.a.(v) Boilers subject to the categorical limits in Section II.A.4.a.(i) through (iv) or boilers with a maximum design heat input capacity less than 100 MMBtu/hr must comply with the combustion process adjustment requirements contained in Section II.A.6. while burning gaseous fuel, liquid fuel, or any combination thereof, when required by Section II.A.6.a.

II.A.4.b. Stationary combustion turbines.

II.A.4.b.(i) Stationary combustion turbines with a maximum design heat input capacity equal to or greater than 10 MMBtu/hr and which commenced construction on or before February 18, 2005, must

II.A.4.b.(i)(A) Comply with the following NO<sub>x</sub> emission limits in Table 1.

Table 1 – NOx limits for stationary combustion turbines constructed on or before February 18, 2005		
Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NOx emission standard
Turbine firing natural gas	> 850 MMBtu/h	15 ppm at 15 percent O <sub>2</sub> or 54 ng/J of useful output (0.43 lb/MWh)
Turbine firing fuels other than natural gas	> 850 MMBtu/h	42 ppm at 15 percent O <sub>2</sub> or 160 ng/J of useful output (1.3 lb/MWh).
Turbine	≤ 50 MMBtu/h	150 ppm at 15 percent O <sub>2</sub> or 1,100 ng/J of useful output (8.7 lb/MWh).
Turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	42 ppm at 15 percent O <sub>2</sub> or 250 ng/J of useful output (2.0 lb/MWh).
Turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	96 ppm at 15 percent O <sub>2</sub> or 590 ng/J of useful output (4.7 lb/MWh).
Turbines operating at less than 75 percent of peak load, turbines operating at temperatures less than 0 °F	≤ 30 MW output	150 ppm at 15 percent O <sub>2</sub> or 1,100 ng/J of useful output (8.7 lb/MWh).
Turbines operating at less than 75 percent of peak load, turbines operating at temperatures less than 0 °F	> 30 MW output	96 ppm at 15 percent O <sub>2</sub> or 590 ng/J of useful output (4.7 lb/MWh).
Heat recovery units operating independent of the combustion turbine	All sizes	54 ppm at 15 percent O <sub>2</sub> or 110 ng/J of useful output (0.86 lb/MWh).

II.A.4.b.(i)(A)(1) For units with heat recovery and CEMS, determine compliance on a 30-day rolling average.

II.A.4.b.(i)(A)(2) For simple cycle turbines with CEMS, determine compliance on a 4-hour rolling average.

II.A.4.b.(i)(A)(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

II.A.4.b.(i)(A)(4) Emissions exceeding the NO<sub>x</sub> emission limits in Section II.A.4.b.(i)(A) at any time, including during times of startup, shutdown, malfunction, fuel switching, tuning, and testing must be reported as specified in Section II.A.8.a.(i).

II.A.4.b.(ii) Stationary combustion turbines with a maximum design heat input capacity equal to or greater than 10 MMBtu/hr and which commenced construction, modification or reconstruction after February 18, 2005 must comply with the applicable NO<sub>x</sub> emission limits in 40 CFR Part 60, Subpart KKKK (July 1, 2017).

II.A.4.b.(iii) Stationary combustion turbines subject to the categorical limits in Section II.A.4.b.(i) or (ii) and stationary combustion turbines with a maximum design heat input capacity less than 10 MMBtu/hr must comply with the combustion process adjustment requirements contained in Section II.A.6. while burning gaseous fuel, liquid fuel, or any combination thereof, when required by Section II.A.6.a.

II.A.4.b.(iv) Stationary combustion turbines, air pollution control equipment, and monitoring equipment must be operated in a manner consistent with good air pollution control practices for minimizing emissions at all times.

II.A.4.c. Lightweight aggregate kilns. For lightweight aggregate kilns with a maximum design heat input capacity equal to or greater than 50 MMBtu/hr, 56.6 pounds of NO<sub>x</sub> per hour.

II.A.4.d. Glass melting furnaces.

II.A.4.d.(i) For, glass melting furnaces, 1.2 pounds of NO<sub>x</sub> per ton of glass pulled. However, days in which a glass melting furnace is operated at less than 35% of maximum designed production may be excluded from the 30-day rolling average for purposes of demonstrating compliance with this Section II.A.4.d.(i). During each day excluded from the 30-day rolling average, NO<sub>x</sub> emissions must be measured continuously in accordance with the applicable monitoring requirements of Section II.A.5, and the furnace must be operated in accordance with good air pollution control practices.

II.A.4.e. Compression ignition RICE.

II.A.4.e.(i) For a compression ignition RICE with a maximum design power output equal to or greater than 500 horsepower, 9 grams per brake horsepower-hour.

II.A.4.e.(ii) Compression ignition RICE subject to the emission limit in Section II.A.4.e.(i) and compression ignition RICE with a maximum design power output less than 500 horsepower must comply with the combustion process adjustment requirements contained in Section II.A.6.

~~II.A.4.f. Landfill gas or biogas gas fired RICE. For landfill gas or biogas fired RICE with a maximum design power output equal to or greater than 500 horsepower, 2 grams per brake horsepower hour.~~

II.A.4.g. Process heaters

II.A.4.g.(i) Except as specified in Section II.A.4.g.(ii), by May 1, 2022, process heaters must comply with the following NOx emission limits in Table 2.

Table 2 – NOx limits for process heaters		
Heat input rate (MMBtu/hr)	Fuel type	NOx emission limit (lb/MMBtu)
≥ 5 and < 100	Natural gas	0.05
≥ 5	Refinery fuel-gas	0.1

II.A.4.g.(ii) Process heaters that require a permitting action or facility shut-down to comply with the NOx emission limits in Table 2 must comply by May 31, 2023.

II.A.5. Compliance demonstration.

II.A.5.a. Compliance date

II.A.5.a.(i) By October 1, 2021, for stationary combustion equipment that existed at a major source of NOx (greater than or equal to 100 tpy NOx) as of June 3, 2016, except for process heaters specified in Section II.A.4.g., the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in this Section II.A.5.

II.A.5.a.(ii) By July 20, 2021, for stationary combustion equipment specified in Section II.A.1.b., except for process heaters specified in Section II.A.4.g., the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in Sections II.A.5.

II.A.5.a.(iii) By May 1, 2022, for process heaters specified in Section II.A.4.g.(i). or May 31, 2023, for process heaters specified in Section II.A.4.g.(ii), the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in Sections II.A.5.

II.A.5.b. Emissions monitoring requirements for major source RACT limits



II.A.5.b.(i) Continuous emission monitoring

II.A.5.b.(i)(A) Owners or operators of an affected unit subject to a NO<sub>x</sub> emission limit in Sections II.A.4.a.(i) through II.A.4.a.(iii), II.A.4.c., or II.A.4.d. must install, operate and maintain a NO<sub>x</sub> CEMS or CERMS to monitor compliance with the applicable emission limit in accordance with this Section II.A.5.b.(i). Owners or operators of affected units' subject to a NO<sub>x</sub> emission limit in Sections II.A.4.b., II.A.4.e., or II.A.4.g. may install, operate and maintain a NO<sub>x</sub> CEMS or CERMS to monitor compliance with the applicable emission limit in accordance with this Section II.A.5.b.(i) in lieu of performance testing pursuant to Section II.A.5.b.(ii).

II.A.5.b.(i)(A)(1) The owner or operator of an affected unit that is subject to or becomes subject to the monitoring requirements of 40 CFR part 75 and 40 CFR part 75, Appendices A to I (July 19, 2018), must use those monitoring methods and specifications for monitoring NO<sub>x</sub> emissions for purposes of this Section II.A.5. and for demonstrating compliance with Section II.A.4. The missing data substitution procedures and bias adjustment requirements of 40 CFR Part 75 (July 19, 2018) do not apply for purposes of demonstrating compliance with Section II.A.4. or this Section II.A.5.

II.A.5.b.(i)(A)(2) For an affected unit equipped with a NO<sub>x</sub> CEMS or CERMS for purposes of demonstrating compliance with an applicable subpart of 40 CFR Part 60 (July 19, 2018), the owner or operator must use the definition of operating day, data averaging methodology, and data validation requirements of the applicable subpart of 40 CFR Part 60 for purposes of demonstrating compliance with an applicable emission limit in Section II.A.4. The owner or operator must calibrate, maintain, and operate the CEMS or CERMS and validate emissions data according to the applicable requirements of 40 CFR Part 60, Section 60.13 (July 19, 2018), the performance specifications in 40 CFR Part 60, Appendix B (July 19, 2018), and the quality assurance procedures of 40 CFR Part 60, Appendix F (July 19, 2018).

II.A.5.b.(i)(A)(3) For an affected unit that is not equipped with a NO<sub>x</sub> CEMS or CERMS for purposes of demonstrating compliance with 40 CFR Part 60 (July 19, 2018) or Part 75 (July 19, 2018), the owner or operator must install, operate, and maintain a NO<sub>x</sub> CEMS or CERMS that measures emissions in terms of the applicable emission limitation and must calibrate, maintain, and operate the CEMS or CERMS and validate emissions data according to the applicable provisions of 40 CFR Part 60, Section 60.13 (July 19, 2018), the performance specifications in 40 CFR Part 60, Appendix B (July 19, 2018), and the quality assurance procedures of 40 CFR Part 60, Appendix F (July 19, 2018). The owner or operator must use the following methodology for purposes of demonstrating compliance with an applicable 30-day rolling average emission limit in Section II.A.4.

II.A.5.b.(i)(A)(3)(a) A unit operating day is a calendar day when any fuel is combusted in the affected unit.

II.A.5.b.(i)(A)(3)(b) 30-day rolling average emission rates must be calculated as the arithmetic average emissions rates determined by the CEMS or CERMS for all hours the affected unit combusted any fuel from the current unit operating day and the prior 29 unit operating days.

II.A.5.b.(i)(A)(4) When an affected unit utilizes a common flue gas stack system with one or more affected units, but no non-affected units, the owner or operator must follow the applicable procedures of 40 CFR Part 75, Appendix F (July 19, 2018) for the determination of all sampling locations and apportionment of emissions to an individual affected unit.

II.A.5.b.(i)(B) Owners or operators of a stationary combustion turbine subject to a NO<sub>x</sub> emission limit in Section II.A.4.b. must comply with

II.A.5.b.(i)(B)(1) The applicable monitoring requirements in 40 CFR Part 60, Subpart GG (July 1, 2017) for turbines which commenced construction on or before February 18, 2005.

II.A.5.b.(i)(B)(2) The applicable monitoring requirements in 40 CFR Part 60, Subpart KKKK (July 1, 2017) for turbines which commenced construction after February 18, 2005.

- II.A.5.b.(ii) Initial and periodic performance testing
- II.A.5.b.(ii)(A) An owner or operator of a stationary combustion turbine subject to 40 CFR Part 60, Subparts GG or KKKK (July 19, 2018) that has used and continues to use performance testing to demonstrate compliance with either Subpart GG or KKKK (July 19, 2018), as applicable, may use those performance testing procedures to demonstrate continued compliance with an applicable limitation contained in Section II.A.4.b., thereby satisfying the requirements of this Section II.A.5.b.(ii).
- II.A.5.b.(ii)(B) An owner or operator of a process heater subject to a NO<sub>x</sub> emission limit in Section II.A.4.g. must
- II.A.5.b.(ii)(B)(1) For natural gas-fired and refinery gas-fired process heaters greater than or equal to 100 MMBtu/hr, conduct an initial performance test in accordance with Sections II.A.5.b.(ii)(C)(1), II.A.5.b.(ii)(C)(4), and II.A.5.b.(ii)(D) by April 1, 2022, or by November 30, 2023, for process heaters specified in Section II.A.4.g.(ii), and conduct subsequent performance tests in accordance with Sections II.A.5.b.(ii)(C)(1), II.A.5.b.(ii)(C)(4), and II.A.5.b.(ii)(D) every 2 years thereafter.
- II.A.5.b.(ii)(B)(2) For natural gas-fired process heaters greater than or equal to 50 MMBtu/hr and less than 100 MMBtu/hr, conduct an initial performance test in accordance with Sections II.A.5.b.(ii)(C)(1), II.A.5.b.(ii)(C)(4), and II.A.5.b.(ii)(D) by April 1, 2022, or by November 30, 2023, for process heaters specified in Section II.A.4.g.(ii), and comply with the combustion process adjustment requirements in Section II.A.6. thereafter.
- II.A.5.b.(ii)(B)(3) For natural gas-fired process heaters greater than or equal to 5 MMBtu/hr and less than 50 MMBtu/hr and refinery gas-fired process heaters greater than or equal to 5 MMBtu/hr and less than 100 MMBtu/hr, comply with the combustion process adjustment requirements in Section II.A.6.
- II.A.5.b.(ii)(B)(4) For a group of process heaters that vent to a common stack, the owner or operator may either assess compliance for the heaters individually by performing a separate emission test of each heater in the duct leading from the heater to the common stack or may perform a single emission test in the common stack. The owner or operator must include in the test protocol for these units a definition of representative conditions for performance testing purposes.

II.A.5.b.(ii)(B)(5) Performance tests conducted in accordance with Sections II.A.5.b.(ii)(C)(1) through II.A.5.b.(ii)(C)(3) and II.A.5.b.(ii)(D) within three (3) years of the applicable performance testing date in Sections II.A.5.b.(ii)(B)(1) or II.A.5.b.(ii)(B)(2) will satisfy the initial performance testing requirement.

II.A.5.b.(ii)(B)(6) As an alternative to the requirements in Sections II.A.5.b.(ii)(B)(1), II.A.4.b.(ii)(B)(2), II.A.5.b.(ii)(B)(4), and II.A.5.b.(ii)(B)(5), the owner or operator may install, operate, and maintain a NO<sub>x</sub> CEMS or CERMS in accordance with Sections II.A.5.b.(i)(A)(1) through II.A.5.b.(i)(A)(4) to monitor compliance with the applicable emission limit.

II.A.5.b.(ii)(C) Except as otherwise provided for in Sections II.A.5.b.(ii)(A) or II.A.5.b.(ii)(B), the owner or operator of an affected unit subject to a NO<sub>x</sub> emission limitation contained in Sections II.A.4.a.(iv), II.A.4.b., or II.A.4.e. that is not equipped with NO<sub>x</sub> CEMS or CERMS, must conduct an initial performance test and subsequent performance tests every 2 years thereafter, according to the following requirements, as applicable, to determine the affected unit's NO<sub>x</sub> emission rate for each fuel fired in the affected unit.

II.A.5.b.(ii)(C)(1) A performance test is not required for a fuel used only for startup or for a fuel constituting less than 2% of the unit's annual heat input, as determined at the end of each calendar year.

II.A.5.b.(ii)(C)(2) Initial performance test must include a determination of the capacity load point of the unit's maximum NO<sub>x</sub> emissions rate based on one 30-minute test run at each capacity load point for which the unit is operated, other than for startup and shutdown, in the load ranges of 20 to 30%, 45 to 55%, and 70 to 100%. Subsequent performance tests must be performed within the capacity load range determined to result in the maximum NO<sub>x</sub> emissions rate.

II.A.5.b.(ii)(C)(3) Performance tests must determine compliance with Section II.A.4. based on the average of three 60-minute test runs performed at the capacity load determined in Section II.A.5.b.(ii)(C)(2).

II.A.5.b.(ii)(C)(4) Initial performance test must be conducted at both high and low load capacity. If site operations do not allow testing at high and low loads, the initial performance test must be conducted at the highest achievable load that site conditions allow. The owner or operator must submit a summary of six months of operating performance with the test protocol supporting the testing load(s). Subsequent performance tests must be performed within the capacity load range determined to result in the maximum NO<sub>x</sub> emissions rate. Performance tests must determine compliance based on the average of three 60-minute test runs.

II.A.5.b.(ii)(D) All performance tests must be conducted in accordance with EPA test methods and a test protocol submitted to the Division for review at least thirty (30) days prior to testing and in accordance with AQCC Common Provisions Regulation Section II.C.

II.A.5.b.(iii) For affected units' subject to a production-based or output based emission limit contained in Section II.A.4. (e.g. lb of NO<sub>x</sub>/ton of product), the owner or operator must install, operate, and maintain monitoring equipment for measuring and recording the affected unit's production or output, on an hourly basis, in units consistent with the applicable emission limitation.

II.A.5.b.(iv) Where measuring fuel use is necessary to calculate an emission rate in the units of the applicable standard, fuel flowmeters must be installed, calibrated, maintained, and operated according to manufacturer's instructions for measuring and recording heat input in terms of the applicable emission limitation. Alternatively, fuel flowmeters that meet the installation, certification, and quality assurance requirements of 40 CFR Part 75, Appendix D (July 19, 2018) are acceptable for demonstrating compliance with this section. The installation of fuel-flowmeters is not required where emissions of NO<sub>x</sub> in terms of the applicable standard can be calculated in accordance with applicable provisions of EPA Method 19 (July 19, 2018) or where the standard is concentration based (e.g. parts per million dry volume corrected for oxygen).

## II.A.6. Combustion process adjustment

### II.A.6.a. Applicability

II.A.6.a.(i) As of January 1, 2017, this Section II.A.6. applies to boilers, duct burners, process heaters, stationary combustion turbines, and stationary reciprocating internal combustion engines with uncontrolled actual emissions of NO<sub>x</sub> equal to or greater than five (5) tons per year that existed at major sources of NO<sub>x</sub> (greater than or equal to 100 tpy NO<sub>x</sub>) as of June 3, 2016.

II.A.6.a.(ii) As of May 1, 2020, this Section II.A.6. applies to boilers, duct burners, process heaters, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, and ceramic kilns with uncontrolled actual emissions of NO<sub>x</sub> equal to or greater than five (5) tons per year that existed at major sources of NO<sub>x</sub> (greater than or equal to 50 tpy NO<sub>x</sub>) as of January 27, 2020, that is not already subject as provided under Section II.A.6.a.(i).

~~II.A.6.a.(iii) (State Only) As of May 1, 2022, or May 31, 2023, for process heaters specified in Section II.A.4.g.(ii), this Section II.A.6. applies to process heaters with uncontrolled actual emissions of NO<sub>x</sub> equal to or greater than five (5) tons per year that existed at sources that emit, or have the potential to emit, NO<sub>x</sub> emissions greater than or equal to 25 tpy NO<sub>x</sub> as of July 20, 2021, that is not already subject as provided under Sections II.A.6.a.(i) or II.A.6.a.(ii).~~

II.A.6.b. Combustion process adjustment

II.A.6.b.(i) When burning the fuel that provides the majority of the heat input since the last combustion process adjustment and when operating at a firing rate typical of normal operation, the owner or operator must conduct the following inspections and adjustments of boilers and process heaters, as applicable:

II.A.6.b.(i)(A) Inspect the burner and combustion controls and clean or replace components as necessary.

II.A.6.b.(i)(B) Inspect the flame pattern and adjust the burner or combustion controls as necessary to optimize the flame pattern.

II.A.6.b.(i)(C) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.

II.A.6.b.(i)(D) Measure the concentration in the effluent stream of carbon monoxide and nitrogen oxide in ppm, by volume, before and after the adjustments in Sections II.A.6.b.(i)(A) through (C). Measurements may be taken using a portable analyzer.

II.A.6.b.(ii) The owner or operator of a duct burner must inspect duct burner elements, baffles, support structures, and liners and clean, repair, or replace components as necessary.

II.A.6.b.(iii) The owner or operator of a stationary combustion turbine must conduct the following inspections and adjustments, as applicable:

II.A.6.b.(iii)(A) Inspect turbine inlet systems and align, repair, or replace components as necessary.

II.A.6.b.(iii)(B) Inspect the combustion chamber components, combustion liners, transition pieces, and fuel nozzle assemblies and clean, repair, or replace components as necessary.

- II.A.6.b.(iii)(C) When burning the fuel that provides the majority of the heat input since the last combustion process adjustment and when operating at a firing rate typical of normal operation, confirm proper setting and calibration of the combustion controls.
- II.A.6.b.(iv) The owner or operator of a stationary internal combustion engine must conduct the following inspections and adjustments, as applicable:
- II.A.6.b.(iv)(A) Change oil and filters as necessary.
- II.A.6.b.(iv)(B) Inspect air cleaners, fuel filters, hoses, and belts and clean or replace as necessary.
- II.A.6.b.(iv)(C) Inspect spark plugs and replace as necessary.
- II.A.6.b.(v) The owner or operator of a dryer or furnace must inspect the burner and combustion controls and adjust, clean, and/or replace components as necessary.
- II.A.6.b.(vi) The owner or operator of a ceramic kiln must inspect and maintain the combustion controls and adjust the burners as necessary to ensure a proper air-to-fuel ratio. At units where entry into a piece of process equipment is required to complete the combustion process adjustment, in-kiln inspections and adjustments are required only during planned entries.
- II.A.6.b.(vii) The owner or operator must operate and maintain the boiler, duct burner, process heater, stationary combustion turbine, stationary internal combustion engine, dryer, furnace, or ceramic kiln consistent with manufacturer's specifications, if available, or good engineering and maintenance practices.
- II.A.6.b.(viii) Frequency
- II.A.6.b.(viii)(A) The owner or operator of boilers, duct burners, process heaters, stationary combustion turbines, and stationary reciprocating internal combustion engines with uncontrolled actual emissions of NO<sub>x</sub> equal to or greater than five (5) tons per year that existed at major sources of NO<sub>x</sub> (greater than or equal to 100 tpy NO<sub>x</sub>) as of June 3, 2016, must conduct the initial combustion process adjustment by April 1, 2017. An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (November 17, 2016) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (November 17, 2016) to satisfy the requirement to conduct an initial combustion process adjustment by April 1, 2017.

II.A.6.b.(viii)(B) The owner or operator of boilers, duct burners, process heaters, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, and ceramic kilns with uncontrolled actual emissions of NO<sub>x</sub> equal to or greater than five (5) tons per year that existed at major sources of NO<sub>x</sub> (greater than or equal to 50 tpy NO<sub>x</sub>) as of January 27, 2020, must conduct the initial combustion process adjustment by May 1, 2020. An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (December 19, 2019) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (December 19, 2019) to satisfy the requirement to conduct an initial combustion process adjustment by May 1, 2020.

~~II.A.6.b.(viii)(C) (State Only) The owner or operator of process heaters with uncontrolled actual emissions that emit, or have the potential to emit, NO<sub>x</sub> equal to or greater than five (5) tons per year that existed at sources of NO<sub>x</sub> emissions greater than or equal to 25 tpy NO<sub>x</sub> as of July 20, 2021, must conduct an initial combustion process adjustment by January 1, 2022, or January 1, 2024, for process heaters specified in Section II.A.4.g.(ii). An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2021) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2021) to satisfy the requirement to conduct an initial combustion process adjustment by January 1, 2022.~~

II.A.6.b.(viii)(D) The owner or operator must conduct subsequent combustion process adjustments at least once every twelve (12) months after the initial combustion adjustment, or on the applicable schedule according to Sections II.A.6.c.(i). or II.A.6.c.(ii).

II.A.6.b.(viii)(E) Beginning January 1, 2022, the owner or operator of process heaters at a refinery must conduct subsequent combustion process adjustments at least once every six (6) months after the initial combustion adjustment, or on the applicable schedule according to Sections II.A.6.c.(i). or II.A.6.c.(ii).

II.A.6.c. As an alternative to the requirements described in Sections II.A.6.b.(i) through II.A.6.b.(viii):

II.A.6.c.(i) The owner or operator may conduct the combustion process adjustment according to the manufacturer recommended procedures and schedule; or



- II.A.6.c.(ii) The owner or operator of combustion equipment that is subject to and required to conduct a periodic tune-up or combustion adjustment by the applicable requirements of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2021) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2021) may conduct tune-ups or adjustments according to the schedule and procedures of the applicable requirements of 40 CFR Part 60 (July 1, 2021) or 40 CFR Part 63 (July 1, 2021).
- II.A.7. Recordkeeping. The following records must be kept for a period of five years and made available to the Division upon request:
- II.A.7.a. The applicable emission limit and calculated heat input weighted emission limit for stationary combustion equipment demonstrating compliance for multiple fuels.
- II.A.7.b. The 30-day rolling average emission rate calculated on a daily basis for sources using CERMS to comply with Section II.A.
- II.A.7.c. The type and amount of fuel used.
- II.A.7.d. The stationary combustion equipment's annual capacity factor on a calendar year basis.
- II.A.7.e. All records generated to comply with the reporting requirements contained in Section II.A.8.
- II.A.7.f. For stationary combustion equipment subject to the combustion process adjustment requirements in Section II.A.6., the following recordkeeping requirements apply:
- II.A.7.f.(i) The owner or operator must create a record once every calendar year identifying the combustion equipment at the source subject to Section II.A. and including for each combustion equipment:
- II.A.7.f.(i)(A) The date of the adjustment;
- II.A.7.f.(i)(B) Whether the combustion process adjustment under Sections II.A.6.b.(i) through II.A.6.b.(vi) was followed, and what procedures were performed;
- II.A.7.f.(i)(C) Whether a combustion process adjustment under Sections II.A.6.c.(i) and II.A.6.c.(ii) was followed, what procedures were performed, and what New Source Performance or National Emission Standard for Hazardous Air Pollutants applied, if any; and
- II.A.7.f.(i)(D) A description of any corrective action taken.
- II.A.7.f.(i)(E) If the owner or operator conducts the combustion process adjustment according to the manufacturer recommended procedures and schedule and the manufacturer specifies a combustion process adjustment on an operation time schedule, the hours of operation.

II.A.7.f.(i)(F) If multiple fuels are used, the type of fuel burned and heat input provided by each fuel.

II.A.7.f.(ii) The owner or operator must retain manufacturer recommended procedures, specifications, and maintenance schedule if utilized under Section II.A.6.c.(i). for the life of the equipment.

II.A.7.f.(iii) As an alternative to the requirements described in Section II.A.7.f.(i), the owner or operator may comply with applicable recordkeeping requirements related to combustion process adjustments conducted according to a New Source Performance Standard in 40 CFR Part 60 (November 17, 2016) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (November 17, 2016).

II.A.7.g. All sources qualifying for an exemption under Section II.A.2. must maintain all records necessary to demonstrate that an exemption applies.

#### II.A.8. Reporting

II.A.8.a. For affected units demonstrating compliance with Section II.A.4. using CEMS or CERMS in accordance with Section II.A.5.c.(i)(A), the owner or operator must submit to the Division the following information:

II.A.8.a.(i) Quarterly or semi-annual excess emissions reports no later than the 30th day following the end of each semi-annual or quarterly period, as applicable. Excess emissions means emissions that exceed the applicable limitations contained in Section II.A.4. Excess emission reports must include the information specified in 40 CFR Part 60, Section 60.7(c) (July 1, 2018).

II.A.8.b. For affected units demonstrating compliance with Section II.A.4 using performance testing pursuant to Section II.A.5.c.(ii)(C), the owner or operator must submit to the Division the following information:

II.A.8.b.(i) Performance test reports within 60 days after completion of the performance test program. All performance test reports must determine compliance with the applicable emission limitations set by Section II.A.4.

### III. Control of Emissions from Specific Major Sources of VOC and/or NO<sub>x</sub> in the 8-hour Ozone Control Area

III.A. Specific major sources of VOC and/or NO<sub>x</sub> (greater than or equal to 100 tpy) as of June 3, 2016, located in the 8-hour Ozone Control Area.

III.A.1. Stationary internal combustion engines at the following major sources must comply with applicable NO<sub>x</sub> emission limits and associated monitoring, recordkeeping, and reporting requirements in 40 CFR Part 60, Subpart IIII (July 1, 2016), 40 CFR Part 60, Subpart JJJJ (July 1, 2016), and/or 40 CFR Part 63, Subpart ZZZZ (July 1, 2016) as expeditiously as practicable, but no later than January 1, 2017:

III.A.1.a. National Reconnaissance Office (NRO) – Aerospace Data Facility (005-0028) – engines (pt 128, 139, 144).

III.A.1.b. Colorado State University (069-0011) – engines (pt 024, 035, 036, 037, 038, 040, 043, 052).

- III.A.1.c. DCP Midstream, Greeley (123-0099) – engine (pt 102).
- III.A.1.d. DCP Midstream, Kersey/Mewbourn (123-0090) – engine (pt 101).
- III.A.1.e. DCP Midstream, Spindle (123-0015) – engines (pt 059, 075).
- III.A.1.f. IBM (013-0006) – engines (pt 092, 094).
- III.A.1.g. Owens-Brockway (123-4406) – engine (pt 024).
- III.A.1.h. Plains End (059-0864) – engine (pt 005).
- III.A.1.i. PSCo Cherokee (001-0001) – engine (pt 031).
- III.A.1.j. Spindle Hill (123-5468) – engine (pt 005).
- III.A.1.k. Suncor (001-0003) – engines (pt 150, 151).
- III.A.1.l. Timberline Energy (123-0079) – engines (pt 010, 011).
- III.A.2. Cemex Construction Materials (013-0003) must comply with applicable THC requirements and associated monitoring, recordkeeping, and reporting in 40 CFR Part 63, Subpart LLL (July 1, 2016) as expeditiously as practicable, but no later than January 1, 2017.
- III.A.3. Denver Regional Landfill and Front Range Landfill (123-0079) (pt 007, 013) must comply with applicable flare requirements in 40 CFR Part 60, Subpart WWW (July 1, 2016) as expeditiously as practicable, but no later than January 1, 2017.
- III.B. Specific major sources of VOC and/or NOx (greater than or equal to 50 tpy) as of January 27, 2020, located in the 8-hour Ozone Control Area.
  - III.B.1. Stationary internal combustion engines at the following major sources must comply with applicable NOx emission limits and associated monitoring, recordkeeping, and reporting requirements in 40 CFR Part 60, Subpart IIII (July 1, 2016), 40 CFR Part 60, Subpart JJJJ (July 1, 2016), and/or 40 CFR Part 63, Subpart ZZZZ (January 30, 2013) as expeditiously as practicable, but no later than July 1, 2021:
    - III.B.1.a. University of Colorado Denver, Anschutz Medical Campus (001-0106) – engines (pts 011, 012, 013, 014, 015, 016, 017, 018, 020, 021).
    - III.B.1.b. Centura Health St. Anthony (059-1511) – engines (pts 002, 003).
  - III.B.2. Flares at the following major sources must comply with applicable flare requirements in 40 CFR Part 60, Section 60.18 (December 22, 2008) as expeditiously as practicable, but no later than July 1, 2021.
    - III.B.2.a. Waste Management of Colorado Denver Arapahoe Disposal Site (005-1291) (pt 003).
  - III.B.3. Front Range Energy (123-5097) must comply with applicable monitoring, recordkeeping, and reporting in 40 CFR Part 60, Subpart VV (July 1, 2019) as expeditiously as practicable, but no later than July 1, 2021.

#### IV. Control of Emissions from Breweries in the 8-hour Ozone Control Area

##### IV.A. Requirements for Brewing Operations

###### IV.A.1. Applicability

Except as provided in Section IV.A.2., the requirements of Section IV. apply to owners or operators of breweries that existed at a major source of VOC (greater than or equal to 100 tpy VOC) as of June 3, 2016, located in the 8-hour Ozone Control Area.

###### IV.A.2. Exemptions

The following emissions units are exempt from Sections IV.A.4. through IV.A.7. but must be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Owners or operators must also maintain records necessary to demonstrate that an exemption applies and make such records available to the Division upon request.

Once an emissions unit at a brewery no longer qualifies for an exemption, the owner or operator must comply with the applicable requirements of Sections IV.A.4. through IV.A.7. as expeditiously as practicable but no later than twelve (12) months after the exemption no longer applies, except as specified in Sections IV.A.2.c. and IV.A.2.d.

IV.A.2.a. An emissions unit subject to a work practice or emission control requirement in another federally enforceable section of Regulation Number 7.

IV.A.2.b. An emissions unit with total uncontrolled actual emissions less than two (2) tons per year VOC on a calendar year basis.

IV.A.2.c. Equipment or activities related to research and development. Research and development ends when the product is sold or offered for sale.

IV.A.2.d. Newly installed, upgraded, or replaced packaging operations for a duration of six months after startup.

###### IV.A.3. Definitions

IV.A.3.a. "Brewery" means a source that produces malt beverage and is comprised of emissions units related to brewhouse operations, fermentation, aging or secondary fermentation, and/or packaging operations.

IV.A.3.b. "Packaging operation" means the canning, bottling, or filling of malt beverages into a container. Packaging operations include keg filling. Packaging operations do not include the railcar loading and unloading of beer concentrate shipped off-site for packing.

IV.A.3.c. "Pilot brewery operation" means an operation where total packaging operations are less than 50,000 barrels per year.

IV.A.3.d. "Process loss" means the difference between the quantity of malt beverage sent to packaging and the quantity of malt beverage packaged into a container. Process loss does not include malt beverage in filled containers if the malt beverage is processed after filling to remove or recover ethanol.

IV.A.4. Emission limitations. By May 1, 2019, no owner or operator of a brewery may exceed an average of 6 percent process loss across all packaging operations in a calendar month and 4 percent process loss on a 12-month rolling average during packaging operations.

IV.A.5. Packaging operation work practices

IV.A.5.a. The owner or operator must develop performance objectives and metrics for each packaging operation to reduce spillage and process loss. Process loss records must be summarized annually and compared to performance objectives established by the owner or operator. Process loss records and summaries must be made available to the Division upon request.

IV.A.5.b. The owner or operator must develop and implement an operator training program for employees engaged in packaging operations to understand the operation of the filling lines and minimize breakdowns, spillage, and process loss. The operator training materials must be made available to the Division upon request. At a minimum, the training program must include:

IV.A.5.b.(i) A brewery training manager, coordinator, or equivalent;

IV.A.5.b.(ii) Written standard operating procedures for packaging operations;

IV.A.5.b.(iii) A requirement that initial training be conducted for employees performing packaging operations and more frequently for the following:

IV.A.5.b.(iii)(A) Employees changing packaging operation responsibilities; and

IV.A.5.b.(iii)(B) Startup of new, upgraded, or replaced packaging operations.

IV.A.5.c. The owner or operator must use and maintain packaging operation equipment to reduce container breakage and process loss. For packaging operations, except at pilot brewery operations, this includes, but is not limited to:

IV.A.5.c.(i) Using and maintaining automated filling equipment according to manufacturer recommended procedures or good engineering practices;

IV.A.5.c.(ii) Installing and operating fill level detectors to monitor the liquid fill levels in containers;

IV.A.5.c.(ii) Installing and operating crown inspectors to monitor the condition of crowns and/or caps applied to bottles, if applicable; and

IV.A.5.c.(iv) Utilizing methods to reduce container damage and spillage. This includes, but is not limited to, installing and operating container handling equipment, including smooth glide rails, lubricated conveyors, and variable speed equipment drives.

IV.A.5.d. The owner or operator of pilot brewery operations must use and maintain packaging operation equipment to reduce container breakage and process loss. This includes, but is not limited to:

IV.A.5.d.(i) Maintaining filling equipment according to manufacturer recommended procedures or good engineering practices;

IV.A.5.d.(ii) Monitoring the liquid fill levels in containers; and

IV.A.5.d.(iii) Utilizing methods to reduce container damage and spillage. This includes, but is not limited to, installing and operating container handling equipment, including smooth glide rails, lubricated conveyors, and variable speed equipment drives.

IV.A.6. Wastewater management and treatment. Owners or operators employing microbial and vegetative destruction of VOCs through the land application of wastewater must ensure that the areas where wastewater is applied are areas covered with vegetation at all times when wastewater is applied, except as required following tilling and seeding for crop rotation and field work per standard agricultural practices.

#### IV.A.7. Recordkeeping

The following records must be kept for a period of five (5) years and made available to the Division upon request:

IV.A.7.a. Monthly records of the percent process loss for packaging operations;

IV.A.7.b. Records necessary to demonstrate compliance with the packaging operation work practice requirements in Section IV.A.5.; and

IV.A.7.c. If applicable, pursuant to Section IV.A.6., monthly and annual records of the amount of wastewater (gallons) sent to the land application site.

### V. Control of Emissions from Foam Manufacturing in the 8-hour Ozone Control Area

#### V.A. Requirements for Foam Product Manufacturing

##### V.A.1. Applicability

Except as provided in Section V.A.2., the requirements of Section V. apply to owners or operators of foam manufacturing operations that existed at a major source of VOC (greater than or equal to 50 tpy VOC) as of January 27, 2020, located in the 8-hour Ozone Control Area.

##### V.A.2. Exemptions

Any foam manufacturing operation that uses only non-VOC blowing agents is exempt from this Section V.A.

##### V.A.3. Definitions

V.A.3.a. "Blowing agent" means any liquid, gaseous or solid substance that alone or in conjunction with other substances is capable of producing a cellular (foam) structure in a polymeric material.

V.A.3.b. "Expandable polystyrene (EPS) beads" means polystyrene beads, particles, or granules, usually less than one-twelfth inch in diameter, that are formulated with a blowing agent (typically 3.5% to 7% of bead weight). When subjected to prescribed heating in an expansion system, the beads puff up, expanding many times their original volume into low density foam globules (called "prepuff" or "puff") from which a variety of EPS foam products are molded.

- V.A.3.c. “Expanded polystyrene (EPS) foam” means a lightweight, foam material, made of polystyrene, from which a variety of common items are made, such as ice-chests, insulation board, protective packaging, and single-use cups.
- V.A.3.d. “Foam” means a solid material in a lightweight cellular form (having internal voids or cavities called cells that contain air or a gas) resulting from the introduction or generation of gas bubbles throughout its mass during processing.
- V.A.3.e. “Foam manufacturing operation” means any EPS production line, or portion of a production line, which processes raw EPS bead into final molded EPS product. Production line processes include, but are not limited to: pre-expansion, aging (pre-puff), and molding. The manufacturing process ends after the product exits the EPS mold. “Foam manufacturing operation” also means any production line processing methylene diphenyl diisocyanate (MDI), resins, and various hardeners and thickeners into foam products and which results in VOC emissions into the atmosphere. The manufacturing process ends after the product exits the drying tunnel.
- V.A.3.f. “Non-VOC blowing agent” means a blowing agent which does not contain VOCs.
- V.A.3.g. “Polystyrene” means any grade, class, or type of thermoplastic polymer, alloy, or blend that is composed of at least 80% polymerized styrene by weight.
- V.A.3.h. “Raw material” means all polystyrene, polyethylene and polypropylene, and blowing agent used in the manufacture of foam products.

#### V.A.4. Emission Limitations

- V.A.4.a. By May 1, 2022, owners and operators of foam manufacturing operations must either
- V.A.4.a.(i) Limit VOC emissions from foam manufacturing to 3.0 lbs. per 100 lbs. of total material process, averaged monthly, or
  - V.A.4.a.(ii) Control VOC emissions from foam manufacturing by 90%. The control device must have a control efficiency of at least 95%.

#### V.A.5. Work Practices

The owner or operator of any foam manufacturing operation must implement the following work practice requirements at all times to reduce VOC emissions from fugitive sources

- V.A.5.a. Store raw materials in closed, leak-free, labeled containers when not in use.
- V.A.5.b. Cover open containers in a manner that minimizes evaporation into the atmosphere.

#### V.A.6. Monitoring

- V.A.6.a. The owner or operator of foam manufacturing operations must operate and maintain the control device consistent with the manufacturer’s specifications.

V.A.6.b. By November 1, 2022, and every three (3) years afterward, owners or operator of foam manufacturing operations must conduct a performance test during representative operations using EPA Method 24 to determine VOC content and EPA Method 18, 25, or 25A to determine control efficiency of the emission control equipment.

V.A.7. Recordkeeping

The following records must be kept for a period of five (5) years and made available to the Division upon request

V.A.7.a. Any records necessary to demonstrate that an exemption in Section V.A.2. applies.

V.A.7.b. The amount of raw material processed on a daily basis.

V.A.7.c. The type of blowing agent used.

V.A.7.d. The amount of blowing agent used on a monthly basis.

V.A.7.e. The total monthly VOC emissions.

V.A.7.f. For operators complying with the emission limitation in Section V.A.4.a.(i), the total monthly VOC emissions calculated on a pounds per 100 lbs. of material processed basis.

V.A.7.g. For operators that use a control device to comply with the emission limitations in Section V.A.4.a.

V.A.7.g.(i) A manufacturer guarantee of the control equipment's emission control efficiency to demonstrate compliance with Section V.A.4.

V.A.7.g.(ii) The amount of supplementary natural gas combusted in the control device on a monthly basis.

V.A.7.g.(iii) Records of performance tests conducted pursuant to Section V.A.6.

V.A.7.h. Records of calendar year VOC emission estimates demonstrating whether the foam manufacturing operation meets or exceeds the applicability threshold in Section V.A.1.

V.A.8. Reporting

V.A.8.a. Performance test protocols required for performance tests under Section V.A.6.b. must be submitted to the Division for review at least thirty (30) days prior to testing and in accordance with AQCC Common Provisions Regulation Section II.C.



## DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

### Air Quality Control Commission

## REGULATION NUMBER 10 CRITERIA FOR ANALYSIS OF TRANSPORTATION CONFORMITY

### 5 CCR 1001-12

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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### Conformity to State Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act

#### I. Requirement to Comply with the Federal Rule

The purpose of Regulation Number 10 is to fulfill the requirement in 40 CFR 51.390(b) to establish a SIP revision that addresses the provisions of Sections 40 CFR 93.105(a) through (e), 40 CFR 93.122(a)(4)(ii), and 40 CFR 93.125(c) of the federal transportation conformity rule (see 40 CFR Part 93, Subpart A). Any person making a transportation conformity determination or adopting or approving a regionally significant project shall comply with the provisions of 40 CFR, Part 93, Subpart A., except as follows:

- I.A. The interagency consultation procedures established in Section III. of this document specify Colorado procedures and shall apply in addition to the consultation procedures established in 40 CFR Section 93.105 (a) through (e).
- I.B. Colorado-specific provisions in Section IV. of this document that require obtainment of and fulfillment of written commitments to SIP control measures not included in a transportation plan or Transportation Improvement Program (TIP) shall apply, pursuant to 40 CFR Section 93.122 (a)(4)(ii).
- I.C. Colorado-specific provisions in Section V. of this document regarding design concept and scope and enforceability of project-level mitigation and control measures shall apply, pursuant to 40 CFR Section 93.125 (c).

#### II. Definitions

CDOT means the Colorado Department of Transportation.

Commission means the Air Quality Control Commission as defined in Section 25-7-103(7), C.R.S.

Division means The Air Pollution Control Division, pursuant to Section 25-7-111, C.R.S.

Hot Spot Analysis is an estimation of likely future localized criteria pollutant (or their precursor) concentrations and a comparison of those concentrations to the national ambient air quality standards. Federally required hot spot analyses assess impacts of pollutants on a scale smaller than the entire nonattainment or maintenance area, including for example, congested roadway intersections, highway portions, or transit terminals, using air quality dispersion modeling.

Lead Planning Agency (LPA) is an agency designated by Colorado's Governor that is charged, together with the Division, with the duty of developing the State Implementation Plan (SIP) for any nonattainment or maintenance area.

Metropolitan planning organization (MPO) is that organization designated as being responsible, together with the State, for conducting the continuing, cooperative, and comprehensive planning process under 23 U.S.C. 134 and 49 U.S.C. 1607. It is the lead agency for preparing transportation plans, TIPs and transportation conformity documents, and it provides a forum for cooperative transportation decision-making.

Project-level Conformity See: *Hot Spot Analysis*

Regional Transportation Conformity refers to the status of a transportation planning region's conformance to relevant State Implementation Plans (SIPs). A conforming region's transportation plans and TIPs have passed emissions tests that must indicate they are unlikely to cause, contribute to, or increase the severity and frequency of future violations of national ambient air quality standards. Regional Conformity is demonstrated using transportation network models and air quality models and comparing projected transportation-related pollutant emissions to motor vehicle emissions budgets, or where budgets are not established, other emission limits for the region. To make a positive Conformity finding for a region, future emissions must not exceed certain limits, e.g., emission budgets, and transportation projects, plans and TIPs must not interfere with any transportation control measures required by SIPs.

Review Team is that group of interagency representatives who consult regarding Transportation Conformity assessment and findings, e.g., the Interagency Consultation Group (ICG) developed by the Denver Regional Council of Governments. The review team's responsibilities are defined in Section III. of this rule.

Regionally Significant Project means a transportation project (other than an exempt project\*) for a facility that serves regional transportation needs, such as access to and from the area outside the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer and alternative to regional highway travel. For the purposes of this rule, regionally significant projects include only those located in nonattainment or maintenance areas. \*Exempt projects are listed in the Federal Regulation at 40 CFR Part 93.126 and Part 93.127 and include safety improvements.

Routine Conformity Determination is one that is made for transportation plans and TIPs and/or their amendments involving: (1) Plans or TIPs that the APCD determines to have minor amendments only, and /or (2) Projects with revisions to staging years only, and/or (3) Minor transit station plan revisions. Conformity Determinations for areas with Limited Maintenance Plans, which do not have emissions budgets, would also generally be considered "routine." Notwithstanding this general definition, the APCD or the Commission at its discretion may request that any Conformity Determination be reviewed by the Commission.

Transportation Control Measure (TCM) is any measure that is specifically identified and committed to in the applicable implementation plan (air quality SIP) through the process established in CAA Section 176 (c) (8), that is either one of the types listed in CAA Section 108, or any other measure designed to reduce emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Vehicle technology-based, fuel-based and maintenance-based measures, e.g., inspection and maintenance programs, are not TCM's.

Transportation Improvement Program (TIP) A prioritized program of transportation projects funded with federal transportation funds, developed under 23.U.S.C. 134(j) and 23 CFR Parts 450.324 through 450.330. The TIP must be fiscally constrained, and, in air quality nonattainment and maintenance areas, the MPO, as well as FHWA and FTA must determine that the TIP achieves Conformity

Transportation Plan in the context of this regulation means a fiscally constrained plan prepared by a Metropolitan Planning Organization or CDOT and a local government or governments and/or regional planning commission pursuant to 23 U.S.C. 134 and as amplified by 23 CFR Part 450.322 (also referred to as a metropolitan transportation plan, regional transportation plan, or long-range transportation plan) for which a regional conformity determination is required. Outside of MPO's, the Colorado Department of Transportation, along with local governments, develops regional transportation plans. The overall State Transportation Plan incorporates all of the regional plans.

Transportation Planning Region (TPR) is a geographic area for which the transportation planning process required by 23 USC 134 and 135 and Section 8 of the Federal Transit Act must be carried out. Per Colorado regulations (CCR 43-1-1102), a TPR is a geographically designated area of the state for which a regional transportation plan may be developed pursuant to the provisions of 43-1-1102 and 1103, CRS.

### III. Interagency Consultation

#### III.A. Roles and Responsibilities for Transportation Conformity Determinations and Related SIP Development.

- III.A.1. This rule sets out the minimum requirements for interagency consultation (Federal, State, regional and local) and resolution of conflicts. Representatives of the MPOs, local transit agency, the Division, the LPA and CDOT shall undertake an interagency consultation process in accordance with this section with each other and with local or regional offices of EPA, FHWA, and FTA on the development of the implementation plan, the list of TCMs in the applicable implementation plan, the transportation plan, the TIP, and all conformity determinations required by this rule. The MPO shall provide notice of revisions to Conformity documents through the normal planning process. The interagency consultation process shall be used in developing or noticing revisions to any documents that could affect Transportation Conformity.
- III.A.2. It shall be the role and responsibility of each agency identified as a lead agency to prepare the final document and to ensure the adequacy of the interagency consultation process. Designation as a lead agency for any decision item shall mean that such agency shall be responsible for making the final decision on such decision item, except that any such decision shall be subject to the dispute resolution process set out in \ Section III.H.
- III.A.3. In each nonattainment area, CDOT, the LPA, the Division, the MPO, local transit agency, and other agencies, as appropriate, may develop a written agreement pursuant to Section III.G. that outlines the specific roles and responsibilities of various participants in the interagency consultation process for the preparation of SIPs, transportation plans, TIPs and conformity determinations. In the absence of such a written agreement, in addition to the other duties specified in this rule, the specific roles and responsibilities of the various participants in the interagency consultation process shall be as follows:
- III.A.3.a. The Division shall be responsible for: (A) emissions inventories; (B) air quality modeling and/or quality-assuring air quality modeling that is performed by the MPOs or CDOT; (C) performing attainment demonstrations; (D) assisting the LPA in the development of pollutant specific implementation plan revisions; (E) providing technical and policy input regarding emission factors and emissions budgets; and (F) updating motor vehicle emissions factors.

III.A.3.b. The LPA, or the Division if there is no LPA, shall: (A) develop pollutant-specific state implementation plans for submittal to the Commission; and (B) prepare emissions budgets.

III.A.3.c. The MPO shall: (A) develop transportation plans and TIPs, and shall make conformity determinations on transportation plans and TIPs within the applicable area, and shall be the lead agency for the development of such plans and TIPs, and for such conformity determinations; (B) develop transportation and socioeconomic data and planning assumptions and provide such data and planning assumptions to the Division for use in air quality analysis; (C) perform transportation modeling and documentation of timely implementation of TCMs needed for conformity assessments and SIP development; and (D) monitor regionally significant projects, and ensure that all disclosed, or otherwise known, regionally significant projects are included in the regional emissions analysis. The MPO may: (E) provide technical and policy input on emissions budgets; (F) perform air quality modeling for transportation conformity purposes; and (G) evaluate TCM impacts on transportation as needed.

III.A.3.d. CDOT shall: (A) provide technical input on proposed revisions to motor vehicle emissions factors, (B) convene air quality technical review meetings on specific projects when requested by other agencies or as needed, and (C) comment on transportation control measures and other aspects of the SIP that may affect the operation, construction or maintenance of the transportation system.

III.A.3.e. In addition to the duties and responsibilities identified in paragraph d. above, for FHWA/FTA projects located outside of metropolitan planning areas, CDOT shall convene the appropriate parties to outline roles and responsibilities and coordinate efforts needed to: (A) perform the required conformity evaluation for such projects, and identify the lead agency for such evaluations; (B) provide technical and policy input on emissions budgets; (C) develop socioeconomic data and planning assumptions for use in air quality analysis to determine conformity of projects in consultation with the affected municipal and county governments and state agencies; and (D) perform transportation modeling, regional emissions analyses and documentation of timely implementation of TCMs needed for conformity assessments. CDOT may also conduct air quality modeling pursuant to a conformity determination.

III.A.3.f. The Commission shall be responsible for promulgating revisions to the SIP and for determining whether a regional conformity determination should be appealed to the Governor.

III.B. Establishing a Forum for Regional Conformity Consultation

III.B.1. Minimum Consultation Requirements.

- III.B.1.a. The MPO shall establish and maintain a forum, herein referred to as the review team, for regular consultation. The MPO may establish a committee, or use existing committees, to perform the tasks assigned to the review team, provided the agencies identified in Subparagraph III.B.1.b., below, have an opportunity to participate. Conference calls or written correspondence may be used to hold the meetings required by this rule upon the concurrence of the Division and any affected LPA. The review team shall comply with the minimum requirements set out in paragraph c. below, except that, outside of metro planning areas, CDOT shall perform the functions assigned to the MPO.
- III.B.1.b. The review team shall consist, at a minimum, of the MPO as lead agency, the local transit agency, the Division, CDOT, and the LPA. In addition, the review team shall include EPA, FHWA and the FTA for the topics identified in Subsection C.1. The agencies on the review team may appoint individual staff members, of any organizational level, to participate in the review team.
- III.B.1.c. The review team established pursuant to paragraphs a. and b. shall comply with the following minimum requirements:
- III.B.1.c.(1) The MPO consultation process shall begin early enough for the review team to adequately review and provide meaningful input on draft transportation plans, TIPs and conformity determinations, including supporting documents.
- III.B.1.c.(2) A schedule of meetings or a process for providing adequate notice of subsequent meetings shall be developed as part of the consultation process. The schedule of meetings shall be frequent enough to address all significant issues in a timely fashion.
- III.B.1.c.(3) The MPO shall establish an agenda for each meeting, and shall include in such agenda any issue or item upon the request of any member.
- III.B.1.c.(4) Any member may, at any time, request a meeting through the consultation process. Upon such a request, the MPO should schedule a meeting as soon as practicable.
- III.B.1.c.(5) The MPO shall respond in written form to written comments received from any of the members of the review team copying all review team members.

III.C. Topics for Consultation

- III.C.1. The review team shall address the following topics in the manner provided.

- III.C.1.a. Evaluating and choosing a model (or models) and associated methods and assumptions to be used in regional emissions analyses.

The MPO shall be responsible for selecting the transportation modeling procedures to be used within its modeling domain. The Division shall be responsible for selecting the emissions or air quality modeling procedures used for performing regional emissions analyses for conformity determinations and for SIP revisions.

- III.C.1.b. Determining which minor arterials and other transportation projects should be considered “regionally significant” for the purposes of regional emissions analysis (in addition to those functionally classified as principal arterial or higher or fixed guideway systems or extensions that offer an alternative to regional highway travel), and which projects should be considered to have a significant change in design concept and scope from the transportation plan or TIP.

- III.C.1.b.(1) The review team shall review the transportation network and identify minor arterials that serve regional transportation needs.

- III.C.1.b.(2) Review the transportation projects disclosed to the MPO pursuant to Section III.E., and all transportation projects otherwise known to the members that may be regionally significant projects, and identify as regionally significant those projects that are on a facility which serves regional transportation needs and that would normally be included in the modeling of the metropolitan area's transportation network.

- III.C.1.b.(3) Identify any significant changes in design concept and scope of any project from the transportation plan, TIP, or regional emissions analysis supporting the conformity determination for a conforming TIP, upon the request of any participant in the consultation process, or any recipient of funds designated under Title 23 or the Federal Transit Act with authority to adopt or approve of the subject regionally significant project.

- III.C.1.c. Evaluating whether projects otherwise exempted from meeting the requirements of this subpart (see 40 CFR Sections 93.126 and 93.127) should be treated as non-exempt in cases where potential emissions impacts may exist for any reason.

- III.C.1.c.(1) At the request of any participant in the consultation process, the review team shall determine whether projects otherwise exempt from meeting the requirements of this subpart should be treated as non-exempt in cases where potential emissions impacts may exist for any reason.

- III.C.1.c.(2) For each non-attainment area that is outside of a metropolitan planning area, CDOT shall consult with the review team to identify categories of exempt projects that should be treated as non-exempt for such area.

III.C.1.d. Making a determination, as required by 40 CFR Section 93.113(c)(1), whether past obstacles to TCM implementation have been identified and are being overcome, and whether State and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding for TCMs.

III.C.1.d.(1) The LPA and the Division shall provide the MPO with information necessary to develop a list of the TCMs. The LPA may also request that the MPO, CDOT, the public transit agency, or any other agency responsible for implementing a TCM reaffirm its commitment to implement a TCM pursuant to the schedule established in the SIP.

III.C.1.d.(2) The MPO, after consultation with the review team, shall determine whether obstacles to implementation of TCMs have been identified and are being overcome, and whether State and local agencies are giving maximum priority to approval or funding for TCMs. For each such determination, the MPO shall identify the past obstacles, the steps taken to overcome them, the State and local agencies with influence over approvals or funding, the basis for finding that such agencies are giving maximum priority to such approval or funding, and a revised schedule for the implementation of the TCM.

III.C.1.d.(3) The MPO shall report any situation in which it determines that obstacles to implementing a TCM are not being overcome, or that State and local agencies with influence over approvals or funding are not giving maximum priority to approval or funding for TCMs. The report shall be provided to the agency sponsoring the TCM, the Division, the Commission and the Governor. The Commission may schedule the matter for a hearing regarding enforcement, and/or replacement of TCMs.

III.C.1.e. Notification of transportation plan or TIP revisions or amendments, which merely add or delete exempt projects listed in 40 CFR Section 93.126 or 93.127.

The MPO shall provide notice through the normal planning process, prior to consideration of any proposed amendment that adds or deletes exempt projects listed in 40 CFR Section 93.126 or 93.127 to or from the transportation plan or TIP.

III.C.1.f. Process for providing final documents and supporting information to each agency after approval or adoption.

The MPO shall make available final TIPs and transportation plans to participants in the consultation process.

III.C.1.g. Choosing conformity tests and methodologies for isolated rural nonattainment areas, as required by 40 CFR Section 93.109(g).

The Division and CDOT shall choose, in consultation with the members of the review team, the requirements and methodologies to be used to comply with 40 CFR Section 93.109. If the Division and CDOT cannot agree, the issue shall be referred to the Commission for review at a public meeting pursuant to Section III.H. The Commission may escalate the matter to the Governor as provided in Section III.H.

III.C.2. The review team shall address the following topics in the manner provided. Outside of the metropolitan planning areas, CDOT shall perform the tasks assigned to the MPO, excepting conformity determination tasks that it contracts out to other entities.

III.C.2.a. Evaluating events which will trigger new conformity determinations in addition to those triggering events established in 40 CFR 93.104.

III.C.2.a.(1) The MPO may identify events that would trigger new conformity determinations in addition to those triggering events established in 40 CFR Section 93.104, and the pollutant specific SIPs. Alternatively, the Commission may promulgate regulations or revise the SIP in a manner that would trigger a new conformity determination.

III.C.2.a.(2) The MPO will consult with the review team to evaluate whether events that may trigger a new conformity determination pursuant to 40 CFR Section 93.104 or a pollutant specific SIP have occurred.

III.C.2.b. Consulting on emissions analysis for transportation activities that cross the borders of MPOs or nonattainment areas or basins.

In the event that contiguous MPOs are created within the state, the affected MPOs shall, in consultation with the participants in the consultation process, establish a consultation procedure for consulting on emissions analyses for transportation activities that cross the borders of MPOs or nonattainment areas or air basins.

III.C.2.c. Determining conformity of projects outside the metropolitan area and within the nonattainment or maintenance area.

In the event that a nonattainment or maintenance area is created in the state that includes a metropolitan planning area or areas, but such metropolitan planning area(s) does not include the entire nonattainment or maintenance area, the affected MPOs, in consultation with the participants in the consultation process, shall establish a procedure for consulting on emissions analyses for transportation activities that cross the borders of MPOs or nonattainment areas or air basins.



III.C.2.d. Process for consulting on the design, schedule, and funding of research and data collection efforts and regional transportation model development by the MPO.

The MPO, in consultation with the review team shall determine the design, schedule and funding of significant research and data collection efforts and regional transportation model development.

III.C.3. Hot Spot Analysis: (1) Evaluating and choosing a model (or models) and associated methods and assumptions to be used in hot-spot modeling; and (2) identifying, as required by 40 CFR Section 93.123(b), projects located at sites in nonattainment or maintenance areas that have vehicle and roadway emission and dispersion characteristics essentially identical to those at sites where violations have been verified by monitoring, and therefore require quantitative pollutant hot-spot analysis. CDOT, the APCD, USEPA, and USDOT will:

III.C.3.a. Determine which types of projects should be evaluated for localized hot spots. CDOT, subject to concurrence by the Division, shall identify the projects or categories of projects that shall be evaluated for potential hot spots.

III.C.3.b. Evaluate and choose a model (or models) and associated methods and assumptions to be used in hot-spot analyses. CDOT shall be responsible for selecting the hot spot model to be used for conformity determinations.

III.D. Process for assuming the location and design concept and scope of projects disclosed to the MPO as required by paragraph (E) of this section in cases where sponsors have not yet decided these features in sufficient detail to perform the regional emissions analysis according to the requirements of 40 CFR Section 93.122.

III.D.1. The MPO shall contact the sponsor of any project disclosed to the MPO pursuant to Section III.E., but whose sponsors have not yet decided these features in sufficient detail to perform the regional emissions analysis according to the requirements of 40 CFR Section 93.122, and shall request that such sponsor develop the location and design concept and scope of the project for the purpose of including the project in the regional emissions analysis.

III.D.2. If the sponsor is unwilling or unable to provide these features to the MPO in a timely fashion, the MPO shall propose reasonable assumptions about such features, and shall provide CDOT, the Division, the LPA, the project sponsor, and any recipient of funds designated under Title 23 U.S.C. or the Federal Transit Act that has the authority to adopt or approve of the project, with a written description of the proposed assumptions. Following consultation with such agencies the MPO shall make assumptions about the location and design concept and scope of the project that are reasonably calculated to estimate the emissions associated with such project. Such assumptions shall be based on the information and comments about the project received by the MPO.

III.E. Process to ensure that plans for construction of regionally significant projects that are not FHWA/FTA projects (including projects for which alternative locations, design concept and scope, or the no-build options are still being considered), including those by recipients of funds designated under Title 23 U.S.C. or the Federal Transit Act, are disclosed on a regular basis, and that any changes to such plans are immediately disclosed.

III.E.1. Prior to conducting a conformity analysis, the MPO shall ensure that CDOT and each municipality, county and public transit agency within the metropolitan planning area, and each agency with approval authority for transportation projects, is notified of the requirement to include regionally-significant projects, and changes to plans for such projects, in the regional emissions analysis.

III.F. Consultation procedures for development of State Implementation Plans.

III.F.1. Minimum Consultation Requirements - SIP development and revision.

In each nonattainment or maintenance area, the LPA or the Division shall establish and maintain a review team for regular consultation to ensure that the transportation community is involved in the development of the implementation plans. Such review team shall also be established to develop and review any SIP revision that includes a new or revised mobile source emissions budget, or that requires a new or revised attainment or maintenance demonstration. The review team may be part of a larger consultation procedure established by the LPA or Division to include all sectors of the community (in addition to the transportation community). The consultation procedure shall comply with the minimum requirements listed below. If the review team is established by the Division, the Division shall perform the tasks assigned to the LPA.

III.F.1.a. The review team shall consist of representatives of the MPO, the Division, CDOT, the EPA, FHWA, FTA, and the public transit agency.

III.F.1.b. The LPA shall begin consultation meetings early enough in the process for review team members to adequately review the modeling used to support the SIP, and to review the proposed control measures. The LPA must provide an opportunity to review copies of the draft implementation plan, including supporting documents, to the other members of the review team, and shall provide at least thirty days for the submission of comments on the draft SIP prior to adoption by the LPA.

III.F.1.c. A schedule of meetings or a process for providing adequate notice of subsequent meetings shall be developed as part of the consultation process. The schedule of meetings shall be frequent enough to address all significant issues in a timely fashion.

III.F.1.d. The LPA shall establish an agenda for each meeting, and shall include in such agenda any issue or item upon the request of any participant.

III.F.1.e. Any member may, at any time, request a meeting to consult with the LPA and the other participants. Upon such a request the LPA should schedule a meeting as soon as practicable.

III.F.1.f. The LPA shall respond in written form to written comments received from any of the participants.

III.F.1.g. SIPs and SIP revisions proposed by the LPA shall be subject to final approval by the Commission following a public hearing. The Division shall provide final copies of any SIP or SIP revision to the MPO, CDOT, the LPA, the public transit agency, the EPA, the FHWA, and FTA.

- III.F.2. The LPA shall submit a list of TCMs included in the proposed SIP to the MPO, CDOT and each affected local agency or other sponsoring agency at least thirty days prior to approval of the SIP or SIP revision by the governing board of the LPA.
- III.F.3. The SIP development procedures set out in this Section III.F. shall be in addition to any other rules or regulations applicable to SIP development or SIP revisions. Nothing in this Section III.F. shall be construed to supersede, alter or amend such other rules, or to incorporate such other requirements into the SIP.
- III.G. Agreements further describing consultation procedures.
- III.G.1. The Division may enter into written agreements with the members of the review team to clarify and further develop the procedures for conformity determinations described in this Section III. The Division may also enter into written agreements with the LPA and members of the committee established pursuant to Section III.F. to further clarify or develop the SIP development procedures. The members of the review team may, by mutual agreement, delegate the tasks assigned to them under this rule to other members. Any member of the review team delegating a task shall conduct reasonable oversight of the delegated task as necessary to ensure proper performance.
- III.G.2. Nothing in this regulation shall be construed to relieve the parties of the obligations set out in agreements entered into prior to the effective date of this rule, except to the extent that the provisions of such agreements are inconsistent with this rule. The Commission and Division shall continue membership on any MPO committee or council as provided in any such agreements.
- III.H. Review of Conformity Determinations by the public, the Air Quality Control Commission, and resolution of conflicts.
- III.H.1. Per, 40 CFR Section 93.105(e), agencies making conformity determinations— i.e., MPO's or CDOT--must provide for public review and comment prior to adopting new or amended transportation plans-and programs.
- III.H.1.a. Agencies making conformity determinations must provide reasonable public access to relevant documents, consistent with 23 CFR Section 450.316(a). Any charges imposed for public inspection or copying of documents would be consistent with USDOT regulations at 49 CFR Section 7.43.
- III.H.1.b. Agencies making conformity determinations must specifically address in writing any public comments asserting that a regionally significant project is not reflected in the emissions analysis supporting a positive conformity finding.
- III.H.1.c. Agencies making conformity determinations shall provide opportunity for public involvement in conformity determinations for projects where otherwise required by law.

- III.H.2. The Division shall make a finding regarding which Conformity Determinations are routine, per the definition set forth in this regulation. Routine Conformity Determinations regarding a TIP or Plan shall be reviewed by the Division. For instances in which the Division agrees that a positive Conformity Determination has been made, it shall provide notice of concurrence with those determinations. The Division shall make the determination regarding whether a Conformity Determination is routine. If a Conformity Determination is non-routine, it shall be brought before the Commission for its review and possible concurrence. The Commission intends to conduct public meetings to review non-routine conformity determinations in accordance with the applicable provisions of the Air Quality Control Commission Procedural Rules, and reserves the right to schedule such meetings as permitted by the Commission's schedule and as necessary to comply with such procedural rules. However, this paragraph shall not be construed to incorporate such procedural rules into the SIP. No violation of such procedural rules shall be construed as a violation of the SIP, except where such procedural rules otherwise has been incorporated into the SIP.
- III.H.3. Upon request of any member of the review team, a conformity determination on an FHWA project located outside of a metropolitan planning area shall be presented to the Commission prior to submittal to FHWA if there is a conflict that cannot be resolved by the review team. The request for such review must be filed as soon as practicable and shall not be filed any later than the first regularly scheduled Commission meeting following the final conformity determination.
- III.H.4. In accordance with 40 CFR Section 93.105(d), conflicts among State agencies or between State agencies and an MPO may be escalated to the Governor. Such conflicts would render a Conformity Determination non-routine and subject to review by the AQCC. The fourteen calendar-days in which to appeal a conflict to the Governor shall commence upon review of a conformity determination by the Commission pursuant to this Subsection H., except as provided below at Sections (a) and (b). If the State appeals to the Governor, the final conformity determination must have the concurrence of the Governor. If the Commission does not appeal to the Governor within 14 days, or as provided below at Sections (a) and (b), the MPO or CDOT may proceed with the final conformity determination.
- III.H.4.a. The Commission may extend the beginning of the time to escalate a conflict to the next regularly scheduled Commission meeting if the entity making the conformity determination amends such determination during the fourteen-day period preceding the Commission meeting.
- III.H.4.b. Upon the agreement and concurrence of the entity making the conformity determination, the Commission may extend the beginning of the time to escalate a conflict as necessary to accommodate further consultation among the agencies.
- III.H.4.c. For purposes of project level conformity determinations in isolated rural nonattainment and maintenance areas, a "final conformity determination" shall be taken to mean CDOT's completed conformity analysis and recommended finding of conformity to FHWA.

- IV. Emission reduction credit for certain control measures.
- IV.A. Pursuant to 40 CFR Section 93.122(a)(4), emissions reduction credit from implementation plan control measures that are not included in the transportation plan and TIP and that do not require a regulatory action in order to be implemented may not be included in the emissions analysis unless the conformity determination includes written commitments to implementation from the appropriate entities.
- IV.B. Any entity making a written commitment to perform a control measure not included in the transportation plan or TIP shall fulfill such written commitment if the control measure is used for emissions reduction credit in a regional emissions analysis.
- V. Enforceability of design concept and scope and project-level mitigation and control measures.
- V.A. Pursuant to 40 CFR Section 93.125 (c), where project-level mitigation is conditional to a positive conformity determination, written commitments to such mitigation measures must be obtained. Project sponsors shall comply with these commitments.
- VI. Statements of Basis, Specific Statutory Authority, and Purpose
- VI.A. Amendments Adopted October 15, 1998

The change to Regulation Number 10, "Criteria for Analysis of Conformity," Part B, "Transportation Conformity" will establish criteria and procedures for making conformity determinations on transportation plans, transportation improvement programs (TIPs), FHWA/FTA projects, and consultation procedures for major revisions to the State Implementation Plan (SIP).

#### Federal Requirements

Pursuant to 40 CFR Section 51.390, Colorado must submit to the EPA and the U.S. Department of Transportation (DOT), a revision to the SIP to establish criteria and procedures for DOT, metropolitan planning organizations (MPOs), and state and local transportation and air quality agencies to assess the conformity of transportation plans, programs, and projects, consistent with the requirements of 40 CFR, Part 93, Subpart A.

The states may incorporate the substantive criteria for making conformity determinations set out in the federal rule, into the state rule by reference. The rule adopted by the Commission takes advantage of this opportunity and incorporates the criteria in 40 CFR Part 93, Subpart A by reference.

The federal rule also requires the states to develop procedures for interagency consultation on transportation conformity determinations, and for SIP revisions. The federal rule establishes minimum requirements for such consultation procedures, but does not actually establish any procedures. Pursuant to 40 CFR Section 51.390 and 93.105, the states must develop and adopt such procedures, and submit the procedures to EPA for inclusion in the SIP. The rule adopted by the Commission establishes procedures for interagency consultation, and addresses each of the topics required by 40 CFR Section 93.105. The consultation procedure established in the rule is intended to create a meaningful interagency consultation process that complies with the federal requirements, but that provides the flexibility necessary to meet the needs of the Colorado Department of Transportation and the various MPOs in the State. The interagency consultation requirements track the minimum federal requirements, and are not otherwise more stringent than the federal requirements.

The only provision in the rule that differs from the federal rule is the definition of the term “regionally significant project” contained in the state rule. The state rule includes a definition applicable to rural nonattainment areas that do not conduct modeling of the area’s transportation network. The federal rule appears to assume that all nonattainment areas conduct such modeling. The specific definition in the rule for rural areas is necessary to reconcile the federal rule with the general practice in rural nonattainment areas, but is not more stringent than federal requirements.

#### Contested Issues

One MPO urged the Commission to adopt a rule requiring a public meeting to be held prior to final action by the MPO. The rule is written to allow flexibility, so that MPOs have the option of coming to the Commission either before or after their governing board takes final action on the conformity determination. However, the Commission strongly encourages the MPOs to submit a draft conformity determination to the AQCC for comment, so that the MPO can take the Commission’s comments into account as early in the process as possible.

#### Statutory Authority

The transportation conformity rule is adopted under the Commission’s general authority to adopt a SIP under Section 25-7-105(1), C.R.S. (1997).

#### Findings pursuant to Section 25-7-110.8

The portion of the rule incorporating the federal criteria for making conformity determinations is exempt from the requirements of Section 25-7-110.8, C.R.S. (1997). The consultation requirements are administrative in nature, and are exempt from the requirements of Section 25-7-110.8(1)(b), C.R.S. The interagency consultation requirements establish a procedure for ensuring that the federal, state and local air quality agencies charged with protecting human health and the environment are consulted during the transportation conformity process. In this way, the rule will bring about reductions in risks to human health or the environment that will justify the cost of implementation of the rule. The rule adopted by the Commission complies with the minimum federal requirements and maximizes the air quality benefits of the regulation in the most cost-effective manner. No other party proposed any alternative rule that would accomplish this result in a more cost-effective manner.

VI.B. Amendments Adopted November 20, 2008

Transportation Conformity Update

#### Background

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Administrative Procedures Act, Section 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

#### Basis and Purpose

These revisions to “Part B, “Transportation Conformity,” update the Regulation to incorporate by reference revisions to the federal rule, and to recognize Colorado-specific practices.

The incorporations by reference adopt revisions to federal conformity regulations adopted by the EPA since 1997. Most of these revisions have streamlined processes and relaxed requirements.

The revisions add language that addresses 40 CFR Section 93.122(a)(4)(ii) regarding obtaining and ensuring the fulfillment of written commitments to SIP control measures needed to achieve or maintain national ambient air quality standards that are not included in transportation plans or programs. These revisions also add language that addresses Section 93.125(c) regarding obtaining and ensuring the fulfillment of written commitments to transportation project mitigation measures. These are not new federal provisions, but they are newly required to be “addressed,” i.e., made explicit in state conformity implementation plans.

These revisions also make non-substantive changes including correcting citations, clarifying language, and striking of unnecessary or confusing language.

#### Federal Requirements

Pursuant to 40 CFR Section 51.390, Colorado must submit to the EPA and the U.S. Department of Transportation (DOT), a revision to the SIP to establish criteria and procedures for DOT, metropolitan planning organizations (MPOs), and state and local transportation and air quality agencies to assess the conformity of transportation plans, programs, and projects, consistent with the requirements of 40 CFR, Part 93, Subpart A. The states may incorporate the substantive criteria for making conformity determinations set out in the federal rule, into the state rule by reference. The rule adopted by the Commission takes advantage of this opportunity and incorporates the criteria in 40 CFR Part 93, Subpart A by reference.

The federal rule also requires the states to develop procedures for interagency consultation on transportation conformity determinations, and for SIP revisions. The federal rule establishes minimum requirements for such consultation procedures, and requires States to establish these consultation procedures, including consultation with the public and conflict resolution at 40 CFR, Sections 93.105 (c) and (d). Pursuant to 40 CFR Sections 51.390 and 93.105, the states must develop and adopt such procedures, and submit the procedures to EPA for inclusion in the SIP. Pursuant to 40 CFR Sections 93.122(a)(4)(ii) and 93.125(c), States must also address the obtainment and enforceability of written commitments to SIP control measures not included in transportation plan as well as transportation project mitigation measures.

#### Statutory Authority

This transportation conformity rule is adopted under the Commission’s general authority to adopt a SIP under Section 25-7-105(1), C.R.S. (1997).

#### Findings pursuant to Section 25-7-110.8

The portion of the rule incorporating the federal criteria for making conformity determinations is exempt from the requirements of Section 25-7-110.8, C.R.S. (1997). The revisions addressing public consultation, conflict resolution, written commitments to SIP control measures not contained in transportation plans and project-level mitigation conditional to a conformity determination track the requirements in federal rules and are mandated by federal law. These revisions provide for written commitment to incorporate mitigation measures into project design for transportation projects. Mitigation measures are frequently necessary to reduce localized emissions associated with transportation project construction, but rarely relied upon for conformity determinations. Where such commitments are necessary for a positive conformity determination, they must be enforced so as to reduce risks to human health or the environment, which justifies the cost of implementation of the rule. The rule adopted by the Commission complies with the minimum federal requirements and maximizes the air quality benefits of the regulation in the most cost-effective manner. No other party proposed any alternative rule that would accomplish this result in a more cost-effective manner.

VI.C. Amendments Adopted December 15, 2011

Basis and Purpose

The purpose of these amendments is to streamline the transportation conformity process by allowing the Colorado Air Pollution Control Division to provide concurrence with routine transportation conformity determinations without the need for a public hearing before the Colorado Air Quality Control Commission. This change to the conformity process is allowed for under federal law and will reduce the burden on the AQCC, the Division and transportation planning organizations, while ensuring that air quality requirements are met. In addition, the amendments include a number of clarifying provisions that will help facilitate the implementation of the regulation. In addition to streamlining the transportation conformity process, these amendments include a number of housekeeping changes made at the request of EPA, including removing incorporations by reference to federal general conformity regulations. Inclusion of these requirements in Regulation Number 10, and the State Implementation Plan is not required and is unnecessary to the general conformity process.

Specific Statutory Authority

The Commission promulgates these regulatory changes pursuant to its authority under Section 25-7-105(1)(a)(I), C.R.S. to adopt a comprehensive state implementation plan that meets the requirements of the federal Clean Air Act.

Findings Pursuant to Section 25-7-110.8

The revisions to Regulation Number 10 are administrative in nature and are not intended to reduce air pollution. Rather, the revisions are intended to streamline the transportation conformity process and clarify existing requirements, while maintaining the air quality benefits of the existing rule. Accordingly, the requirements of Section 25-7-110.8, C.R.S. do not apply to this rulemaking.

VI.D. Adopted: February 18, 2016

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act Sections 25-7-110 and 25-7-110.5, C.R.S. ("the Act"), and the Air Quality Control Commission's ("Commission") Procedural Rules.

Basis

The Commission revised the definition of "routine conformity determination" to grant the Colorado Air Pollution Control Division ("Division") the authority to provide concurrence with a wider range of transportation conformity determinations thus streamlining the conformity process.

Specific Statutory Authority

The purpose of Regulation Number 10 is to fulfill the requirement in 40 CFR 51.390(b) to establish a SIP revision that addresses the provisions of Sections 40 CFR 93.105(a) through (e), 40 CFR 93.122(a)(4)(ii), and 40 CFR 93.125(c) of the federal transportation conformity rule (see 40 CFR Part 93, Subpart A). The Colorado Air Pollution and Control Act, Section 25-7-105(1)(a)(I), authorizes the Commission to adopt a comprehensive state implementation plan that meets the requirements of the federal Clean Air Act and Section 25-7-106(3) authorizes the Commission to adopt regulations governing procedures before the Commission.



### Purpose

The purpose of this amendment is to streamline the transportation conformity process by allowing the Division to provide concurrence with a wider range of routine transportation conformity determinations without the need for a public hearing before the Commission. This change to the routine conformity determination definition will reduce the burden on the Commission, the Division and transportation planning organizations, while ensuring that air quality requirements are met.

### Findings of Fact

The revisions to Regulation Number 10 are administrative in nature and are not intended to reduce air pollution. Rather, the revisions are intended to streamline the transportation conformity process while maintaining the air quality benefits of the existing rule. Accordingly, the requirements of § 25-7-110.8, C.R.S. do not apply to this rulemaking.

Further, the Commission corrected any typographical, grammatical and formatting errors found within the regulation.

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### **Editor's Notes**

#### **History**

Entire rule eff. 01/30/2012.

Entire rule eff. 03/30/2016.



## DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

### Air Quality Control Commission

#### REGULATION NUMBER 11

#### MOTOR VEHICLE EMISSIONS INSPECTION PROGRAM

#### 5 CCR 1001-13

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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PART A: General Provisions, Area of Applicability, and Schedules for Obtaining Certification of Emissions Control, Definitions, Exemptions, and Clean Screen/Remote Sensing

PART B: Standards and Procedures for the Approval, Operations, Gas Span Adjustment, Calibration and Certification of the Air Pollution Control Division (Division) Approved Test Analyzer Systems for Use in the Basic and Enhanced Program Areas, Test Analyzer Systems for Licensed Dealers in the Enhanced Area, and Clean Screen Test Analyzer Systems

PART C: Inspection Procedures and Requirements for Exhaust Emissions, Fuel Evaporation Control, Visible Smoke Emissions, Emissions Control Systems, On-Board Diagnostics (OBD); and Practices to Ensure Proper Emissions Related Adjustments and Repairs

PART D: Qualification and Licensing of Emissions Mechanics, Emissions Inspectors, and Clean Screen Inspectors; Licensing of Emissions Inspection and Readjustment Stations, Inspection-Only Stations, Inspection-Only Facilities, Fleets, Motor Vehicle Dealer Test Facilities and Enhanced Inspection Centers, Clean Screen Inspection Sites; and Registration of Emissions Related Repair Facilities and Technicians

PART E: Prohibited Acts and Penalties to Ensure Proper Inspection Procedures, Adherence to Prescribed Procedures and Effective Emissions Related Repairs

PART F: Maximum Allowable Emissions Limits for Motor Vehicle Exhaust, Evaporative and Visible Emissions for Light-Duty and Heavy-Duty Vehicles

PART G: Reserved

PART H: Statements of Basis, Specific Statutory Authority and Purpose

APPENDIX A: Technical Specifications

APPENDIX B: Standards and Specification for Calibration/Span Gas Suppliers

#### REFERENCES

Pursuant to Section 24-4-103 (12.5), C.R.S., material incorporated by reference is available during normal working hours, or copies may be obtained at a reasonable cost, from the Technical Secretary of the Air Quality Control Commission c/o the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530 or material incorporated by reference within this regulation may be examined at any state publications depository library. References do not include later amendments to or additions of incorporated material.

**PART A General Provisions, Area of Applicability, Schedules for Obtaining Certification of Emissions Control, Definitions, Exemptions, and Clean Screening/Remote Sensing**

**I. APPLICABILITY**

Subject to the provisions described in Sections I.A and I.B of this Part A and pursuant to the schedule in Section I.C. and V.B. of this Part A, all non-diesel fueled motor vehicles which are registered in the AIR Program area or which motor vehicle is owned or operated by a non-resident who meets the requirements of Section, 42-4-310(1)(c)(I), C.R.S., will be subject to On-Board Diagnostics and/or an exhaust and evaporative emissions, smoke opacity and emissions control, equipment inspection as a prerequisite to initial or renewal of the vehicle registration. Any person owning or operating a business and any post-secondary educational institution located in the program area as defined in Subsection A of this section shall annually inform by written notice all persons employed by such business or attending classes that they are required to comply with the provisions of this regulation. The provisions of this regulation applicable to Larimer and Weld counties shall not be included in the state implementation plan.

**I.A. Geographic Areas of Applicability**

This regulation shall apply to the AIR Program area as defined in Section 42-4-304(20), C.R.S. as amended by Senate Bill 09-003.

**I.B. Vehicles Eligible for AIR Program Inspection Procedures**

This regulation shall apply to all motor vehicles as defined in Section 42-4-304(18), C.R.S.

Vehicles that are registered in a program area and are being operated outside such area but within another program area shall comply with the requirements of the area where such vehicles are being operated. Vehicles registered in a program area that is being temporarily operated outside the state at the time of registration or registration renewal may apply to the department of revenue for a temporary exemption from program requirements. Upon return to the program area, such vehicles must be in compliance with all requirements within fifteen days. A temporary exemption shall not be granted if the vehicle will be operated in an emissions testing area in another state unless proof of emissions from that area is submitted.

Pursuant to Section, 42-4-310(1)(c)(I), C.R.S. motorists operating vehicles in the enhanced program area shall comply with the provisions of the enhanced program.

The burden of proof in establishing an exemption from inclusion in all or any part of the AIR Program inspection requirements is on the vehicle owner.

**I.C. Schedules for Obtaining Certifications of Emissions Control**

**I.C.1. REPEALED**

**I.C.2.** Inspection schedules during calendar year 1995 and thereafter, vehicles are to be inspected according to the schedules established in Sections, 42-4-304(3)(b)(II), and, 42-4-310(1)(b)(II), C.R.S. as amended.

- I.C.3. No used vehicle which is required to be registered in the program area shall be registered, unless such vehicle has a Certification of Emissions Control, or of Emissions Exemption. The seller of a used vehicle is required to obtain a Certification of Emissions Control for the new owner at the time of sale. This paragraph (3) does not apply to the sale of a motor vehicle that is inoperable or otherwise cannot be tested in accordance with this regulation if the seller of the motor vehicle provides a written notice to the purchaser pursuant to Section 42-4-310(4), C.R.S. If a motor vehicle is being registered for the first time in the program area, the owner shall obtain the certification and submit it with the application for registration to the Department of Revenue or an authorized agent of the Department of Revenue.
- I.C.3.a. On or after October 1, 1989, no used vehicle which is required to be registered in the program area shall be registered, unless such vehicle has a Certification of Emissions Control, or of Emissions Exemption. The seller of a used vehicle is required to obtain a Certification of Emissions Control for the new owner at the time of sale. This paragraph (3) does not apply to the sale of a motor vehicle which is inoperable or otherwise cannot be tested in accordance with this regulation or that is being sold pursuant to Part 18 (Vehicles Abandoned on Public Property) or Part 21 (Vehicles Abandoned on Private Property) of Article 4 of Title 42, C.R.S. if the seller of the motor vehicle provides a written notice to the purchaser pursuant to Section 42-4-310(4), C.R.S. If a motor vehicle is being registered for the first time in the program area, the owner shall obtain the certification and submit it with the application for registration to the Department of Revenue or an authorized agent of the Department of Revenue.
- I.C.3.b. An inspection is not required prior to the sale of a motor vehicle with at least twelve months remaining before the vehicle's certification of emissions compliance expires if such certification was issued when the vehicle was new.
- I.C.3.c. Effective January 1, 2015, a motor vehicle being registered in the program area for the first time may be registered without an inspection or certification if the vehicle has not yet reached its seventh model year pursuant to Section 42-4-310(1)(a)(II)(C)C.R.S.
- I.C.4. Any motor vehicle may be voluntarily inspected and a Certification of Emissions Control obtained which shall be valid as specified in Section I.C.2. of this Part A.
- I.C.5. (Reserved)
- I.C.5.a. As it pertains specifically to federally owned or leased vehicles; tactical military vehicles are not required to be inspected.
- I.C.5.b. Federal installation managers are to declare all federal employee-owned vehicles operated on the installation and demonstrate that these vehicles have complied with periodic inspection requirements pursuant to 40 CFR Section 51.356(A)(4). Inspection results shall be reported to the Department of Revenue AIR Program section and up-dated based on inspection cycles.
- I.C.6. (Reserved)
- I.C.7. Fleets of twenty or more eligible vehicles shall be periodically inspected, comply with inspection provisions and obtain a Certification of Emissions Control.

- I.C.7.a. Fleets may pursue licensing as a fleet inspection station under Part D of this Regulation Number 11 pursuant to Section, 42-4-309, C.R.S. and comply with the provisions of that section.
- I.C.7.b. Fleets may elect to comply with periodic inspection requirements under the provisions of Section 42-4-309 (2)(a), C.R.S. to include the inspection schedules of Sections 42-4-304(3)(b)(II) and 42-4-310(1)(b)(II)(a), C.R.S.
- I.C.7.c. As it pertains to the fleet vehicles provisions pursuant to Section, 42-4-309, C.R.S. and this Section I.C.7., municipal fleets of twenty vehicles or more may comply with periodic inspection requirements as specified in Section 42-4-309(2)(a), C.R.S. to include inspection schedule of Sections 42-4-304(3)(b)(II) and 42-4-310 (1)(b)(II)(a), C.R.S.
- I.C.8. New motor vehicles being registered with a Manufacturer's Statement of Origin (MSO), Manufacturer's Certificate of Origin (MCO) or similar document shall be issued a registration without a Certificate of Emissions Control.

Such new motor vehicles are to be issued a Verification of Emissions Test exemption windshield sticker at the time of sale that shall be valid for a period of seven (7) years. The selling dealer is responsible for obtaining the Verification of Emissions Test.

New vehicles under this section shall also include those new vehicles leased under an MSO or MCO or similar document and seven years without an inspection. Such new leased vehicles are to be issued a Verification of Emissions Test exemption windshield sticker at the time of initiation of the lease that shall be valid for a period of seven (7) years.

After the seventh year, such vehicles shall be issued a registration only with a Certificate of Emissions Control. The inspection schedule for these vehicles shall then revert to a biennial inspection cycle.

A used motor vehicle may be registered in the program area without an inspection if, on the date of vehicle registration, at least twelve months remain before the expiration of the Verification of Emissions Test exemption if such certification was issued when the vehicle was new.

Effective January 1, 2015 vehicles that were originally issued a Verification of Emissions Test exemption windshield sticker at the time of new vehicle sale that was valid for a period of four years shall have that time period extended to seven years.

- I.C.9.a. Compliance with AIR Program inspection requirements will not be required for wholesale transactions between motor vehicle dealers licensed pursuant to Article 6 of Title 12, C.R.S.
- I.C.9.b. Motor vehicle dealers shall have motor vehicles inventoried or consigned for retail sale inspected annually. A further inspection is not required at the time of sale if:
- i. For a 1982 or later motor vehicle, there are at least twelve months remaining before the vehicle's certification of emission compliance expires and the dealer has had the vehicle inspected since acquiring it.

- ii. For a 1981 or earlier motor vehicle, the vehicle has a valid certification of emission compliance and the dealer has had the vehicle inspected since acquiring it. Such a vehicle purchased from a licensed motor vehicle dealer may be registered in the program area without an inspection if, on the date of vehicle registration, at least nine months remain before the expiration of such certification.

I.C.10. Reserved

I.C.11. Eligible fleets as defined in Section 42-4-309, C.R.S. that declare not to self-inspect shall be inspected according to the same schedules, subject to the same emissions related repair requirements and waiver provisions as non-fleet vehicles.

I.C.12. For the purposes of 42-4-309(6)(B) if a vehicle fails the test or is untestable due to mechanical and/or electrical/electronic problem, the motorist shall have the same recourse as that of not passing an inspection. However, Section 42-4-309(6), C.R.S. and the regulations implementing such provision, shall not be federally enforceable, and shall not be incorporated into the State Implementation Plan.

## II. DEFINITIONS

1. "Accreditation" means certification that the instrument and instrument manufacturer meet the operating criteria specifications and requirements of the Colorado Department of Health, Air Quality Control Commissions as specified in Part B of this regulation.
2. "Air Intake Systems" are those systems that allow for the induction of ambient air (to include preheated air) into the engine combustion chamber for the purpose of mixing with a fuel for combustion.
3. "AIR Program Station" is an Automobile Inspection and Readjustment (AIR) Station that qualifies and is licensed to operate as an emissions inspection and readjustment station.
4. "Air System" is a system for providing supplementary air into the vehicle's exhaust system to promote further oxidation of HC and CO gases and to assist catalytic reaction.
5. "BAR 90" refer to the California Bureau of Automotive Repair specifications for Exhaust Gas Test Analyzer Systems (TAS) that became effective in 1990. "BAR 97" refers to the California Bureau of Automotive Repair specifications for Exhaust Gas Test Analyzer Systems (TAS) that became effective in 1997.
6. "Basic Engine Systems" are those parts or assemblies which provide for the efficient conversion of a compressed air/fuel charge into useful power to include but not limited to valve train mechanisms, cylinder head to block integrity, piston-ring-cylinder sealing integrity and post-combustion emissions control device integrity.
7. "Calibration" is the process of establishing or verifying the total response curve of an exhaust gas analyzer. Calibration is a laboratory procedure using several different calibration gases having precisely known concentrations.
8. "Calibration Gases" are gases of precisely known concentration that are usually used in the laboratory as references for establishing or verifying the calibration curve of an exhaust gas analyzer.
9. "Catalytic Converter" is a post-combustion device that oxidizes HC and CO gases and/or reduces oxides of nitrogen.

10. "Certification" means assurance by the authorized source, whether it is a laboratory, the manufacturer, or the State, that a specific product or statement is in fact true and meets all required accreditation requirements.
11. "Certification of Emissions Control" shall have the same meaning as set forth in Section 42-4-304(3)(1), C.R.S.
12. "Chlorofluorocarbon" (CFC) is a class I stratospheric ozone depleting compound as listed in Appendix A, final rule vol.57.mp 147 Federal Register, 40 CFR Part 82.
13. "Clean Screen Inspection Site" is that location within the program area as defined in Section 42-4-304(20)(a), C.R.S., approved by the Division and the Department of Revenue.
14. "Clean Screen Inspector" is a person found qualified by the Division, and licensed by the Executive Director to operate Clean Screen Inspection equipment.
15. "Clean Screen Program" is that program as defined in Section 42-4-304(3.5), C.R.S.
16. "Clean Screened Vehicle" is a vehicle that is eligible for inspection, has at least two consecutive passing remote sensing emissions readings performed at approved Clean Screen Inspection Sites prior to its registration renewal date, or for vehicles identified as low emitters on the low emitting vehicle index, one passing remote sensing reading prior to its registration date, and has otherwise complied with the provisions of Section IV of this Part A, Section XII of Part C and Section VI of Part F.
17. "Clean Screen Data Manager" is that person or entity that contracts with the state to provide clean screen data management functions. This same person or entity may also act as general contractor in conducting and facilitating clean screen inspections.
18. "Colorado 94" refers to those test analyzer systems that are based on BAR 90 but modified as specified by the Division for use in the AIR Program for the period of time after January 1, 1994. "Colorado AIR Program BAR 97 Exhaust Gas Analyzer" or Colorado 97" refers to those test analyzer systems that are based on BAR 97, but modified as specified by the Division for all fleet inspection stations and inspection-only facilities that become licenses after May 1, 2010.
19. "Colorado Automobile Dealer Transient Mode Test Analyzer System" is a dynamometer based inspection system capable of performing an inspection grade (IG 240) emissions inspection procedure under simulated driving conditions. The procedure is intended for determining the compliance status for used vehicles prior to retail sale.
20. "Colorado On-Board Diagnostic (OBD) Test Analyzer System" or "OBD TAS" refers to the analytical and testing instrumentation used to verify automotive emissions and to prompt the emissions inspector through the elements of an official Colorado OBD emissions inspection.
21. "Compliance" means verification that certain submission data and hardware submitted by a manufacturer for accreditation consideration, meet all required accreditation requirements.
22. "Diagnostic Trouble Code (DTC)" is an alpha-numeric code representing a specific fault or problem identified by the OBD system on a vehicle. OBD diagnostic trouble codes are standardized across all vehicle manufacturers and are defined individually in the Society of Automotive Engineers Recommended Practice J2012.
23. "Division" is the Air Pollution Control Division of the Colorado Department of Public Health and Environment.

24. "Electrical, Electronic, or Electro-mechanical Span" is the adjustment of an exhaust gas analyzer using an electronic signal rather than a calibration or span gas as a reference source.
25. "Emissions Control Systems" are those parts, assemblies or systems originally installed by the manufacturer in or on a vehicle for the purpose of reducing emissions.
26. "Estes Park Area" means that part of the program area west of Range 71 West in Larimer County.
27. "Executive Director of the Department of Revenue" or "Executive Director" is the representative of the Department of Revenue or designee responsible for the field enforcement of the AIR Program, licensing of emissions mechanics, clean screen inspectors and inspection stations.
28. "Fuel Control Systems" are mechanical, electro-mechanical, galvanic or electronic parts or assemblies that regulate the air/fuel ratio in an engine for the purpose of providing a combustible charge.
29. "Fuel Filler Neck Restrictor system" is the orifice and obstruction ("Flapper Door") in the gas tank filler neck that prevents the insertion of a "leaded gasoline" nozzle and deters the introduction of "leaded fuel".
30. "Gas Span" is the adjustment of an exhaust gas analyzer to correspond with known concentrations of span gases.
31. "Gas Span Check" is a procedure using known concentrations of span gases to verify the gas span adjustment of an analyzer.
32. "Gross Vehicle Weight (GVW) Rating" is the maximum recommended combined weight of the motor vehicle and its load as prescribed by the manufacturer and expressed on a permanent identification label affixed to the motor vehicle.
33. "Heavy Duty Vehicles (HDV)" are those motor vehicles for model years 1978 and earlier having a GVW rating of greater than 6000 pounds and for model years 1979 and newer, having a GVW rating of greater than 8,500 pounds.
34. "Idle Mode" means a condition where the vehicle engine is warm and running at the rate specified by the manufacturer's curb idle, where the engine is not propelling the vehicle, and where the throttle is in the closed or idle stop position.
35. "Ignition Systems" are those parts or assemblies that are designed to cause and time the ignition of a compressed air/fuel charge.
36. "Inspection Area" is the area that is occupied by the analyzer, sample hose and the vehicle being inspected.
37. "Inspection-only station" is that licensed station within the basic program area as defined in Section 42-4-304(2), C.R.S., which meets the requirements of Section 42-4-308, C.R.S., which facility the operator is licensed to operate by the Executive Director as an inspection-only station.
38. "Instrument" is the complete system that samples and reads out the concentration of pollutant HC and CO gas plus CO<sub>2</sub> gas. The instrument includes the sample handling system, the exhaust gas analyzer and the enclosure cabinet.



39. "Light Duty Vehicles (LDV)" are those motor vehicles (to include trucks) for model years 1978 and earlier having a GVW rating of 6,000 pounds or less and for model years 1979 and newer having a GVW rating of 8,500 pounds or less.
40. "Low Emitting Vehicle Index" refers to a statistical table summarizing the probability of vehicles passing the IM 240 inspection. The statistical table will be updated annually by each July 1st. The low emitting vehicle index must meet the requirements of Part F, VI.B. based on a tabulation of the previous calendar year's IM 240 inspection program results.
41. "Malfunction Indicator Light (MIL)" is a warning light located on the dash of vehicles equipped with On-Board Diagnostic (OBD) systems that notifies the motorist that a malfunction to the vehicle's emissions control system has been detected.
42. "Motor Vehicle Emissions Compliance Inspectors (ECI)" are those persons employed and authorized by the Department of Revenue for licensing and enforcement of the AIR Program.
43. "North Front Range Area" is the portion of the Program Area located in Larimer and Weld Counties as set forth in Section 42-4-304(20) as amended by Senate Bill 09-003.
44. "On-Board Diagnostics II (OBD or OBDII) Test" means the electronic retrieval of stored readiness status, diagnostic trouble codes, malfunction indicator light (MIL) illumination status, and other information from a vehicle's OBD system to determine if any emission related trouble codes are present and if the MIL is commanded to be on, which would indicate the existence of an emission related malfunction with the vehicle.
45. "Original Condition" means the condition as installed by the manufacturer but not necessarily to the original level of effectiveness.
46. "Program Area" is that geographic area defined in Section 42-4-304(20), C.R.S. as amended by Senate Bill 09-003.
47. "Registration Renewal Date" is the last day of the month in which the vehicle registration expires as defined in Section 42-3-103, C.R.S.
48. "Span Gases" are gases of known concentration used as references to adjust or verify the adjustment of an exhaust gas analyzer's span settings.
49. "State Emissions Technical Center Personnel" are those persons employed by or authorized by the Department of Health for technical or administrative support of the AIR Program.
50. "Tampering" is the removal or rendering inoperative of any device or element of design installed on or in a motor vehicle engine, drivetrain, fuel system or exhaust system used to control emissions.
51. "Test Analyzer Systems" (TAS) in the context of this regulation is that analytical instrumentation used to measure automotive emissions and prompt the operator through other elements of an emissions inspection.
52. "True Concentration" is the concentration of the gases of interest as measured by a standardized instrument which has been calibrated with 1% precision gases traceable to the National Institute for Standards and Technology.
53. "Zero Gas" is a gas, usually air or nitrogen, which is used as a reference for establishing or verifying the zero point of an exhaust gas analyzer.

**III. EXEMPTION FROM SECTION 42-4-314, C.R.S. FOR DEPARTMENT OF DEFENSE PERSONNEL PARTICIPATING IN THE PRIVATELY OWNED VEHICLE IMPORT CONTROL PROGRAM**

III.A. U.S. Department of Defense (DOD) personnel participating in the DOD POV (privately owned vehicle) Import Control Program operating a 1975 or subsequent model year automobile, are exempt from the prohibition of C.R.S., 42-4-314(2), C.R.S. insofar as it pertains to filler neck restrictors, catalytic converter systems, and, if applicable, exhaust gas oxygen (O<sub>2</sub>) sensor(s), if one of the following conditions are met:

III.A.1. The automobile will be driven to the port and surrendered for exportation under said program within ten (10) working days of disconnection, deactivation, or inoperability of the restrictor, catalytic converter systems, or exhaust gas oxygen (O<sub>2</sub>) sensor(s); or

III.A.2. The reconnection, reactivation, or reoperability of the restrictor, catalytic converter systems, and, if applicable, exhaust gas oxygen (O<sub>2</sub>) sensor(s), is made within ten (10) working days from the time the owner picked up the automobile at the port.

III.B. Persons disconnecting, deactivating, or rendering inoperable any filler neck restrictor, catalytic converter system, exhaust gas oxygen (O<sub>2</sub>) sensor(s) on 1975 or subsequent model year automobile of DOD personnel participating in the DOD POV Import Control Program which will be driven to the port and surrendered for exportation under said program within ten (10) working days are exempt from the prohibition of 42-4-314, C.R.S.

III.C. Unless otherwise exempt under this Section III of Part A, vehicles shall be required to be configured as a vehicle certified by the EPA for sale and use within the United States pursuant to 40 CFR, Part 86, Subpart A.

**IV. CLEAN SCREEN/REMOTE EMISSIONS SENSING**

IV.A. Geographic Area of Applicability

IV.A.1. (Reserved)

IV.A.2. The Division shall implement an expanded clean screen program in the enhanced program area.

IV.A.3. (Reserved)

IV.B. Vehicles Eligible to participate in the Clean Screen/Remote Emissions Sensing Program

IV.B.1. The clean screen program established in this Section IV. of Part A shall apply to eligible motor vehicles as defined in 42-4-310(5)(a), C.R.S., for which registration will expire within twelve months, a certificate of emissions control is a prerequisite to renewal and which are registered in a clean screen program county.

IV.B.2. The counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld are clean screen counties.

IV.C. REPEALED

IV.D. Schedule for collection of emissions inspection fees by county clerks and recorders.

The clerks and recorders for the counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer and Weld shall collect an emissions inspection fee in the amount specified pursuant to Section 42-3-304(19)(a)(I), C.R.S. at the time of registration of a motor vehicle that the Department of Revenue has determined to have been clean screened, unless a valid certification of emissions compliance has already been issued for the vehicle being registered indicating that the vehicle passed the applicable emissions test at an enhanced inspection center, motor vehicle dealer test facility or fleet inspection station.

**V. EXPANSION OF THE ENHANCED EMISSIONS PROGRAM TO THE NORTH FRONT RANGE AREA**

V.A. Program Commencement

Beginning November 1, 2010, unless the Division comes back to the Commission and the Commission agrees to a later date, motor vehicles registered in the North Front Range Area, and vehicles operating in the North Front Range Area that meet the requirements of Section 42-4-310(1)(c)(I), C.R.S. shall be subject to an Enhanced emissions inspection as defined in Section 42-4-304(8.5). Notwithstanding the above, the Estes Park Area, located west of Range Seventy-one (71) West, shall be excluded from the Enhanced Emissions Program. Such inspection shall be the same as the inspection required in the Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson county portions of the Program Area.

V.B. Requirement to Obtain Certification of Emission Control and Emissions Inspection Schedule

V.B.1. Except as otherwise provided in Title 42, Article 4, Part 3, C.R.S. and this Regulation Number 11, a motor vehicle that is subject to the North Front Range Area Inspection and Maintenance Program pursuant to Subsection V.A. above may not be registered or sold without a valid Certification of Emissions Control. In order to obtain a Certification of Emissions Control the vehicle must either pass the applicable emissions inspection or obtain a waiver from the Department of Revenue under this Regulation Number 11.

V.B.2. Subject to the phase-in provision in Subsection V.B.3. below, emissions inspections shall be conducted and Certification of Emissions Controls shall remain valid in accordance with the schedules set forth in Section 42-4-304(3), C.R.S., Section 42-4-310(1)(b)(II), C.R.S. and Part A, Section I.C. of this Regulation Number 11.

V.B.3. In order to better balance the number of inspections from year to year, odd number model year motor vehicles that require biennial inspections under Subsection V.B.2. above, shall be inspected commencing January 1, 2011. This phase-in shall not excuse a vehicle from an inspection in 2010 that is required due to the sale or transfer of the motor vehicle.

**PART B Standards and Procedures for the Approval, Operation, Gas Span Adjustment, Calibration and Certification of the Division Approved Test Analyzer Systems for Use in the Basic and Enhanced Areas and Test Analyzer Systems for Licensed Dealers in the Enhanced Area**

**I. APPROVAL OF THE COLORADO 94 AND COLORADO 97 TEST ANALYZER SYSTEMS**

- I.A. From January 1, 1995 and thereafter no emissions inspection required by the AIR Program in the enhanced program area shall be performed unless the instrument used for measuring exhaust gases from motor vehicles is identified as a Colorado AIR Program Colorado 94 exhaust gas analyzer. For any emissions inspection station licensed after May 1, 2010, a Colorado BAR 97 exhaust gas analyzer must be used. Sources of vendors for the approved analyzers may be obtained from the Program Administrator, Mobile Sources Section, Air Pollution Control Division, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver CO 80246-1530.
- I.B. As an element of accreditation, the Division will accept a Certification statement for the exhaust gas analytical and sampling system portion of the Colorado AIR Program Colorado 94 exhaust gas analyzer or a Colorado BAR 97 exhaust gas analyzer from the California Bureau of Automotive Repair (BAR) or a recognized laboratory. The Division or its designee will determine the manufacturers' compliance with the revisions and additions to the specifications necessary for use of the instrument within the AIR Program. Those testing procedures are to be included with the bid specifications.
- I.C. The following statement is a requirement of the AIR Program for approval of an exhaust gas analyzer and is included to make manufacturers and purchasers of exhaust gas analyzers aware of the warranty requirements of Section 207(b) of the federal Clean Air Act, as amended 1981.

207(b) Warranty Requirements:

Unless an exhaust gas analyzer has been certified by the manufacturer as having met the specifications of 40 CFR Part 85, Subpart W as published in Part IX of the May 22, 1980 Federal Register, an inspection performed using that analyzer may not qualify a 1982 or later model year vehicle for warranty repair coverage according to the provisions of the Emission Control System Performance Warranty (Section 207(b) of the federal Clean Air Act).

**II. APPLICATIONS FOR APPROVAL OF COLORADO 94 OR COLORADO BAR 97 TEST ANALYZER SYSTEMS EQUIPMENT MANUFACTURERS**

Those manufacturers wishing to participate in the open bid process shall make application with the Air Pollution Control Division, Mobile Sources Section, of the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, CO 80246-1530 on forms provided thereby. All manufacturers making application shall meet the requirements as specified by the Department of Administration and the Procurement Code, Articles 101-112 of Title 24, C.R.S.

A manufacturer requesting the approval of an instrument for the measurement of exhaust gases for use in the AIR Program station shall make application therefore with the Air Pollution Control Division, 4300 Cherry Creek Drive South, Denver, CO 80246-1530 on forms provided thereby. All manufacturers making application shall meet the technical specifications and administrative requirements specified by the Air Pollution Control Division.

### III. PERFORMANCE AND DESIGN SPECIFICATIONS FOR THE COLORADO 94 AND COLORADO BAR 97 EXHAUST GAS ANALYZERS

Pursuant to Section 42-4-306(3)(a), C.R.S the specifications for the exhaust gas analyzer required for inspections conducted July 1, 1987 and thereafter are attached to this regulation as Appendix A. These specifications include but are not limited to the provisions of California BAR 90, data collection, service/maintenance, requirements for replacement or loan instruments and warranty for the period of the agreement. These specifications are described in a separate document entitled "Colorado Department of Public Health and Environment Specifications for Colorado 94 Analyzer - Hardware Specifications" March 17, 1994 as adopted by the Commission. This information is available from the Air Pollution Control Division, Mobile Sources Section, 4300 Cherry Creek Drive South, Denver, CO 80246-1530. Those manufacturers making application should refer to Section II of this Part B.

The Division in its discretion may accept substitute specifications for Test Analyzer Systems provisions that such substitute specifications are equivalent to those contained in Appendix A.

### IV. SPAN GASES FOR USE WITH COLORADO 94 AND COLORADO BAR 97 TEST ANALYZER SYSTEMS

#### IV.A. General

The instrument manufacturer and his designated marketing vendors shall, supply span gases approved by the Division to any ultimate purchaser of his unit. The instrument manufacturer shall also provide the analyzer purchaser with a comprehensive, up-to-date list (with addresses and phone numbers) of gas blenders approved by the Division. Each new or used instrument sold by the instrument manufacturer or marketing vendor shall have full span gas containers installed and operational at time of delivery.

#### IV.B. Span Gas Blends

The span gas concentrations supplied to the AIR Program stations shall conform to the specifications contained in Section VI. of this Part B.

Only gas blends supplied by Division approved blenders selected pursuant to Section 42-4-306(3)(a) and labeled in conformance with samples in Attachment VI of Appendix A, shall be offered for sale in Colorado. Suppliers of span and calibration gases to the Colorado AIR Program must be approved by the Division's Colorado AIR Program Standards Lab (CAPSL), located at 11609 Teller Street, Broomfield, CO 80020.

Pursuant to Section 42-4-306(3)(a), the Division shall select blenders authorized to provide span gases that comply with the standards and specifications set out in Appendix B. The requirement to use gases procured pursuant to the standards and specification in Appendix B shall not be federally enforceable, and shall not be part of the State Implementation Plan.

#### IV.C. Optical Correction Factor [also referred to as "C" factor, propane to hexane conversion factor" (P.E.F.)].

Each instrument shall be permanently labeled with its correction factor visible from the outside of its cabinet. The correction factor shall be carried to at least two decimal places e.g., (0.52). Factor confirmation shall be made on each assembled analyzer by measuring both N-hexane and propane on assembly line quality checks. P.E.F. limitations are described in the specifications document attached to this regulation as Appendix A.

**IV.D. Running Changes and Equipment Updates**

The Commission must approve any changes to design or performance characteristics of component specifications that may affect instrument performance. It will be the instrument manufacturer's responsibility to confirm that such changes have no detrimental effect on analyzer performance. All Colorado 94 exhaust gas analyzers will be updated as needed and as specified in the specifications document.

**V. DOCUMENTATION, LOGISTICS, AND WARRANTY REQUIREMENTS**

**V.A. Instruction Manual**

The instruction manual accompanying each analyzer shall contain at least the following:

- V.A.1. Complete technical description.
- V.A.2. If available, functional schematics (mechanical and electrical).
- V.A.3. Accessories and options (included and/or available).
- V.A.4. Model number, identification markings and location.
- V.A.5. Operating maintenance to include periodic recommendations, i.e., daily, weekly, monthly, and procedure for maintaining sample system integrity (leaks, hang-up, calibration, filters, etc.).
- V.A.6. Required service schedule identifying the items needing maintenance and the procedures to be followed by the purchaser. The services to be performed only by the manufacturer shall be clearly identified.
- V.A.7. Warranty provisions to include listing of warranty repair stations by name, address, and phone number.
- V.A.8. The name, address, and phone number of the permanent Colorado representative offering training, service, warranties, etc.
- V.A.9. Information and terms of manufacturers service contract clearly stating the coverage including but not limited to each party's obligation, period of coverage, cost, service response times, availability of loaner units. Manufacturer or designee performed service/maintenance provisions and costs shall be so stated for the duration of the program and annually up-dateable costs.

**VI. CALIBRATION OF COLORADO 94 AND COLORADO BAR 97 TEST ANALYZER SYSTEMS**

The Division shall use and require for use in the calibration and spanning of exhaust gas analyzers span gases and containers supplied by authorized blenders meeting the following parameters, blends, and specifications:

**VI.A. Standardizing Instruments**

The calibration gases for standardizing instruments shall conform to the provisions outlined in 40 CFR, Section 86.114 (July 1, 1992) (EPA) for automotive exhaust emissions testing. Those gases shall be of "precision" quality, certified to be within  $\pm 1\%$  of the labeled concentration, and traceable to the National Institute for Standards and Technology (NIST).

**VI.B. AIR Program Station Instruments**

The span gases supplied to AIR Program stations shall conform to the following:

VI.B.1. Tri-blends of HC, CO, CO<sub>2</sub> in a carrier gas of nitrogen (N<sub>2</sub>). The hydrocarbon (HC) gas will be propane.

VI.B.2. The concentrations) of the span gas blends (two) shall be within limits established by the Division to provide for uniform exhaust gas analyzer spanning. The Division may establish such limits to ensure gasses are measurable based upon the ranges or scales of the equipment.

VI.B.3. The accuracy of the AIR Program station span gas blend shall be certified by the blender to be  $\pm 2\%$  of labeled concentration and traceable to the NIST.

VI.C. AIR Program stations will calibrate the exhaust gas instrument once every 72 hours as determined by the instrument or as needed in order to maintain accuracy.

VI.D. All AIR Program exhaust gas analyzers will be calibrated only with span gases bearing a Colorado approval label.

VI.E. Additional specifications related to calibration requirements are described in the specifications document attached to this document as Appendix A.

**VII. APPROVAL OF THE COLORADO AUTOMOBILE DEALERS TRANSIENT MODE TEST ANALYZER SYSTEM**

Any applicable emissions inspection required by the AIR Program performed by a licensed Motor Vehicle Dealers Test Facility pursuant to Section 42-4-304 (19), C.R.S., in the enhanced program area, shall be performed utilizing a Colorado Automobile Dealer Transient Mode (IG 240) test analyzer system approved by the state open bid process. Sources of vendors for the approved test system may be obtained from the Program Administrator, Mobile Sources Section, Air Pollution Control Division, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver Colorado 80246-1530.

This Section VII, and the associated design and performance specifications set out in Appendix A, Attachment III, shall not be federally enforceable and shall not be part of the State Implementation Plan.

**VIII. APPLICATIONS FOR APPROVAL OF THE COLORADO AUTOMOBILE DEALERS TRANSIENT MODE TEST ANALYZER SYSTEM**

Those manufacturers wishing to participate in the open bid process shall make application with the Air Pollution Control Division, Mobile Sources Section, of the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver Colorado 80246-1530 on forms provided thereby. All manufactures making application shall meet the requirements as specified by the Department of Administration and Procurement Code, Articles 101-112 of Title 24, C.R.S.

The design and performance specifications for the Colorado Automobile Dealers Transient Mode Test Analyzer System Technical and Hardware Specification Document of January 27, 1997 attached as Appendix A, Attachment III. Pursuant to 42-4-306(3)(a)(I)(C), the Division shall let bids for the procurement of instruments that comply with such specifications. In addition to the specifications set out in Appendix A, attachment III, qualifying bids shall:

Include a bid for the procurement of any working/support and span gases necessary for the operation of such Colorado Automobile Dealers Transient Mode Test Analyzer System, unless all such gases are already subject to a contract issued pursuant to 42-4-306(3)(a)(I)(C). Any bid for the procurement of such gases shall comply with the relevant requirements of Part B, IV of the Regulation Number 11 and relevant requirements of Standards and Specifications for Calibration and Span Gas Suppliers, attached as Appendix B, including the "Gas Requirements for the Basic and Enhanced Inspection Test Programs, 1997" as set out in Section 5 of Appendix B.

Include a comprehensive and up-to-date list of working/support and span gas suppliers subject to a contract issued pursuant to 42-4-306(3)(a)(I)(C). A copy of such list shall be provided to each purchaser.

Provide for the Division-approved calibration gases for calibration of the Colorado Automobile Dealers Transient Mode Test Analyzer System.

A service and maintenance plan, including a description of services, service response times, periodic maintenance schedules and annual service agreement costs inclusive of all services necessary to comply with the Colorado Automobile Dealers Transient Mode Test Analyzer System Technical and Hardware Specification Document of January 27, 1997. Service agreement costs are to be listed annually and shall be for the remaining period of the AIR Program.

**IX. APPROVAL OF THE COLORADO ON-BOARD DIAGNOSTIC (OBD) TEST ANALYZER SYSTEM**

Any applicable on-board diagnostic emissions inspection required by the Air Program performed shall be performed utilizing an on-board diagnostic (OBD) test analyzer system approved by the state. Sources of vendors for the approved Colorado On-Board Diagnostic Test Analyzer System may be obtained from the Program Administrator, Mobile Sources Section, Air Pollution Control Division, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530.

**X. THE COLORADO ON-BOARD DIAGNOSTIC (OBD) TEST ANALYZER SYSTEM**

The design and performance specifications for the Colorado On-Board Diagnostic Test Analyzer System are outlined in the Society of Automotive Engineers J1979 Standard.

In addition to the specifications set out in J1979 Standard, additions and/or modifications to the operational, data collection, data recording and quality assurance auditing functions shall be outlined in a Colorado On-Board Diagnostic (OBD) Test Analyzer System Requirements Specification, to be submitted by the Division for Air Quality Control Commission approval no later than December 31, 2013.

**XI. REQUESTS FOR APPROVAL OF CLEAN SCREEN TEST ANALYZER SYSTEMS**

**XI.A. REPEALED**

**XI.B.** Calibration gas blends intended for Clean Screen Test Analyzer Systems shall be verified and approved subject to the requirements of Standards and Specifications for Calibration and Span Gas Suppliers including Gas Requirements for the Basic and Enhanced Inspection Test Programs, 1997, (Appendix B).

Concentrations of calibration gases noted above are to be determined pending system configuration, operating ranges and expected emissions readings.

State audit blends for Clean Screen Test Analyzer Systems shall be of varying concentrations of and shall conform to the above gas blending standards.



**PART C Inspection Procedures and Requirements for Exhaust Emissions, Fuel Evaporation Control, Visible Smoke Emissions, Emissions Control Systems, On-Board Diagnostics (OBD); and Practices to Ensure Proper Emissions Related Adjustments and Repairs**

**I. PRE-INSPECTION REQUIREMENTS**

I.A. A licensed emissions mechanic, licensed emissions inspector or authorized emissions inspector must perform all aspects of the inspection. It is the responsibility of emissions mechanics and emissions inspectors to notify the Department of Revenue of their current place of employment and any subsequent transfer, and place of residence. The Contractor shall be responsible for its personnel and notifying the Department of all personnel assignments and adjustments in those assignments.

The emissions mechanic not employed by an "Inspection-Only Station" shall notify the customer prior to initiating an emissions inspection if he/she is unable to perform the required adjustments and/or repairs for that particular vehicle should that vehicle fail the inspection. Otherwise the emissions mechanic shall not conduct an inspection on a motor vehicle unless that emissions mechanic so notifies the customer or is able to perform the adjustment and/or repair procedures for that particular vehicle as prescribed by the manufacturer and specified by Section IV. of this Part C.

I.B. Inspections may only be performed on the premises of the licensed address as prescribed in Part D, Section I. A. 2. The entire inspection shall take place within the reach of the analyzer hose.

I.C. In consideration of maintaining inspection integrity:

I.C.1. The temperature of the inspection area when utilizing one or more test analyzer systems as specified in Part B of this regulation shall be between 41°F and 110°F (5°C and 43°C) during the inspection. Inspection area temperatures must be accurately recorded, and monitored in a well-ventilated location away from vehicle engine and exhaust heat sources and out of direct sunlight. The inspection area includes the vehicle being inspected.

I.C.2. The test analyzer system and other inspection equipment shall be kept in an area within the facility that affords adequate protection from the weather.

I.C.3. A permanent location that meets all applicable requirements of this rule to provide for the inspection of vehicles is required. Electrical supply must be public utility designated for that area and meeting the analyzer manufacturer's requirements for to the test analyzer system is to be dedicated to this purpose. Full-time connectivity to a dedicated data transmission media meeting the analyzer manufacturer's requirements for the test analyzer system.

I.D. Upon a physical verification of the vehicle identification number (VIN) and license plate number, the emissions mechanic or emissions inspector will enter this information into the program database in order to match this information with the state registration record. In the case of a match, the emissions mechanic or emissions inspector shall proceed. If no match is found, a new inspection record will be created. All non-Colorado registered vehicles and first time registrations with the State of Colorado will require the creation of a new inspection record by the emissions mechanic or emissions inspector.

- I.E. The emissions mechanic or emissions inspector shall ascertain from the inspection record data base if an initial inspection or an after-repairs inspection is to be conducted. If an after-repairs inspection is to be conducted, previous inspection data is required for comparison. Specific emissions related repair information as specified in Section VII (B) of this Part C shall be entered to the database. Inspections conducted within 60 days of the initial inspection date are to be considered an after-repairs inspection. Inspections conducted greater than 60 days from the initial inspection date are to be considered initial inspections. The emissions mechanic or emissions inspector shall accurately enter vehicle, and last inspection information as required for vehicle emissions inspection records.
- I.F. The emissions mechanic or emissions inspector shall perform a cursory safety assessment of the motor vehicle prior to inspection. If in the opinion of the emissions mechanic or emissions inspector the vehicle is unsafe to inspect due to engine/drive-line metallic noises, or leaking fluids, the request for inspection may be refused.

## **II. EXHAUST EMISSIONS INSPECTION PROCEDURES**

- II.A. All heavy-duty vehicles and all 1981 and older model year vehicles to be inspected at licensed inspection-only facilities or licensed enhanced inspection centers in the enhanced program area shall be administered an EPA approved idle short test as specified in 40 CFR, Part 51, Subpart S, Appendix B.
- II.A.1. The emissions mechanic or emissions inspector will use a certified TAS to select the appropriate idle short test cycle based upon the make, model year engine family and vehicle classification. These idle short tests include, but may not be limited to, a standard single speed idle test; the pre-idle 30-second pre-conditioning idle test with the high speed ( $2500 \pm 300$  RPM) pre-conditioning cycle before the idle mode; a standard two speed (3 - mode) idle test with the raised idle segment at  $2500 \pm 300$  RPM; second chance raised idle pre-conditioning for 30 seconds just prior to the idle mode after an initial failure, and second chance restart in which the ignition is turned off for ten (10) seconds and then restarted to complete the emissions inspection procedure. All sampling modes shall (each) be thirty seconds in duration and raised engine speed modes be it for pre-conditioning or sampling, shall be  $2500 \text{ RPM} \pm 300 \text{ RPM}$ . As a pass/fail determination, the vehicle's emissions levels must be the same as or less than applicable limits at the designated engine speed(s) in order to pass.
- II.A.2. The entire vehicle shall be in normal operating condition and at normal operating temperature, which shall be determined by carefully feeling the top radiator hose while the engine is not operating, by checking the temperature gauge, and/or operating the vehicle prior to performing the idle emissions inspection. Vehicles are not to be idled for extended periods of time but rather inspected in an expeditious manner as soon as normal operating temperature is achieved. The vehicle shall be inspected in an as-received condition.
- II.A.3. The inspection shall be performed with the transmission in park or neutral and with all accessories off.
- II.A.4. The analyzer probe shall be inserted at least twelve (12) inches or as recommended by the analyzer manufacturer for a quality sample whichever is greater.
- II.A.5. For all vehicles equipped with a multiple exhaust system, the analyzer's dual exhaust procedure must be used.
- II.A.6. If a baffle or screen prevents probe insertion to an adequate depth, a suitable probe adapter or snug fitting hose that effectively lengthens the exhaust pipe may be used.

- II.A.7. The appropriate emissions limits specified in Part F of this regulation would be utilized by the certified test analyzer system. In selecting appropriate emissions limits, for motor vehicles of model years 1978 and earlier having a gross vehicle weight (GVW) rating of greater than 6000 lbs., or of model years 1979 and newer having a gross vehicle weight rating of greater than 8500 lbs., the emissions mechanic or emissions inspector shall identify that particular vehicle's GVW rating by examining the vehicle information (metal) plate or sticker. These motor vehicles will be subject to the applicable emissions limits as listed in Part F of this regulation. If the vehicle information plate or sticker is missing, illegible or the GVW rating information is not otherwise available, the emissions mechanic or emissions inspector shall examine the engine exhaust emissions control information label which is permanently affixed to the engine and determine heavy-duty engine/vehicle federal certification status. Vehicle engines not labeled as having complied with applicable U.S. EPA heavy-duty regulations by the manufacturer are assumed to be light-duty vehicles and subject to the emissions limits listed in Part F of this regulation. Emissions limits for vehicles in which the engine has been changed shall be based upon whichever is newest, the vehicle or the replacement engine, as specified on a vehicle evaluation form (DR2365) or bar coded label generated by emissions technical center staff or designee.
- II.A.8. In the event the tachometer over-ride mode must be utilized to inspect a vehicle, an accurate auxiliary tachometer must be used to verify engine speeds mandated in Part C, Section II.A.1.
- II.A.9. The vehicle will be evaluated for the presence of visible smoke emissions. The evaluation is to be performed during all (engine) operating conditions of the inspection procedures prescribed in Part C, Sections II.A.1 through II.A.11.
- II.A.10. A Certification of Emissions Compliance shall be issued if the vehicle passes the emissions control systems inspection (for 1975 and newer model year vehicles only), the exhaust and evaporative emissions inspection, and there is no evidence of visible smoke emissions.
- II.A.11. If the vehicle fails the initial emissions inspection the owner is to have appropriate emissions related repairs or adjustments made and may return the vehicle to an AIR Program station, facility or center, as appropriate, for reinspection. Within ten (10) calendar days of the initial test, one free reinspection shall be provided to the motorist if the vehicle is returned to the same station or facility at which the initial test was performed. A motorist shall be entitled to one free after-repairs test at any contractor operated center within ten (10) calendar days of the initial test performed at a contractor operated center. If during repairs, it is determined the necessary parts are not available, the motorist may be issued a temporary Certificate of Emissions Control by Department of Revenue personnel. Proof of part(s) non-availability as described in Part C, Section III.D. of this part is required. Motorists pursuing a temporary Certificate of Emissions Control must facilitate final vehicle inspection and compliance with adopted regulation.
- II.B. All model year 1982 and newer light-duty vehicles, except vehicles required to be OBD tested pursuant to Part C, Section II.C. to be inspected at licensed enhanced inspection centers within the enhanced program area shall be administered an EPA approved transient loaded mode inspection procedure as specified in 40 CFR, Part 51 Subpart S Federal Register as amended to incorporate OBD testing August 6, 1996.
- II.B.1. Vehicles shall be inspected in an as-received condition.
- II.B.2. The inspection shall be performed with all accessories off.

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- II.B.3. The appropriate emissions limits as specified in Part F of this regulation shall be selected by the TAS based upon the model year and vehicle classification.
- II.B.4. Light-duty vehicles of model year 1995 and older found to be safe but unable to be dynamometer tested shall be administered an idle short test as specified in 40 CFR, Part 51, Subpart S, Appendix B. OBD equipped light-duty vehicles that are unable to be tested on the dynamometer shall be tested using the OBD test procedures in Part C, Section II.C. to include meeting passing criteria in Part F, Section VII. Eligibility for an alternative test procedure shall be determined by the Division. The current eligibility list for an alternative test to the I/M 240 is maintained in the Air Pollution Control Division's Emissions Technical Center Procedures Manual:
- II.B.5. Heavy-duty vehicles to be inspected at licensed enhanced inspection centers within the enhanced program area shall be administered an appropriate EPA approved idle short test as specified in Section II (A) of this Part C.
- II.B.6. The inspector may refuse to conduct the transient driving cycle dynamometer inspection procedure if the tires on the drive wheels are worn such that the cords are visible or sidewalls are peeling or blistered.
- II.C. Effective January 1, 2015, light-duty vehicles, to include light-duty trucks in their eighth through eleventh model year, and all light-duty vehicles, to include light-duty trucks of model year 1996 and newer that are unable to be tested on an IM 240 test, are to be inspected at licensed enhanced inspection centers and shall be administered an EPA approved on-board diagnostic test as specified in 40 CFR, 85.2222. Effective July 1, 2015, 1996 and newer light-duty vehicles, to include light duty trucks, that are owned by a fleet that operates a Fleet Inspection Station shall be administered an EPA approved on-board diagnostic test as specified in 40 CFR. 85.2222.
- II.C.1. Vehicles shall be inspected in an as-received condition.
- II.C.2. The on-board diagnostic inspection shall be conducted with the key-on/engine running.
- II.C.3. The on-board diagnostic test analyzer system shall determine what monitors are supported by the diagnostic system and the readiness status for applicable monitors.
- II.C.3.a. A readiness evaluation will ensure that:
- The oxygen sensor and/or heated oxygen sensor monitor(s) shall be ready if supported;
  - The catalyst monitor shall be ready if supported, and;
  - A 2001 or newer model year shall have no more than one (1) supported readiness monitor not ready; or
  - A 2000 or older model year shall have no more than two (2) supported readiness monitors not ready.
- If the above readiness criteria are not met, and the malfunction indicator light (MIL) is commanded off, the vehicle shall be subjected to an IM 240 emissions inspection immediately.
- II.C.3.b. If the vehicle's on-board diagnostics are unable to communicate electronically with the Colorado OBD Test Analyzer System, the vehicle will be subjected to an IM 240 emissions inspection immediately.

- II.C.3.c. The readiness requirement, outlined in this Part C, Section II.C.3.a. may be waived to accommodate for specific vehicles with known readiness design problems, in accordance with applicable technical service bulletins, EPA guidance, or division technical findings, as approved by the Division.
- II.C.4. The OBD test analyzer system shall evaluate the malfunction indicator light status and record status information in the vehicle test record.
- II.C.5. All diagnostic trouble codes resulting in malfunction indicator light commanded-on status shall be recorded in the vehicle test record.
- II.C.6. If the vehicle meets the passing criteria for the OBD inspection as listed in Part F, Section VII. Of this regulation, the vehicle passes the on-board diagnostic inspection.
- II.C.7. Vehicles in an OBD “not ready” status, or vehicles unable to communicate with the OBD Test Analyzer System that default to an IM 240 test as described in Part C, Section II.B. shall be subject to pass/fail for the applicable IM 240 pass/fail standards in Part F, Section III. of this regulation.
- II.C.8. If the malfunction indicator light is not commanded on and the vehicle passed the mil visual inspection, as outlined in this Part C, Section III.B., the vehicle shall pass the on-board diagnostic portion of the emissions inspection even if diagnostic trouble codes are present.
- II.C.9. The division may require no more than five percent, at random, of all OBD tested vehicles to undergo an IM 240 test at the time of the OBD testing. The IM 240 test shall be the pass/fail determinant for these vehicles.
- II.C.10. If the vehicle’s OBD responds that the catalyst readiness monitor is not supported or that all readiness monitors are supported; or if any other OBD tampering indicators are present, as determined by the Division and listed in the Division’s Emissions Technical Center Procedures Manual, then the OBD test will be FAILED and the vehicle owner will be provided with a Vehicle Inspection Report.

### **III. EMISSIONS CONTROL SYSTEMS INSPECTION PROCEDURES**

Motor vehicles shall be configured as required for sale or use within the United States pursuant to 40 CFR, Part 86, Subpart A; unless specific documentation in the form of a state issued vehicle evaluation form (DR2365) or an EPA (EPA form 3520) or DOT exemption is submitted. To ensure compliance with this requirement, for all inspections performed through December 31, 2014, the emissions mechanic or emissions inspector shall inspect all model year 1975 through 1995 and newer model year vehicles and assess the integrity of the emissions control system in accordance with the procedures set forth in this Section III. Effective January 1, 2015, the emissions mechanic or emissions inspector shall inspect all model year 1975 through 1995 model year vehicles and assess the integrity of the emissions control system in accordance with the procedures set forth in this Section III.

- III.A. All model year 1975 through 1995 model year vehicles shall be visually inspected for the presence and operability of the air system, catalytic converter system(s) and oxygen (O<sub>2</sub>) systems. If these parts or systems are not operating as designed, inoperable or have been removed or otherwise tampered with, the vehicle will not qualify for a Certification of Emissions Control. In assessing whether the proper emissions control systems are present, the emissions mechanic or emissions inspector shall examine the emissions control information decal within the engine compartment to determine the appropriate emissions control systems for that particular vehicle. If an emissions control information decal is missing, incomplete, illegible or is not appropriate for the specific vehicle, the emissions mechanic or inspector may contact a state emissions technical center for guidance, use other reference materials or refer the vehicle to a state emissions technical center for further evaluation.

For the period December 1, 2012 through December 31, 2014, in place of the visual inspection, the emissions control systems, model year 1996 and newer vehicles may be inspected using the vehicle's on-board diagnostic (OBD) systems. To utilize this alternative inspection procedure, the emissions inspector must interrogate the vehicle's OBD system using Division approved procedures and equipment. If the emissions inspector is unable to interrogate the OBD system, or if the interrogation reveals either that the malfunction indicator light (MIL) is commanded on or that any OBD monitors are not set, the vehicle shall be visually inspected in accordance with the procedures set forth in Subsection III.A.

- III.B. An assessment of the emissions control system malfunction/service-maintenance indicator(s) performance shall be conducted by the emissions mechanic or emissions inspector on those vehicles so equipped.

For those vehicles equipped with "check engine" dash indicator lights or similar emissions control systems malfunction or service-maintenance indicator(s), the following procedure if applicable will be performed to assess the integrity of the system:

- Ignition Off, Engine Off = indicator(s) off
- Ignition On, Engine Off = indicator(s) on or displayed
- Ignition On, Engine Running = indicator(s) off

The failure of the system to respond as described above shall be reported to the motorist, but shall not be used to fail the vehicle.

- III.C. The repair/replacement of catalytic converters must incorporate the same type, style and location on the exhaust system relative to engine as originally designed by the vehicle manufacturer. If a new original equipment manufacturer (OEM) part is not used, only an EPA "accepted" after-market component appropriate to that application may be used. Verification of the correct application and certification status must be performed at the time of reinspection. The submittal and review of repair receipts as specified in Subsection VII.B of this section is required in order to substantiate proper repairs of applicable emissions control system.

- III.D. If the necessary part(s) will not be available prior to the month of expiration of the present vehicle registration, and the owner obtains a signed form or statement to that effect from a manufacturer's dealer for that make vehicle, or from an automotive parts supplier which in the normal course of business supplies part(s) for that vehicle, Department of Revenue personnel after verification may issue a temporary Certification of Emissions Control. The form or statement provided must specifically identify by part numbers and description, the necessary part(s). The owner then has until the expiration of the temporary certification to complete the necessary repairs or replacement.

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**IV. ON-BOARD DIAGNOSTIC INSPECTION PROCEDURES**

Effective January 1, 2015, light-duty vehicles to include light-duty trucks of model year 1996 through those vehicles that have reached their eleventh model year old equipped with California on-board diagnostic (OBDII) or EPA on-board diagnostic systems (EPA, OBD) shall be evaluated to determine operability and integrity of the applicable system(s). The OBD system will be connected to the TAS and interrogated. Fault codes and diagnostics shall be reported to the motorist with other emissions inspection information but with the exception of dynamometer incompatible vehicles as noted in Part C, Section II.B.4. shall not be used to fail the vehicle.

**V. EVAPORATIVE FUEL CONTROL INSPECTION PROCEDURES**

Model year 1975 and newer vehicles shall be inspected for the presence and integrity of the gasoline cap(s). The gasoline cap(s) of such vehicles inspected in the nine county Front Range enhanced program area as defined in Section 42-4-304(9)(a)., shall also be inspected for sealing integrity as specified in Part F, Section IV of this regulation.

Vehicles with a missing gasoline cap(s) shall not qualify for issuance of a Certificate of Emissions Control. Motorists whose vehicles have gasoline cap(s) demonstrating excessive leakage shall be notified of the deficiency, repair/replacement and a full retest shall be mandatory.

**VI. FREE REINSPECTION**

Vehicles which fail any or all elements of an emissions inspection are eligible for one free reinspection within ten (10) calendar days if presented to the same station or facility as initially inspected and failed. In the case of the contractor operated enhanced inspection center network, the ten (10) day free reinspection shall be honored at any enhanced inspection center.

**VII. REPAIR INFORMATION**

Any after-repairs reinspection of a vehicle initially failed calls for the submittal of a completed official AIR Program emissions repair form.

**VIII. CERTIFICATION OF EMISSIONS CONTROL**

In order to obtain a Certificate of Emissions Control, the vehicle must meet the following conditions:

VIII.A. Certification of Emissions Compliance may be issued if:

VIII.A.1. The vehicle emissions levels are the same as or less than the applicable emissions limits;  
or

VIII.A.2. For vehicles in model years seven through ten subject to an on-board diagnostic inspection, the OBD system meets the passing criteria established in Part F, Section VII. of this regulation, and

VIII.A.3. There are no smoke emissions visible from the vehicle engine crankcase and/or tailpipe,  
and

VIII.A.4. For 1975 through 1995 model years, the vehicle passes the emissions control systems inspection, and

VIII.A.5. Under enhanced inspection requirements, the vehicle owner/operator of a 1995 or newer model year vehicle shall demonstrate compliance with any federal emissions recall-pursuant to 40 CFR Part 85.1902 (d) or remedial repair plan pursuant to Section 207 (C) of the federal Clean Air Act for which owner notification occurs after 01 January 1995.

VIII.B. A Certification of Emissions Waiver may be issued if:

VIII.B.1. The vehicle passes the emissions control systems inspection (1975 and newer model year vehicles only) required by Part C, Section III. A, B and C. and there are no smoke emissions visible from the vehicle's exhaust, and the vehicle is not tampered, as determined by the Division's Emissions Technical Center staff or their direct designee.

VIII.B.2. Enhanced Program

For model year 1968 and newer, at least seven hundred fifteen dollars (\$715) or as adjusted annually by the Consumers Price Index for Urban Consumers (CPIU) of the previous year as compared to 2003 has been spent on emissions related adjustments and repairs as specified in Part C, Section IX, provided that proof of repair costs for that specific vehicle has been provided to Department of Revenue personnel or their designee in the form of an itemized receipt for parts purchased if repaired by the owner, or , invoice, work order, manifest, or statement in which emissions related parts and/or repairs are specifically identified as specified in 42-9-108 C.R.S.

For model year 1967 and earlier at least seventy-five dollars (\$75) has been spent on emissions related adjustments and repairs as specified in Part C, Section IX provided that proof of repair costs for that specific vehicle has been provided to and verified by the emissions inspector in the form of an itemized receipt for parts purchased if repaired by the owner, or invoice, work order, manifest, or statement in which emissions related parts and/or repairs, are specifically identified as specified in 42-9-108 C.R.S .

The motorist is to be referred to the Department of Revenue or its designee pursuant to Sections IX.C. of this Part C.

VIII.B.3. Enhanced Program

For model year 1968 and newer, at least seven hundred fifteen dollars (\$715) or as adjusted annually by the Consumers Price Index for Urban Consumers (CPIU) of the previous year as compared to 2003 has been spent on emissions related adjustments and repairs as specified in Part C, Sections IX and X, provided that proof of repair costs for that specific vehicle has been provided to Department of Revenue personnel or their designee in the form of an itemized bill, invoice, work order, manifest, or statement in which emissions related parts and/or repairs, are specifically identified. The Division shall adjust the amount that must be expended by the motorist in order to qualify for a Certificate of Emissions Waiver, which amount shall be established for each calendar year through 2004 by the Division pursuant to the criteria specified in Section 42-4-310(1)(d)(VI),C.R.S.

For model year 1967 and earlier at least seventy-five dollars (\$75) has been spent on emissions related adjustments and repairs as specified in Part C, Sections IX and X provided that proof of repair costs for that specific vehicle has been provided to and verified by the emissions inspector in the form of an itemized bill, invoice, work order, manifest, or statement in which emissions related parts and/or repairs, are specifically identified.

If no emissions reduction is achieved, the motorist is to be referred to the Department of Revenue or its designee pursuant to Sections IX. G. and X. of this Part C.



- VIII.C. If in the opinion of the Division's Emissions Technical Center personnel or its designee that no additional emissions related repairs would be effective or needed, yet the vehicle's Malfunction Indicator Light remains illuminated, and the repair expenditure limits have not been met, the vehicle will be given the alternate IM240 inspection in lieu of the OBD inspection. If the vehicle is unable to be inspected using the IM240 inspection procedure or continues to exceed one or more emissions limits, a waiver which shall not exceed one inspection cycle in duration shall be issued upon physical verification of systems operation and vehicle performance by emissions technical center personnel.
- VIII.D. For vehicles registered and operated in the enhanced area, upon verification by a Department of Revenue Motor Vehicle Emissions Compliance Inspector, a waiver not to exceed one inspection cycle may be granted to obtain necessary emissions related repairs on a vehicle in the case of economic hardship when the Certificate of Emissions Waiver requirements of this section have not been met. It must be verified that the vehicle owner in question is participating in an established and recognized public assistance program. The provisions of this Paragraph D shall only apply to a vehicle once. To obtain a hardship waiver, the registered owner of the vehicle in question shall satisfy the following requirements:
- VIII.D.1. The vehicle must fail for carbon monoxide, hydrocarbons, and/or oxides of nitrogen or OBD.
- VIII.D.2. The hardship waiver will not be approved for vehicles that are tampered, missing equipment, fail the evaporative inspection, or fail for visible smoke.
- VIII.D.3. The vehicle owner must be participating in an established and recognized public assistance program.
- VIII.D.4. The vehicle must be the sole means of transportation for the vehicle owner, and the owner must not have more than two vehicles registered in his/her name.
- VIII.D.5. Such extension may be granted only once per vehicle.
- VIII.E. A Certificate of Emissions Waiver will not be issued to a vehicle that is eligible for the Emissions Control Systems Performance Warranty, 207(b) of the federal Clean Air Act. Per the provisions of the 207(b) Performance Warranty, the repair costs necessary for compliance with AIR Program emissions limits specified in Part F of this regulation will be borne by the vehicle manufacturer or his authorized dealer representative.
- IX. (Reserved)
- X. **EMISSIONS RELATED REPAIRS**
- X.A. Emissions related repairs include only those adjustments to and maintenance and repair of the motor vehicle that are directly related to the reduction of exhaust emissions and/or undertaking repairs that extinguish the OBD Malfunction Indicator Light (MIL) necessary to comply with the applicable emissions limits and procedures. The expenditure for emissions related repairs does not include the inspection fee as specified in Section 42-4-311, C.R.S. or expenses associated with the adjustments to and maintenance, replacement, and repair of air pollution control equipment on the vehicle if the need for such adjustment, maintenance, or repair pursuant to Part C, Section III is due to disconnection of, tampering with, or abuse to such air pollution control equipment. Air pollution control equipment is any part, assembly or system originally installed by the manufacturer for the sole or primary purpose of reducing emissions.

X.B. Repairs and maintenance to the following systems shall qualify as emissions related repairs insofar as the purpose is to reduce exhaust emissions or extinguish the OBD MIL:

- Air Intake Systems
- Ignition Systems
- Fuel Control Systems
- Emissions Control Systems
- Basic Engine Systems
- Microprocessor (O<sub>2</sub>) based air/fuel control systems.

X.C. If the vehicle continues to exceed applicable emissions limit, or continues to fail OBD, the vehicle must undergo specific emissions related repairs. Adjustments and repairs must be accomplished to the point of compliance, or the applicable repair cost ceiling has been met. If the applicable emissions related adjustment and repair requirements have been met, the vehicle owner may be referred to a Department of Revenue Motor Vehicle Emissions Compliance Inspector to receive a waiver. Repairs must have been reasonably calculated to achieve a reduction in emissions of those components of the inspection that the vehicle failed, pursuant to manufacturer's specifications as required by 42-4-306 (7)(a)(II)(A) and 42-9-111 C.R.S.

In order to be creditable to the enhanced repair cost limits, adjustments and repairs must have been performed by a repair facility/technician registered with the Division pursuant to Part D of this regulation.

Only the appropriate emissions failure related parts costs should apply to applicable waiver limits for repairs not performed at a licensed emissions inspection station or registered repair facility/technician.

## **XI. ENGINE CHANGES**

XI.A. For those vehicles in which the original engine has been replaced, the emissions limits and applicable emissions control equipment for the year and model of the vehicle body/chassis, as per registration/title or replacement engine, whichever is newest, shall apply. For those diesel powered vehicles which have been converted to operate on fuel(s) other than diesel; the emissions limits and applicable emissions control equipment for the year, make and model of the gasoline powered engine equivalent as originally manufactured, for the vehicle body/chassis, per the registration or replacement engine, whichever is newest, shall apply as determined by emissions technical center personnel or designee and specified on an official AIR Program vehicle evaluation form (DR2365).

XI.B. For 1975 and newer vehicles in which the original engine has been replaced, if either the vehicle body/chassis original engine, as per registration/title or replacement engine as manufactured had a catalytic converter system, air injection reaction system, and/or microprocessor based air/fuel control system, these emission control systems must be present, intact and operational before a Certification of Emissions Control may be issued.

XI.C. For those vehicles titled/registered as model year 1975 and newer, that were assembled by other than a licensed manufacturer such as kit-cars, registered/titled according to Section(s) 42-6-108 and/or 42-5-205, C.R.S. and assigned a state or manufacturer specific identification number, the applicable emissions control equipment and standards will be based upon a determination by technical center personnel of the vintage of the vehicle engine. The technical center personnel may issue an affidavit and the year of the engine shall be presumed to be that stated by the vehicle owner unless it is determined by state emissions technical center personnel or designee, after physical inspection of the vehicle engine, that the year of the engine is other than stated by the owner.

## **XII. CLEAN SCREEN INSPECTION PROGRAM PROCEDURES**

XII.A. Eligibility to participate

XII.A.1. Vehicles specified in Part A, Section IV.B., are eligible for participation in the Clean Screen Program.

XII.A.2. Clean Screen inspections applicable to the program are those performed within twelve months prior to an individual vehicle's registration renewal date.

XII.A.3. Vehicles are eligible for participation in the Clean Screen Program when the two most recent consecutive emissions readings observed during the 12-months prior to its registration date comply with the standards specified in Part F, Section VI. Additionally, vehicles that are identified as low emitters on the low emitting vehicle index are eligible for participation in the clean screen program when the most recent emissions reading observed during the 12-months prior to their registration date complies with the standard specified in Part F, Section VI.

XII.A.4. The following vehicles are ineligible for participation in the Clean Screen Program:

XII.A.4.a. New Vehicles as specified in Section 42-4-310(b)(II)(A), C.R.S.

XII.A.4.b. Vehicles involved in a change of ownership.

XII.A.4.c. Vehicles owned by the United States government or any agency thereof pursuant to Section 42-4-310(l)(b)(I), C.R.S.

XII.B. All aspects of inspection must be performed by a licensed Clean Screen Inspector.

XII.C. Clean Screen Test Analyzer Systems

XII.C.1. Vehicles participating in the Clean Screen Program shall be tested as specified in this Part C utilizing a Clean Screen Test Analyzer System recognized by the Division as having complied with the performance and design requirements specified in Part B, Section IX. of this regulation.

XII.C.2. Clean Screen Test Analyzer Systems will be periodically calibrated and maintained as required in Part B, Section IX. of this regulation.

XII.C.3. The inspection data processing system(s) used by the Data Manger and Clean Screen Inspector will be that approved by the Division, and the Department of Revenue.

XII.D. Vehicle owners participating in the Clean Screen Program are not subject to the provisions of Part C, Sections I. through XI.

XII.E. Certification of Emissions Control.

In order to obtain a Certificate of Emissions Control the following conditions must be met:

- XII.E.1. The vehicle emissions levels are the same as or less than the limits specified in Part F, Section VI.
- XII.E.2. The most recent two consecutive emissions readings were observed within twelve months of the registration renewal date.
- XII.E.3. No non-complying emissions readings are observed between or subsequent to the last pair of complying readings.
- XII.E.4. For vehicles that are identified as low emitters on the low emitting index the most recent emission reading was observed within 12-months of the registration renewal date. For these vehicles, identification as a low emitter on the low emitting vehicle index shall take the place of the second remote sensing reading otherwise required under Section XII.E.2., above.

**PART D      Qualification and Licensing of Emissions Mechanics, Emissions Inspectors, and Clean Screen Inspectors; Licensing of Emissions Inspection and Readjustment Stations, Inspection-Only Stations, Inspection-Only Facilities, Fleets, Motor Vehicle Dealer Test Facilities, Enhanced Inspection Centers; Qualification of Clean Screen Inspection Sites; and Registration of Emissions Related Repair Facilities and Technicians**

**I.      LICENSING OF EMISSIONS INSPECTION AND READJUSTMENT STATIONS, INSPECTION-ONLY STATIONS, INSPECTION-ONLY FACILITIES, ENHANCED INSPECTION CENTERS, FLEET INSPECTION STATIONS AND MOTOR VEHICLE DEALER TEST FACILITIES**

**I.A.      Emissions Site Requirements for the Licensing of Emissions Inspection and Readjustment Stations, Inspection-Only Stations, Inspection-Only Facilities, Fleet Inspection Stations and Motor Vehicle Dealer Test Facilities:**

**I.A.1.      Applicability**

All emissions inspection and readjustment stations, inspection-only stations, inspection-only facilities, fleet inspection stations, and motor vehicle dealer test facilities are required to meet all applicable standards pursuant to this Part D and the Department of Revenue's adopted regulations in order to qualify for licensing for operation in Colorado's AIR Program.

To achieve the uniformity and security needed in test site locations; in order to meet federal EPA regulations contained in Federal Register vol. 57, Number 215, of the Federal Register and meet the statutory requirements contained in Sections 42-4-301 through 42-4-316, C.R.S.; the Air Quality Control Commission adopts this standard for emissions site requirements.

**I.A.2.      Standards for emissions inspection sites:**

I.A.2.a. All facilities shall be a permanent type of structure.

I.A.2.b. All sites must be capable of receiving mail.

I.A.2.c. All test facilities shall have a minimum of two off-street parking spaces for staging to accommodate additional vehicles.

- I.A.2.d. All test site facilities shall have a customer waiting area that provides for observation of the entire emissions inspection process. Observation can be, direct observation, observation by electronic equipment, or other methods that prove to be as effective with prior approval of the Department of Revenue.
- I.A.2.e. All test sites shall be capable of conducting all aspects of the inspection process within the confines of a building or structure, and maintaining ambient air temperatures between 41 degrees and 110 degrees Fahrenheit in the inspection area as defined in Section I. C. 1. of Part C of this regulation. Inspections are not required to be performed within the confines of a structure or building provided ambient temperatures are within such parameters.
- I.A.2.f. All test site facilities shall have an adequate exhaust removal system which shall be designed so as to not alter the inspection results and to assure safe ambient air quality of the inspection area as established by the Occupational Safety and Health Administration pursuant to 29 CFR, Part 1910, Subpart Z.
- I.A.3. Pursuant to Sections 42-4-306(4)(a) and 42-4-307 (8)(a), C.R.S. as amended, the Division shall develop or contract for the development of a training program for emissions mechanics and emissions inspectors. The training program shall be comprehensive in nature and address all aspects of vehicle inspection procedures specified for this regulation.
  - I.A.3.a. Participation by emissions inspectors intending to operate in the enhanced program area shall be required.
  - I.A.3.b. Participation by emissions mechanics intending to operate in the basic program area shall be voluntary.
  - I.A.3.c. Training classes shall be funded by tuition charged to the participants.
  - I.A.3.d. The following tuition rates and fees shall apply
    - I.A.3.d.(1) The training class fee shall be no greater than \$150 per participant.
    - I.A.3.d.(2) The instructor's fee for presenting a class shall not exceed \$400.
    - I.A.3.d.(3) The training manual for those emissions mechanics who choose not to participate in a training class shall be no greater than \$25.
  - I.A.3.e. These same training provisions shall be applicable to the requalification provisions of Section II.B. of this Part D.
- I.B. The following tools, reference manuals and diagnostic equipment shall be available for performance of inspections; and within the basic program, emissions related adjustments and repairs.
  - I.B.1. Division approved calibrated and spanned Test Analyzer System (TAS) or On-Board Diagnostic Test Analyzer System (OBD TAS).
    - I.B.1.a. As a provision of continued license to perform AIR Program inspections, the TAS must be updated as required, pursuant to this regulation.

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- I.B.1.b. The station or facility owner or operator shall maintain a full service/maintenance contract with the equipment manufacturer or equipment manufacturer's designee valid for the duration of the program but renewable on an annual basis
  - I.B.2. Rules for the operation of AIR Program inspection stations provided by the Colorado Department of Revenue.
  - I.B.3. Tachometer capable of reading 4,6 and 8 cylinders, 0-6,000 RPM minimum at no greater than 10 RPM of actual speed.
  - I.B.4. Emissions control systems applications guide as incorporated into the TAS, and oxygen sensor/check engine light, systems maintenance guide in either printed or electronic medium.
  - I.B.5. Commercially available reference manuals giving idle speed, idle mixture, mixture control dwell or fuel injection duration, timing, dwell, fast idle speed specification, high altitude specifications and information covering the emissions control systems description, diagnostic and repair procedures for the year models of vehicles involved in the AIR Program. In either printed or electronic medium.
  - I.B.6. Sufficient hand tools including but not limited to suitable computer scanner diagnostic link, digital volt/ohm meter, vacuum pump and other automotive diagnostic equipment for proper performance of the inspections, adjustments and emissions related repairs as applicable to the licensed entity.
  - I.B.7. Division approved span gas and equipment for performing gas span checks and calibrations.
  - I.B.8. Suitable non-reactive tail pipe extenders or probe adapter for inspecting vehicles with screened or baffled exhaust systems, or exhaust systems with multiple tail pipes.
  - I.B.9. The analyzer manufacturer's maintenance and calibration manual must be retained in the inspection area.
  - I.B.10. Items #5 and 6 above are not required for licensing as an inspection-only station or inspection-only facility.
  - I.C. A licensed emissions mechanic or emissions inspector who has successfully completed a hands-on proficiency check administered by the Department of Revenue in accord with the Commission regulations and those of the Department of Revenue, and the criteria specified in Part D of this regulation is or will be available to make a proper inspection. Enhanced inspection centers shall be open 8:30 am - 7:30 p.m. weekdays, and Saturday 8:00 a.m. - 1:00 p.m.
  - I.D. An emissions inspection-only station and inspection-only facility, must so indicate same by posting a sign in a readily visible location, and that no emissions related adjustments or repair services are available should the vehicle fail the inspection procedure.

- I.E. A person to whom there are twenty (20) or more vehicles registered, or to whom said number of vehicles are leased for not less than six continuous months, or are consigned for sale, may be licensed as a "fleet inspection station" or as a dealer licensed under Article 6 of Title 12, C.R.S., a motor vehicle dealers test facility and conduct inspections of that fleet or those vehicles inventoried or consigned for retail sale. As a fleet inspection station or motor vehicle dealer test facility, no inspections may be conducted for the employees or general public, but only on vehicles owned, leased by the business, or consigned or held in inventory for sale. A Certificate of Emissions Control issued by a fleet emissions inspection station will be valid for 12 months, one vehicle registration cycle.
- I.E.1. Under the self-inspection provisions of Section 42-4-309, C.R.S. for fleets of twenty (20) or more vehicles, the retail sale of a fleet vehicle within the enhanced program area requires full compliance with applicable inspection procedures as performed by an enhanced inspection center or an (enhanced) inspection-only facility.
- I.E.2. At the time of initial licensing and annually thereafter, the vehicle fleet shall be declared by completing a listing of all eligible vehicles by make, model year, light-heavy duty classification, vehicle identification number, license plate number, and if applicable unit number and state of registration on forms provided by the Division.
- I.F. All AIR Program inspection stations, facilities and centers are required to post in a conspicuous location in a clearly legible fashion a sign indicating the fees charged for inspections and in the basic program area, and maximum fees for emissions related adjustments and repairs required for the issuance of a Certificate of Emissions Control.
- I.G. All AIR Program inspection stations, facilities and centers are required to be linked via dedicated service line to the program data/communications network.
- I.G.1. Basic program inspection services providers and independent inspection-only facilities in the enhanced area shall be linked to the data network via dedicated voice quality telephone lines with a dial-up back-up telephone line.
- I.G.2. Enhanced inspection centers shall be linked via dedicated data quality lines with dedicated voice quality lines as dial-up back-up.
- I.H. All sites must provide for reasonable access in order for Departments of Revenue (or if applicable, Health) staff to conduct periodic quality control and audit functions as necessary.
- I.I. Upon request for a license as an emissions inspection and readjustment station, inspection-only station, fleet inspection station, motor vehicle dealer test facility, or inspection-only facility, applicants shall complete forms approved by the Department of Revenue which shall include but not be limited to a declaration of any past violations of AIR Program statute Section 42-4-301 through 42-4-316, C.R.S. as amended or any rule or regulation pursuant to such law.

## **II. QUALIFICATION AND LICENSING OF EMISSIONS MECHANICS AND EMISSIONS INSPECTORS**

- II.A. Qualification of Emissions Mechanics and Emissions Inspectors
- II.A.1. Application for qualification as an emissions mechanic and emissions inspector shall be filed with the Air Pollution Control Division. The Division shall administer issuance of letters of qualification. Applications for such letters of qualification shall be completed on forms provided by the Division. Before an applicant may be given a letter of qualification, he must comply with the requirements of this Section II. The Division will notify applicants of the evaluation requirements prior to testing.



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- II.A.2. An applicant must demonstrate knowledge, skill, and competence concerning the conduct of emissions inspections, and within the basic program area the adjustment and repair of vehicles to manufacturers' specifications. Such knowledge, skill and competence will be shown by passing a written and skills proficiency qualification test including, but not limited to, knowledge of the following:
    - II.A.2.a. Operation and purpose of emissions control systems.
    - II.A.2.b. Relationship of exhaust and evaporative HC and CO to timing and air/fuel ratio control.
    - II.A.2.c. Adjustment and repair to manufacturers' and applicable high altitude specifications.
    - II.A.2.d. Rules and regulations of AIR Program and proper inspection procedures.
    - II.A.2.e. Contemporary diagnostic and engine tune-up procedures.
    - II.A.2.f. The provisions of the Emissions Control Systems Performance Warranty pursuant to Section 207 (A) and (b) of the federal Clean Air Act as it applies to the AIR Program.
    - II.A.2.g. Visual inspection of the required emissions control equipment for 1975 and newer vehicles.
    - II.A.2.h. Operation of and proper use, care maintenance, calibration and gas span checking of the Division-approved inspection equipment.
    - II.A.2.i. Proper use of, security, and distribution of inspection forms, Certificates of Emissions Control, and supplemental inspection documents.
    - II.A.2.j. Emissions related adjustment and repair requirements for all vehicles failing the initial emissions inspection.
    - II.A.2.k. Inspecting for visible smoke emissions.
    - II.A.2.l. (Reserved)
    - II.A.2.m. Cause and effect of air pollution.
    - II.A.2.n. Purpose, goal and function of the AIR Program.
    - II.A.2.o. Exhaust and evaporative emissions inspection procedures and rationale for use.
    - II.A.2.p. Public relations and motorist assistance.
    - II.A.2.q. Safety procedures in the inspection lane or bay.
  - II.B. Requalification Requirements for all Emissions Mechanics and Emissions Inspectors
    - II.B.1. Upon the determination by the Commission of the necessity of technically updating the qualifications for emissions mechanics or emissions inspectors and, upon development or approval of retraining courses and retesting requirements for emissions mechanics to demonstrate said qualification, emissions mechanics, or holders of certificates of qualification, shall be required to requalify biennially.
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II.B.2. Emissions mechanics and emissions inspectors shall be required to requalify within ninety days from the date of written notification by the Department of Revenue. Said notice shall be mailed to the address of record in the office of the Department of Revenue charged with licensing of emissions mechanics and inspectors, which notice shall inform the person of the necessity of requalification and the nature of such skills, systems, and procedures requiring the retraining for the continued performance of the emissions inspection. The notice shall give the name and location of training sources approved or accredited for purposes of retraining, the necessity of requalification by a certain date, and the nature and evidence of documentation to be filed with the Department of Revenue evidencing such requalification, and state that failure to requalify within said period of time shall result in suspension or revocation of the emissions mechanic's or emissions inspector's license or certification as described in the Department of Revenue rules and regulations.

II.B.3. The Division shall issue a letter of requalification to any person who has requalified to the satisfaction of the Division and according to the requalification regulation of the Department of Revenue.

II.C. Transmittal of Letters of Qualification and Issuance of Emissions Mechanic's and Emissions Inspector's Licenses

The Division shall provide a listing of all letters of qualification or letters of requalification for emissions mechanics or emissions inspectors to the Department of Revenue, and, upon application by any person qualified, the Department of Revenue shall issue an emissions mechanic's or emissions inspector's license or renewal license in accord with the regulations of that department.

II.D. Lapse of Certificate of Qualification for Emission Mechanic.

A person to whom the Division has issued a letter of qualification, who has not been issued an emissions mechanic's or emissions inspector's license within six (6) months from the date of issuance of the most recently issued letter of qualification shall be deemed to have forfeited said qualification and shall be required to reapply if a new letter of qualification is requested.

II.E. Program License Application Performance Review Criteria

II.E.1. Applicability

Pursuant to Sections 42-4-306(4)(c) and 42-4-308(1)(b), C.R.S. the Commission is authorized to establish minimum performance criteria for licensed emissions inspectors, mechanics, and stations. Based on these performance criteria, Section 42-4-312, C.R.S. grants authority to the Executive Director of the Department of Revenue to suspend or revoke a license on a finding of a pattern of violations.

In order to meet federal act requirements and to provide consistent criteria for the Department of Revenue's review of performance based evaluations that may result in a denial of the license application, the Executive Director of the Department of Revenue or the designee shall apply criteria contained in this Section E.

II.E.2. Standards

The following criteria shall be used by the Department of Revenue's Executive Director or his designee in the review of any emissions license application for a mechanic, inspector, inspection and readjustment station, inspection-only station, inspection-only facility, fleet station, or motor vehicle dealer test facility.

Performance

Based on violations and penalties provided in Section 42-4-313(4)(b)(1), C.R.S. the following criteria will be used for the review of any emissions license application listed in this section:

- II.E.2.a. Any substantiated violation of intentional passing of a failing vehicle.
- II.E.2.b. Any substantiated violation of performance of emissions tests by an unlicensed mechanic, inspector, or station.
- II.E.2.c. Any substantiated violation of performance of an emissions test on falsified emissions test equipment.
- II.E.2.d. Any substantiated violation of failing of passing vehicles.
- II.E.2.e. Any substantiated violation of flagrant misuse of emissions program control documents.
- II.E.2.f. Any substantiated pattern of non-compliance with AIR Program regulations.
- II.E.2.g. Any substantiated violation of false statements on any emissions license application in an attempt to conceal problems such as: administrative hearings held for program violations, any probation of any emissions license held previously or currently held, any suspension or revocation of any emissions license held previously or currently.

For the purposes of emissions license application review, past performance may entail complete program history review of any person, persons, or officers of a corporation, or partners of any partnership that hold or held a license with the AIR Program.

- II.E.2.h. As a prerequisite to licensing of an emissions mechanic or emissions inspector, a hands-on proficiency check to address the criteria described in Section II. A. 2. of this Part D will be administered by the Department of Revenue in accord with the regulations of the Commission. This evaluation will be conducted at the emissions mechanic's or emissions inspector's place of employment and on an exhaust gas analyzer or test analyzer system that would be used to conduct inspections.

In order to provide for continuity and consistency with training, testing and licensing activities conducted per this Part D, the development and maintenance of the hand-on proficiency check will be coordinated between the Department of Revenue and the Division.

**III. REGISTRATION OF EMISSIONS RELATED REPAIR FACILITIES**

- III.A. Automotive Emissions Related Repair Facilities May Voluntarily Register with the Division.
  - III.A.1. The repair facility/technicians agree to have the effectiveness of their emissions related repairs and repair costs monitored by the Division on an on-going basis.
  - III.A.2. Repair facility/technicians agree to have repair effectiveness listing provided to those motorists whose vehicles fail any element of the inspection procedures specified in Part C of this regulation.

- III.A.3. The facility shall complete and process AIR Program repair report forms as approved by the Division. Repair report form processing equipment may incorporate PC based bar code technology such that one-dimensional "3 of 9" and two dimensional "PDF 417" symbology can be read and written. The system must be capable of supporting form generation software provided by the state. The printer shall be an ink jet printer or equivalent capable of printing the bar code symbology stated. Refer to Section 2.14 of the TAS specifications attached as Appendix A of this regulation for microcomputers specifications. The Division shall determine performance equivalence.
- III.B. As an aid to motorists seeking emissions related repair assistance, a means will be established whereby a listing of registered repair facilities whose repair effectiveness would be made available and presented to the motorist at the time of inspection failure. Repair effectiveness shall include but may not be limited to:
- a. Number of vehicles repaired and retested
  - b. Percent passing on first retest
  - c. Percent requiring additional repairs and retests
  - d. Percent issued waivers
- The listing shall document any recognized professional automotive accreditation or memberships that may include but not be limited to the National Institute for Automotive Service Excellence, or Automotive Service Association. The listing may also indicate the vehicle make(s) or vehicle classification that the repair facility specializes in.
- III.C. Repair facilities may request removal from the listing or temporary placement on an inactive listing while measures are being taken to improve repair effectiveness.
- III.D. It is further suggested that:
- III.D.1. The repair facility/technicians will seek out appropriate training when repair effectiveness deficiencies are identified.
  - III.D.2. Repair facilities will hire and retain technicians certified under "Automotive Service Excellence" tests number A-1, A-6, A-8, and L-1 and that technicians will maintain these levels of certifications.
  - III.D.3. That the repair facility be adequately equipped and maintain a level of diagnostic and repair equipment necessary to perform emissions related repairs based upon the criteria set forth by the Automotive Service Association of Colorado, Incorporated.
  - III.D.4. The Department of Revenue performs a site evaluation of facilities that apply to assess compliance and confirm qualifications.
  - III.D.5. The facility has or could comply with the provisions established in Part D of this regulation and have not been subject to the penalties prescribed by Section 42-9-111, C.R.S.
- III.E. The Division will monitor and periodically report to individual repair facilities their repair effectiveness and average costs as compared to other registered repair facilities.
- III.F. The Division shall make repair effectiveness data available to the general public upon request as well as periodically to the Department of Revenue.

- III.G. The Division may request a site evaluation of any registered repair facility by the Department of Revenue for reasons of diminished repair effectiveness or noted consumer complaints.
- III.H. The Division shall identify the level(s) of repair effectiveness that would result in inadequate emission(s) reductions and negatively impact consumer protection.

**IV. REQUIREMENTS FOR CLEAN SCREEN/REMOTE SENSING SITES**

IV.A. Applicability

Clean Screen Inspection Sites must meet all applicable standards pursuant to this Part D and the Department of Revenue's regulations in order to qualify for operating in Colorado's Clean Screen Program.

IV.B. Standards for emissions inspection sites

All sites shall comply with all applicable state and local codes/ordinances and maintain appropriate permits for that specific municipality and location.

IV.C. All Clean Screen Sites must provide reasonable access in order for Department of Revenue (and if applicable, Division) staff to conduct periodic quality control and audit functions as necessary.

IV.D. Applicants for a license as a Clean Screen Emissions Inspector shall complete forms approved by the Department of Revenue which shall include, but not be limited to, a declaration of any past violations of AIR Program statute Sections 42-4-301 through 42-4-316, C.R.S., as amended or any rule or regulation pursuant to such law.

IV.E. A Clean Screen Inspection Site where two consecutive emissions readings collected at the same location on the same day may be used, must meet site criteria for same-day remote sensing devices established by the Division, and as licensed by the Department of Revenue.

**V. QUALIFICATION OF CLEAN SCREEN EMISSIONS INSPECTORS**

V.A. Clean Screen Emissions Inspector applicants shall apply for letters of qualification on forms provided by the Division. The Division shall issue letters of qualification to applicants who comply with the requirements of this Section V. The Division will notify applicants of the evaluation requirements specified in Part D, Section V.B. prior to testing.

V.B. An applicant for a letter of qualification or requalification must demonstrate knowledge, skill, and competence concerning the operation of Clean Screen emissions inspections. Such knowledge, skill and competence will be demonstrated on actual Clean Screen equipment and by passing a skills proficiency qualification test including, but not limited to, knowledge of the following:

V.B.1. Operation of and proper use, care, maintenance, calibration and gas span checking of the Division-approved Clean Screen Test Analyzer System.

V.B.2. Safety procedures for the Clean Screen Inspection Site.

V.B.3. Proper setup and breakdown of the Clean Screen equipment

**VI. REQUALIFICATION REQUIREMENTS FOR ALL CLEAN SCREEN EMISSIONS INSPECTORS**

VI.A. Upon the determination by the Division of the necessity of updating the technical qualifications for Clean Screen Emissions Inspectors, holders of certificates of qualification shall be required to requalify biannually. The Division may waive this requirement should it be unnecessary.

- VI.B. Clean Screen Emissions Inspectors shall be required to requalify within ninety days from the date of electronic notification by the Department of Revenue.
- VI.C. The Division shall issue a letter of requalification to any licensed Clean Screen Emissions Inspector who meets the requirements of Section Part D, Section V.B.

**VII. TRANSMITTAL OF LETTERS OF QUALIFICATION AND ISSUANCE OF CLEAN SCREEN INSPECTOR LICENSES**

The Division shall provide a listing of all letters of qualification or letters of requalification for Clean Screen Inspectors to the Department of Revenue, and upon application by any person qualified, the Department of Revenue may issue a Clean Screen Inspector's license or renewal license in accordance with the regulations of that department.

**VIII. LAPSE OF CERTIFICATE OF QUALIFICATION FOR CLEAN SCREEN INSPECTOR**

A person to whom the Division has issued a letter of qualification, who has not been issued a Clean Screen Inspector license within six (6) months from the date of issuance of the most recently issued letter of qualification shall be deemed to have forfeited said qualification and shall be required to reapply if a new letter of qualification is requested.

**IX. PROGRAM LICENSE APPLICATION PERFORMANCE REVIEW CRITERIA**

IX.A. Applicability

Pursuant to Sections 42-4-306(4)(c) and 42-4-308(1)(b), C.R.S., the Commission is authorized to establish minimum performance criteria for licensed Clean Screen Inspectors and Data Management Contractor(s). Based on these performance criteria, Section 42-4-312, C.R.S., grants authority to the executive director of the Department of Revenue to suspend or revoke a license.

In order to provide consistent criteria for the Department of Revenue's review of performance based evaluations that may result in a denial of a license application, or revocation of a license, the executive director of the Department of Revenue or the designee shall apply criteria contained in Sections IV through VII of this Part D.

IX.B. Requirements

The Department of Revenue's executive director or his designee in the review of any emissions license application shall use the following criteria for a Clean Screen Inspector, or Clean Screen Data Manager.

Performance

Based on violations and penalties provided in Section 42-4-313(4)(b)(1), C.R.S., the following criteria will be used for the review of any license application listed in the section:

- IX.B.1. Any violation of intentional passing of a failing vehicle.
- IX.B.2. Any violation of performance of Clean Screen inspections by an unlicensed inspector, or at an unapproved/unlicensed site.
- IX.B.3. Any violation of performance of a Clean Screen inspection on a falsified Clean Screened Test Analyzer System.

- IX.B.4. Any violation of flagrant misuse of Clean Screen inspection data, control documents, vehicle owner information, or vehicle registration data.
- IX.B.5. Any pattern of non-compliance with AIR Program regulations, including Clean Screen provisions.
- IX.B.6. Any violation of false statements on any license application.
- IX.B.7. As a prerequisite to licensing of a Clean Screen Inspector, a hands-on proficiency check to address the criteria described in Section V of this Part D will be administered by the Department of Revenue in accord with the regulations of the Commission. This evaluation will be conducted at a mutually agreed upon location and on an approved Clean Screen Test Analyzer System that would be used to conduct inspections.

In order to provide for continuity and consistency with qualifying and licensing activities conducted per this Part D, the development and maintenance of the hands-on proficiency check will be coordinated between the Department of Revenue and the Division.

**PART E Prohibited Acts and Penalties to Ensure Proper Inspection Procedures, Adherence to Prescribed Procedures and Effective Emissions Related Repairs**

**I. THIS PART E DESCRIBES THE GROUNDS UPON WHICH THE LICENSE OF AN EMISSIONS MECHANIC, EMISSIONS INSPECTOR OR ANY TYPE OF AIR PROGRAM INSPECTION BUSINESS MAY BE SUSPENDED, FOR A PERIOD OF TIME NOT LESS THAN Six MONTHS, OR REVOKED.**

**I.A. Pattern of Violations**

The license of an emissions mechanic, emissions inspector, inspections and readjustment station, inspection-only station, inspection-only facility, fleet inspection facility, motor vehicle dealer test facility, or contractor's contract may be revoked or suspended, as appropriate pursuant to Sections 42-4-312 and, 42-4-313, C.R.S., if such mechanic, inspector or facility has engaged in a pattern of violations of the provisions of this Regulation Number 11, or other applicable statutes or regulations, including, but not limited to:

- I.A.1. AIR Program inspection business, and/or emissions inspector or emissions mechanic is involved in any unauthorized entry into the analyzer or inspection system that result in a fraudulent inspection report and/or emissions certificate being issued.
- I.A.2. AIR Program inspection business, and/or emissions inspector or emissions mechanic caused an inspection report and/or emissions certificate to be issued to a vehicle that did not at the time of issue comply with the laws, rules or regulations.
- I.A.3. AIR Program inspection business, and/or emissions inspector or emissions mechanic makes, issues, or knowingly uses any imitation or deceptively similar or counterfeit inspection report and/or emissions certificate.
- I.A.4. AIR Program inspection business, and/or emissions inspector or emissions mechanic possesses an inspection report and/or emissions certificate which is known to be fictitious, or was issued for another vehicle, or was issued without an emissions inspection test having been performed when required.
- I.A.5. Exercising licensing privilege other than those granted by the Department of Revenue and the Commission.



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- I.A.6. AIR Program inspection(s) have not or are not being made in accordance with applicable laws and the rules and regulations of the Department or the Commission.
  - I.A.7. Vehicles have not or are not being repaired in accordance with applicable laws and the rules and regulations of the Department or the Commission.
  - I.A.8. Emissions mechanic or emissions inspector failed to a post-valid license.
  - I.A.9. AIR Program inspection business, and/or emissions inspector or emissions mechanic failed to post AIR Program license(s) in a location available and conspicuous to the public.
  - I.A.10. AIR Program inspection business, and/or emission inspector or emissions mechanic failed to use the correct inspection report form issued by the Department.
  - I.A.11. AIR Program inspection business, and/or emissions inspector or emissions mechanic used an inspection report form for a purpose other than permitted by the Department.
  - I.A.12. AIR Program inspection business, and/or emissions inspector or emissions mechanic failed to complete the correct inspection report form or.
  - I.A.13. AIR Program inspection business, and/or emissions inspector or emissions mechanic loaned, sold, gave or transferred inspection report forms to another AIR Program inspection business or mechanic.
  - I.A.14. Repealed.
  - I.A.15. AIR Program inspection business, and/or emissions inspector or emissions mechanic performed air tests with an analyzer or test system that was not certified.
  - I.A.16. AIR Program inspection business, and/or emissions inspector or emissions mechanic used span gas that was not approved.
  - I.A.17. AIR Program inspection business, and/or emissions inspector or emissions mechanic, failed to have tools, supplies and records available for inspection by the Department of Revenue.
  - I.A.18. AIR Program inspection business, and/or emissions inspector or emissions mechanic used "escape" mode in analyzer without valid reason.
  - I.A.19. AIR Program inspection business, and/or emissions inspector or emissions mechanic failed to properly identify and record a vehicle that fails the air test.
  - I.A.20. AIR Program inspection business, and/or emissions inspector or emissions mechanic failed to properly identify and record a vehicle that passes the emissions inspection.
  - I.A.21. AIR Program inspection business, emissions inspector or emissions mechanic falsely reports an (incorrect) vehicle identification number or vehicle information on a DR2411 form supplied by the Department of Revenue.
  - I.A.22. AIR Program inspection business, and/or emissions inspector or emissions mechanic performed inspections while under suspension or administrative hold.
  - I.A.23. AIR Program inspection business, and/or emissions inspector or emissions mechanic continued using an analyzer knowing it was malfunctioning.

- I.A.24. AIR Program inspection business, emissions inspector or emissions mechanic charged more than posted fee for service.
- I.A.25. AIR Program inspection business, through its agent denied the issue of a vehicle inspection report and/or Certificate of Emissions Compliance when at the time of inspection the vehicle did comply with the laws, rules and regulations for the issuance of such a certificate.
- I.A.26. AIR Program inspection business was not open and available to perform inspection services during normal business hours.
- I.A.27. AIR Program inspection business, through its agent, failed to issue a Certificate of Waiver to a vehicle that met all the requirements.
- I.A.28. AIR Program inspection business, through its agent, issued a Certificate of Waiver to a vehicle that was eligible pursuant to Section 207(b) of the federal Clean Air Act
- I.A.29. AIR Program inspection business, through its agent, performed repairs to the emissions control systems of a vehicle that are eligible for any manufacturer's warranties without informing the owner of said warranties.
- I.A.30. AIR inspection business failed to display all required signs and post fees for inspection services.
- I.A.31. Electrical supply fails to meet voltage and frequency requirements of 110V ( $\pm$ ) 10% 60HZ, or is not publicly supplied as appropriate to that area.
- I.A.32. AIR Program inspection business, through its agent, performed an inspection when the temperature of the inspection area was not between 41 degrees and 110 degrees Fahrenheit.
- I.A.33. AIR Program inspection business could not account for controlled documents.
- I.A.34. Emissions mechanic or emissions inspector failed to keep their access code secure which resulted in an inspection conducted by an unlicensed person.
- I.A.35. Emissions mechanic or emissions inspector failed to keep his current mailing address on file with the Department of Revenue.
- I.A.36. A licensed emissions mechanic or emissions inspector is not employed at the facility.
- I.B. Conditions Under Which a Station, Facility or Center License may be Denied, Suspended or Revoked.

In addition to the grounds listed in Section A, the license of any inspection and readjustment station, inspection-only station, inspection-only facility, fleet inspection facility, motor vehicle dealer test facility or the Contractor, may be suspended or revoked as appropriate pursuant to Sections 42-4-312 and, 42-4-313, C.R.S. for any of the following violations:

- I.B.1. AIR Program inspection business, and/or its agent have engaged in a pattern of violation of any provision of the applicable laws, rules or regulations.
- I.B.2. AIR Program inspection business, through its agent issued a vehicle inspection report and/or Certificate of Emissions Waiver when at the time of issue the vehicle did not comply with the laws, rules and regulations for the issuance of such a certificate.

- I.B.3. AIR Program inspection business, through its agent issued a vehicle inspection report and/or Certificate of Emissions Control without an air test having been performed.
- I.B.4. Adjustments or repairs were performed when such adjustments or repairs were not authorized or required.
- I.B.5. AIR Program inspection business is not equipped as required.
- I.B.6. AIR Program inspection business was not operating from the location for which the license was issued.
- I.B.7. Emissions mechanic or emissions inspector made false statements on official forms.
- I.B.8. Facilities of applicant for an AIR Program license are not properly equipped for the type of license applied for.
- I.B.9. The AIR Program inspection business flagrantly misuses control documents by committing any of the violations described in Part E, Sections I.A.10 through I.A.14.
- I.B.10. An unlicensed person performed all or any part of an inspection procedure.
- I.B.11. Within the enhanced program area, Motor Vehicle Dealer Test Facility inspections are limited to one per vehicle (consecutively) such that no vehicle shall be inspected twice consecutively. Following an inspection at a Motor Vehicle Dealer Test Facility that vehicle's inspection for the next cycle must be performed in the inspection-only network of enhanced inspection centers or decentralized inspection-only facilities; as applicable to the model year of the vehicle.

Conditions Under Which an Emissions Mechanic or Emissions Inspector License may be Denied, Suspended or Revoked.

- I.C.1. Emissions mechanic or emissions inspector caused a passing Certificate of Emissions Compliance to be issued to a failing vehicle.
  - I.C.2. Emissions mechanic or emissions inspector made false statements on official forms.
  - I.C.3. The emissions inspector or emissions mechanic performed two or more emissions inspections using a test analyzer system that was not updated as required by Part B or Appendix A of this regulation.
- I.D. Any action to suspend or revoke the license for any enhanced emissions center, or to revoke the contractor's agreement pursuant to this Part E, shall be subject to the terms of the agreement entered into pursuant to Section 42-4-304(5), C.R.S.

**PART F            Maximum Allowable Emissions Limits for Motor Vehicle Exhaust, Evaporative and Visible Emissions for Light-Duty and Heavy-Duty Vehicles**

In order for a vehicle (owner) to obtain a Certificate of Emissions Compliance, the exhaust and evaporative emissions from the motor vehicle subject to an EPA approved emissions test as specified in Part C of this regulation may not exceed the applicable maximum concentrations or if applicable, maximum mass for exhaust carbon monoxide (CO), hydrocarbons (HC) and oxides of nitrogen (NO<sub>x</sub>); and the integrity requirements specified for fuel evaporation control and visible smoke.

**I. LIGHT-DUTY VEHICLES (INCLUDING LIGHT-DUTY TRUCKS) SUBJECT TO IDLE SHORT TEST(S) FOR ALL VEHICLES OF MODEL YEAR 1981 AND NEWER SUBJECT TO IDLE SHORT TEST(S), THE EMISSIONS CONCENTRATION LIMITS OF THIS SECTION I SHALL ALSO APPLY AT RAISED IDLE SPEEDS AS SPECIFIED IN SECTION II OF PART C OF THIS REGULATION.**

**I.A. Maximum Concentration Limits for Light-Duty Vehicles (Includes Light-Duty Trucks)**

Model Year	Percent Carbon Monoxide	Parts/million Hydrocarbon
1970 and earlier	3.5	1000
1971	3.0	1000
1972	3.0	1000
1973	3.0	1000
1974	3.0	1000
1975	2.0	600
1976	2.0	600
1977	1.5	400
1978	1.5	400
1979	1.5	400
1980	1.5	400
1981 and newer	1.2	220

**II. HEAVY-DUTY VEHICLES (1978 AND EARLIER GREATER THAN 6000 LBS. GVWR) SUBJECT TO IDLE SHORT TEST(S) FOR ALL VEHICLES OF MODEL YEAR 1981 AND NEWER SUBJECT TO IDLE SHORT TEST(S), THE EMISSIONS CONCENTRATION LIMITS OF THIS SECTION II SHALL ALSO APPLY AT RAISED IDLE SPEEDS AS SPECIFIED IN SECTION II OF PART C OF THIS REGULATION.**

**II.A. Maximum Concentration Limits for Heavy-Duty Vehicles**

Model Year	Percent Carbon Monoxide	Parts/million Hydrocarbon
1967 and earlier	7.0	1500
1968	6.5	1200
1969	6.5	1200
1970	5.5	1000
1971	5.5	1000
1972	5.5	1000
1973	5.5	1000
1974	5.5	1000
1975	5.5	1000
1976	5.5	1000
1977	5.5	1000
1978	5.5	1000

Model Year	Percent Carbon Monoxide	Parts/million Hydrocarbon
Heavy-Duty Vehicles (1979 and Newer Greater Than 8500 lbs. GVWR) Subject to Idle Short Test(s)		
1979	4.0	800
1980	3.5	800
1981	3.0	600
1982	3.0	600
1983	3.0	600
1984	3.0	600
1985	3.0	600
1986 and newer	2.0	300

**III. TRANSIENT TEST MASS EMISSIONS LIMITS IN GRAMS/MILE (GPM)**

III.A. Light-Duty vehicles (Excluding Light-Duty Trucks)

MODEL YEAR	HC	CO	NOx
1982	3.5	45.0	5.0
1983	3.5	30.0	4.5
1984	3.0	30.0	4.5
1985	2.5	20.0	4.5
1986	2.5	20.0	4.5
1987	2.5	20.0	4.0
1988	2.0	20.0	4.0
1989	2.0	20.0	4.0
1990	2.0	20.0	3.5
1991	1.5	20.0	3.5
1992	1.5	15.0	3.5
1993	1.5	15.0	3.5
1994	1.2	15.0	3.0
1995	1.2	15.0	2.5
1996	1.2	15.0	2.0
1997	1.2	15.0	2.0
1998	1.2	15.0	1.5
1999 and newer	1.2	15.0	1.5

III.B. Light-Duty Trucks (equal to or less than 8,500 lbs. G.V.W.R.)

MODEL YEAR	HC	CO	NOx
1982	6.0	65.0	6.0
1983	6.0	65.0	6.0
1984	5.0	55.0	6.0
1985	4.5	45.0	6.0
1986	4.0	40.0	6.0
1987	3.5	30.0	5.5
1988	3.0	25.0	5.0
1989	3.0	25.0	5.0
1990	3.0	25.0	5.0
1991	2.5	25.0	4.5
1992	2.5	25.0	4.5
1993	2.5	25.0	4.5
1994	2.0	20.0	4.0
1995	2.0	20.0	4.0
1996	1.2	15.0	3.5
1997	1.2	15.0	3.0
1998	1.2	15.0	2.5
1999 and newer	1.2	15.0	2.0

**IV. EVAPORATIVE EMISSIONS CONTROL STANDARDS**

System Integrity - A gas cap integrity check to assess the degree of leakage between the fuel filler neck sealing surface and the gasoline cap sealing surface shall be performed on all model year 1975 and newer vehicles.

IV.A. Pressure decay of the gasoline cap to filler neck sealing surfaces shall not exceed six (6) inches of water over a ten (10) second period, or

- IV.B. The gasoline cap flow rate shall be compared to an orifice with a National Institute of Standards and Technology (NIST) traceable flow rate that will result in a pass/fail flow rate threshold of 60 cc/minute of air at 30 inches of water (column).

**V. VISIBLE SMOKE**

Vehicles shall not exhibit any continuous gray, blue, blue-black, or black smoke of greater than 5% opacity from the engine crankcase and/or tailpipe(s) during any engine operating condition of applicable inspection procedures.

**VI. CLEAN SCREEN PROGRAM MAXIMUM ALLOWABLE EMISSIONS LIMITS**

- VI.A. In order to obtain a Certificate of Emissions Control through the Clean Screen Program, vehicles must not exceed maximum emissions concentrations of 0.50 percent carbon monoxide (CO), 1,000 parts per million nitrogen oxides (NO<sub>x</sub>), and 200 parts per million hydrocarbon (HC) as reflected in remote sensing emissions readings.
- VI.B. Vehicle owners who participate in the Clean Screen Program shall not be subject to the provisions of this Part F other than this Section VI.
- VI.B.1. On or before July 1st of each year the Air Pollution Control Division shall develop a low emitting vehicle index based on a tabulation of the previous calendar year's inspection program results for specified make, model and model year of vehicles.
- VI.B.2. A passing rate for emissions shall be set as the minimum allowable passing criteria for the low emitting vehicle index.
- VI.B.3. In developing the low emitting vehicle index, the Division may use passing criteria as necessary to ensure that the use of the low emitting vehicle index is equivalent to or better than the use of a second remote sensing measurement in terms of air quality benefits.
- VI.B.4. The passing rate criteria for the low emitting vehicle index shall be submitted to the U.S. EPA on or before July 1 of each year.

**VII. ON-BOARD DIAGNOSTIC INSPECTION PASSING CRITERIA**

In order for a vehicle (owner) to obtain a certificate of emissions compliance, the results of the OBD inspection as specified in Part C, Section II.C. of this regulation must meet the following requirements:

- VII.A. The data link connector (DLC) is not missing, has not been tampered with, and is operational
- VII.B. The malfunction indicator light (MIL) illuminates when the ignition key is turned to the key on, engine off (KOEO) position.
- VII.C. The MIL extinguishes and remains off once the vehicle's engine is started (KOER).
- VII.D. The MIL status, as indicated by the on-board diagnostic test analyzer system is commanded off.

## APPENDIX A Technical Specifications

Revised Sept 09, 1994

### INTRODUCTION

The Colorado AIR Program is in the process of modifying its current automotive inspection and maintenance program to comply with the Clean Air Amendments of 1990. Colorado's current program is based upon BAR 84 inspection technology utilizing a decentralized program format encompassing nine Front Range counties. In order to achieve compliance with the Clean Air Amendments of 1990, Colorado will change to a program format that will have a contractor based operation conducting the IM 240 emissions test and a population of independent inspectors conducting inspections utilizing a new Colorado 94 emissions analyzer. The contractor is based in the "enhanced" program area, basically the Denver metropolitan area and will inspect 1982 and newer vehicles. Independent inspection facilities will inspect vehicles of all years within the "basic" program area as well as being able to inspect 1981 and older vehicles within the "enhanced" area.

The demands for more accurate analytical information as well as a more automated inspection process with real-time data transfer has superseded the capabilities of BAR 84 technology. Current BAR 90 analytical technology is acceptable, but other system enhancements are necessary to meet Colorado's inspection needs. These enhancements and other technical details are described in the remainder of this document.

### 1.0 GENERAL

#### 1.1 Design Goals

The specifications that have been developed are designed utilizing a personal computer system. The analyzer system must be capable of performing uniform and consistent emission tests for Colorado's Automotive Inspection and Readjustment (AIR) Program. Features of the analyzer include: vehicle emissions measurements of hydrocarbon (HC), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and oxygen (O<sub>2</sub>); engine RPM measurements, exhaust dilution determinations, pressure test system for EVAP; data entry; data retrieval tables; a dedicated printer (for vehicle inspection certificates) and an additional printer for diagnostics and general purpose printouts; data recording on double sided high density 1.44 megabyte (Mb) 3.5" floppy diskette and a 120Mb (or greater) hard drive; modem for "on-line real time" data transmission; CRT information display to the inspector; bar code (2D) reader and printing capabilities; and fully menu driven, interactive simple microprocessor controlled operation.

Additional, automatic features required include: gas calibrations, zero and span checks, pressure calibrations, gas auditing procedure; leak checks, HC hang-up checks, audit menus (i.e., data read system), test sequencing, and low-flow checks. The analyzer shall be designed and constructed to provide reliable and accurate service in the automotive environment. The software used in the analyzer shall consist of a process control system as well as data look-up files. Security shall be provided to prevent unauthorized modifications to the software or test data and recording unauthorized entry (tampering) and locking out of the inspection process when detected.

The emissions analyzer software shall be designed for maximum operational simplicity.

It shall also be capable of providing emission-reading characteristics, independent of the inspection function, which can be used for vehicle diagnostic.



1.2 Useful Life

The useful life of the analyzer shall be a minimum of five years.

1.3 Nameplate Data

A nameplate including the following information shall be permanently affixed to the housing of the analyzer:

Name and Address of Manufacturer

Model Description

Serial Number

Date of Assembly

The manufacturer shall affix a stick-on type label to the analyzer that contains a toll-free telephone number for customer service. This number can also be included in a service software message.

1.4 Manuals

Each analyzer shall be delivered with the following manuals:

- A. Reference Operating Instructions
- B. Operation Instruction Manual
- C. Maintenance Instruction Manual (limited)
- D. Initial Start-up Instructions

Colorado 94 Analyzer manufacturers may consolidate manuals. The manuals shall be constructed of durable materials and shall not deteriorate as a result of normal use over a five-year period. The analyzer housing shall provide convenient storage for each manual in a manner that will:

- E. Allow easy use.
- F. Prevent accidental loss or destruction.

1.5 Certification Documentation

The analyzer software shall be fully documented. Two copies of the documentation listed below shall be submitted to the Colorado Department of Public Health and Environment as part of the certification application.

- A. Complete program listings. Program listings may be on diskette. They are not required to be submitted with the application for certification.
- B. Functional specifications.
- C. Functional flowcharts of the software.

- D. Example inputs and outputs from all processes.
- E. Detailed interface information on system components including the identification of protocol and output specifications.
- F. All DOS file layouts with file names, file types, file security, field names, field types, field sizes, and field editing criteria.

Documentation provided by the vendor to meet this requirement will be treated as proprietary information by the Colorado Department of Public Health and Environment.

Prior to certification of any Colorado 94 emissions analyzer for sale in Colorado, the manufacturer of such analyzer shall provide the Division with software source codes and all other technical information (including, but not limited to all working codes, schematics and drawings) necessary to operate, maintain, calibrate and repair such analyzer in the event that the manufacturer or its agent ceases providing adequate maintenance, calibration and repair services in Colorado. The manufacturer shall keep such information current, and will provide the Division with copies of any and all changes. So long as such maintenance, calibration and repair, services are available from the manufacturer or its agent, the Division shall protect such information as confidential commercial data if it is clearly marked as such. In the event that the manufacturer becomes insolvent or stops providing adequate maintenance, repair or calibration services in Colorado all such information shall be the property of the Division and may be released to a third party as necessary to repair, calibrate and maintain the analyzers.

#### 1.6 Warranty Coverage/Mandatory Service Contract

A written warranty coverage agreement, signed by an authorized representative of the equipment manufacturer and the vehicle inspection station owner, which provides a complete description of coverage for all systems and components and all manufacturer provided services listed in Section 1.8, must accompany the sale or lease of each Colorado 94 emissions analyzer.

An extended service contract must be available upon the expiration of the manufacturers original warranty period. Original manufacturer's warranty shall be a minimum of one year from the date of purchase. The "service contract" shall be offered in one-year increments and is a mandatory condition of inspection station operation. The "service contract" agreement shall include the inspection station owner's name, inspection station address, telephone number, inspection station identification number, analyzer serial number and detailed terms of the agreement. The agreement must extend for at least one year with the expiration date entered to software file and monitored by the system clock. Approaching expiration messages must be displayed at daily system start-up beginning thirty days prior to expiration and messaging "30 days until expiration, 29 days etc." Failure to renew the "service contract agreement" will cause the analyzer to automatically "lock-out" from any official inspection process. Renewals shall be offered at the inspection station owner's request and governed by "good business" practices between the parties involved. Service contract agreements must be available by the manufacturer for the mandated life of the Colorado AIR Program. Cost disclosures and detailed descriptions of coverage's must be available in printed form and distributed to all Colorado 94 users. Cost disclosure shall also be made for "consumable" inventory items 1.8B. This information would most appropriately be presented with the original manufactures warranty.

## 1.7 Tampering Resistance

Controlled access design shall be the responsibility of the manufacturer and is subject to approval by the Colorado Department of Public Health and Environment. Analyzer service personnel, inspectors or others shall be prohibited, to the Colorado Department of Public Health and Environment satisfaction, from creating or changing any test results, programs or data files contained in the analyzer. Manufacturers shall utilize special BIOS partitions, or other appropriate software and hardware provisions, deemed necessary to protect the I/M files and programs. The protection features shall prevent access to the secured floppy disk drive and those portions of the hard disk containing I/M programs and test data or files.

The emission analyzer and the sampling system shall be made tamper-resistant to the Colorado Department of Public Health and Environment satisfaction. At a minimum, the manufacturer shall develop tamper-resistant features to prevent unauthorized access through the cabinet. Microswitches, keyed locks, or software algorithms requiring the use of a password, which can be changed by the Colorado Department of Public Health and Environment would all be acceptable provided the physical or logical design effectively prevents unauthorized access.

Manufacturers may offer analyzers with additional floppy disk drives that can run optional software application programs.

If tampering occurs, a software lockout algorithm shall be activated which aborts any existing test sequence and prevents further inspections until an authorized AIR Program official clears the lockout.

The lockout system shall be designed so that an AIR Program official from the audit menu can activate it. Only AIR Program Auditors may remove lockouts put in place from the audit menu. Manufacturers shall develop a system by which their service technicians shall be prevented from clearing "tamper" lockouts.

Optional software packages shall not interfere with the normal operation of the I/M inspection and testing software, and shall not compromise the tamper-resistant features of the analyzer.

Manufacturer field service representatives will not have access to DOS, unless assurances acceptable to the Colorado Department of Public Health and Environment have been provided that insure, integrity of the system will not be jeopardized.

## 1.8 Manufacturer Provided Services

The manufacturer shall agree to provide the following services to the inspection station as part of the manufacturer's original warranty and thereafter as a portion of the service contract agreement. The cost of a service agreement is to be listed on a year-by-year basis. Future charges cannot exceed the amount published.

- A. Delivery, installation, calibration, and verification of the proper operating condition of a Colorado 94 emissions analyzer.
- B. Quarterly (90 days) examination, calibration, and routine maintenance of the analyzer and sampling systems. Full systems support and repair, including loaner units. Upon initial sale or loan, provide "extra" printer medium (1 ea.) sample filter(s)(2), sample hose (1) and sample probes (1). Maintain the "extra" consumable inventory upon examination and provide a software history file for the replacement of consumables accessible to AIR Program officials. Consumables and the cost(s) thereof must be disclosed in the service agreement.

- C. Instruct all certified inspectors employed by the inspection station at the time of installation in the proper use, maintenance, and operation of the analyzer. The analyzer shall contain a feature that will allow an inspector to go through the complete inspection procedure without generating an official inspection record. This function will be used for evaluating inspector performance, by AIR Program officials, or by the manufacturer for demonstration purposes. The "training mode" shall not require the use of an inspector's access code or allow access to secured areas of hardware or software. The display shall show a message throughout the inspection that this is not an official inspection. Vehicle inspection reports shall indicate to the satisfaction of the Colorado Department of Public Health and Environment that they are for training only. No official Certificate of Compliance will be generated during the training exercise.
- D. On-site service response by a qualified repair technician within two (2) business days, (48 hours) excluding Sundays and national holidays, of a request from the inspection station. The names, toll-free telephone numbers, and service facility addresses of all manufacturer representatives responsible for equipment service shall be provided to the inspection station. A service representative shall be available at all times during normal working hours. Sundays and national holidays are not included. All system repairs, component replacements, and/or analyzer adjustments, shall be accomplished on-site within 48 hours after a service request has been initiated. If the completion of this work is not possible within this time period, a Colorado 94 loaner unit shall be provided until the malfunctioning unit is properly repaired and returned to service. Service representatives shall have a software driven menu option that allows the transfer of inspection station, inspector information and other applicable data files from one analyzer to another without manual inputs and without transfer of previous test files.
- E. Updates of the "Functional" software will be limited to once per year at no cost.
- Updates of operational software i.e., file based information will be on an "as required" basis. All forms of software updating will utilize modem technology for the updating process. File updates are at no cost and every effort will be made to minimize them.
- F. The analyzer software shall be designed so that AIR Program officials can insert a floppy disk, prepared by the manufacturer, into the Program system host, and update the existing software version, via modem. A system of manual updating by program officials utilizing the auditor's menu shall also be available. Look-up tables and message screens shall be designed sufficiently separate from the main operations software so that it is not possible, to interfere in any way with the operations of the analyzer.

The Colorado Department of Public Health and Environment will require the manufacturer to render updates as necessary in the first year of the program to ensure the program meets all design criteria. Thereafter software updates will be limited to once per year at no cost. Since modem software updating will be utilized, there are no costs to the analyzer owner. A software version number, consisting of a four character alpha-numeric code made up of the last two digits of the year followed by a two character version number, shall be recorded in the analyzer and included on each vehicle test record. The analyzer manufacturer shall not modify any existing software version without obtaining written approval from the Colorado Department of Public Health and Environment.

The Colorado Department of Public Health and Environment may require the manufacturers to conduct on-site or laboratory testing of in-use analyzers in order to document continued compliance. When an analyzer is removed from the field, for repair or testing, manufacturers shall supply the inspection station from which it was removed with a temporary replacement unit meeting all program requirements. Manufacturers shall pay for all necessary shipping and transfer costs for the replacement of the analyzer selected for compliance testing. Manufacturers shall also pay for any required testing performed by their personnel or by an independent company.

The manufacturers shall provide training to AIR Program officials on all operational, maintenance, and quality control features of the analyzers, including full access to and use of inspection menus, audit menus and calibration menus, as well as optional programs offered to inspectors. Such training shall be conducted at the manufacturer's expense as a condition of certification and thereafter at reasonable intervals upon written request by the Colorado Department of Public Health and Environment

### 1.9 Certification Requirements

The manufacturer shall submit a formal certificate to the Colorado Department, of Public Health and Environment that states that any analyzer sold or leased by the manufacturer or its authorized representatives for use in the Colorado AIR Program will satisfy all design and performance criteria described in these specifications. The manufacturer shall also provide sufficient documentation to demonstrate conformance with these criteria including a complete description of all hardware components, the results of appropriate performance testing, and a point-by-point response to specific requirements. Previous certification by the California Bureau of Automotive Repair (BAR) is necessary for the analytical bench.

In addition, a full description of the company's service procedures and policies, as well as sample contracts, warranties, and extended service agreements, shall be provided as part of the certification application to ensure proper maintenance of all analyzers throughout their useful life. One fully functional analyzer shall be presented for evaluation and one additional fully functional analyzer for the certification process. If certified these units will remain in AIR Program possession for continued in-use evaluation for the life of the AIR Program. In the event that 1 % of overall unit sales exceed this two-unit base, in-use evaluation will require 1 % of overall unit sales for in use evaluation.

## 2.0 CONSTRUCTION DESIGN

### 2.1 Materials

All materials used in the fabrication of the analyzer and the appropriate housing assembly shall be new and of industrial quality and durability. Contact between non-ferrous and ferrous metals shall be avoided where possible. Suitable protective coatings shall be applied where galvanic action is likely. All mechanical fasteners shall have appropriate locking features. Use of self-tapping screws shall be limited. All parts subject to adjustment or removal and reinstallation shall not be permanently deformed by the adjustment or removal-reinstallation process and this process shall not cause deformations to adjoining parts. Only materials that are not susceptible to deterioration when in contact with automobile exhaust gases shall be used.

## 2.2 Construction

The analyzer shall be complete and all necessary parts and equipment required for satisfactory operation shall be furnished. A suitable means of storing the probes and sample hose shall be provided. A means of storing the "spares" inventory shall be included. All parts shall be manufactured and assembled to permit the replacement and/or adjustment of components and parts without requiring the modification of any parts or the basic equipment design. Where practical, components and/or subassemblies shall be modularized. The analyzer cabinet finish shall be baked enamel or another durable finish.

## 2.3 Mobility

The analyzer unit shall be designed for easy and safe movement over rough surfaces and/or graded surfaces (15° incline). The center of gravity and wheel design shall be such that the analyzer can negotiate a vertical grade separation of one-half inch (1/2") without overturning when being moved in a prescribed manner. Industrial grade, swivel casters shall be used to permit 360° rotation of the unit. The caster wheels shall be equipped with oil resistant tires and foot operated brakes capable of preventing movement on a 15° incline.

## 2.4 Electrical Materials/Construction

Unless otherwise specified, all electrical components and wiring shall conform to standards established by the Underwriters Laboratories, Standard for Electrical and Electronic Measuring and Testing Equipment (U.L.-1244).

The analyzer shall operate from an 115VAC, 60 hertz (Hz) supply. An input voltage variation of  $\pm 12$  volts shall not change analyzer performance more than 1 % of full scale. The analyzer must operate on a 15 AMP breaker. The power cable shall be equipped with a standard three-prong connector at the inlet, and shall have a National Electrical Code rating of SO, SJO or better with an overall length not to exceed 25 feet. Each emissions analyzer shall incorporate safety devices to prevent conditions hazardous to personnel or detrimental to equipment. The system shall be grounded to prevent electrical shock, and adequate circuit overload protection shall be provided. The analyzer shall incorporate an internal surge protector.

## 2.5 Sampling System

The sampling system consists of two subsystems: (1) external sampling system; and (2) internal sampling system. The external system shall include a sample probe, sample hose twenty-five feet (25') in length, a water trap, and a filtration system. The internal subsystem shall include but not necessarily be limited to, a sample pump and bypass pump, or an equivalent system approved by the Colorado Department of Public Health and Environment.

The sample probe shall incorporate a positive means of retention to prevent it from slipping out of the tailpipe when in use. A thermally insulated, securely attached handgrip shall be provided on the probe in such a manner that easy probe insertion using one hand is ensured.

The probe shall also have a smooth surface near the probe tip before the flexible portion of the probe to be used for sealing of the span gas adaptor necessary for field or on-board leak checking (vacuum or gas) or response time checking equipment. For standardization, it is recommended that the sealing surface be one-half inch (1/2") in outside diameter and one-half to one inch (1/2" to 1") long. A probe tip cap shall be provided for the sample system leak check. A probe tip adaptor or assembly shall be included for use with spark arrester type tail pipes.

The interconnecting hose shall be of such design and weight that the inspector can easily handle it. The hose shall be of non-kinking construction and fabricated of materials that will not be affected by or react with the exhaust gases. Molecular HC hang-up shall be minimized. The hose connection to the analyzer shall be reinforced at the point of maximum bending. The system shall be designed with a water trap in the bypass sample stream. The water trap shall be continually self-draining. The trap bowl shall be constructed of a durable transparent material. The water trap should be located as low as possible on the analyzer so that condensed water in the sample hose will drain into them. However, the trap must be placed in a position readily visible to the inspector. The sample for the analyzer shall be obtained from the top of the water trap. The sampling system shall be equipped with a suitable particulate filter upstream of the optical bench. There may be a secondary filter located in the sample hose, serviceable by the inspector. This filter must have sufficient capacity to filter the samples obtained during the routine testing of vehicles in the inspection station. Threaded connections must be used to attach the filter to the sample hose. A prompt shall be provided to the inspector indicating when the filter should be changed based on an indication of low flow (automatic lock-out) or other criteria approved by the Colorado Department of Public Health and Environment

The pumps shall contain corrosion resistant internal surfaces. The pumps shall have a minimum operational life of 2,000 hours without failure.

The sample pump system may be a single pump, multiple pumps, or a multiple stage pump or an equivalent system approved by the Colorado Department of Public Health and Environment. The sample pump shall have integral motor overload protection and be permanently lubricated. The bypass system shall be connected in the sample system so that any water condensed in the water trap is removed and dumped outside the system.

## 2.6 Storage Temperature

While in storage, the analyzer and all components thereof shall be undamaged from ambient air temperatures ranging from 0° F to 120° F.

## 2.7 Operating Temperature

The analyzer and all components shall operate within calibration limits in ambient air temperatures ranging from 41° F to 110° F.

## 2.8 Humidity Conditions

The analyzer shall be designed for use inside a building that is vented or open to outside ambient humidity. The analyzer, including all components of the analytical, sampling, and computer systems, shall operate within the required performance specifications at ambient conditions of up to 80% percent non-condensing relative humidity throughout the required temperature range, assuming the components are reasonably protected by the inspector from direct contact with water, or other condensing moisture. Failure of any component due to exposure to temperature and humidity extremes within this limits specified during actual use shall be corrected at the manufacturer's expense.

### 2.8.1 Temperature Control

Analyzer components that affect sensitivity and calibration shall have their internal temperatures controlled to maintain design temperature when exposed to prevailing ambient conditions. If internal operating temperatures are exceeded the analyzer will automatically lockout from any official inspection process.

2.9 Barometric Pressure Compensation

Barometric pressure compensation shall be provided. Compensation shall be made for elevations up to 6,000 feet (mean sea level). At any given altitude and temperature, errors due to barometric pressure changes of  $\pm$ two inches (2") of mercury shall not exceed the accuracy limits specified in this specification. Manufacturers shall describe in writing how compensation will be accomplished. The method used shall be acceptable if approved by the Colorado Department of Public Health and Environment.

2.10 Operational Design

A. Analytical System

These analyzers shall utilize non-dispersive infrared systems for measuring hydrocarbons (HC), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>). Oxygen (O<sub>2</sub>) shall also be measured and ambient air will be used for calibration purposes.

B. Readout Display/CRT Screen

The screen shall contain numerical HC (as hexane), CO, CO<sub>2</sub> and O<sub>2</sub> displays and a pass/fail indication at the completion of the inspection process. Pressure purge shall be a pass/fail indication, with pressure/time values recorded to file.

The numerical display shall be of a digital format. The resolution of the emissions display shall be as follows:

HC: XXXX ppm (as hexane)

CO: XX.XX%

CO<sub>2</sub>: XX.X%

O<sub>2</sub>: XX.X%

The **MINIMUM** display increments shall be 1 ppm HC, 0.01 % CO, 0.1% CO<sub>2</sub>, and 0.1% O<sub>2</sub>. The displays shall be capable of full-scale readings of 2000 ppm HC (as hexane), 9.99% CO, 16.0% CO<sub>2</sub> and 25.0% O<sub>2</sub>.

CRT display is to be employed for an exhaust sample validity (sample dilution). This indication will signal excess dilution in the exhaust system based upon measurement of CO + CO<sub>2</sub> emissions.

The analyzer shall be capable of selecting the pass/fail values (limits) based on vehicle model year, vehicle type, or other criteria. The system shall be designed in such a manner that the standards and vehicle groups may be readily revised by a modem software update.

Specific emissions limits and vehicle model year groupings are available in this Regulation Number 11, Part F: maximum allowable emissions limits for motor vehicle exhaust, evaporative and visible emissions for Light-Duty and Heavy-Duty vehicles.



2.11 Automatic Calibrations

The analyzer shall be designed to require an automatic two-point gas calibration for HC, CO, and CO<sub>2</sub>, and an automatic electrical zero and span check. (O<sub>2</sub> shall be measured by ambient air.) The automatic gas calibration shall be conducted every 24 or 72 hours, activated by the internal clock. The option of 24 HOUR calibration will be software selectable, with the default @ 72 hours. Electrical zero and span check (automatic) shall be required prior to each test sequence. User-friendly prompts shall be provided to the inspector to indicate every step needed to properly perform the required gas calibration (including when it is necessary to turn the gas cylinder valve on and off).

If the system is not calibrated, or the system fails the calibration or the zero and span check, an error message or fault indication shall be displayed and the analyzer shall be locked out to prevent the performance of an emissions inspection. Lockout will remain until the system is properly calibrated and passes a calibration check and zero and span check.

The calibration record will contain before and after calibration readings. The gas calibration shall ensure that accuracy specifications are satisfied and that linearity is correct at the required span points. The gas calibration and leak check procedures shall require no more than five (5) minutes to complete. The analyzer shall provide adequate prompts on the display to guide the inspector through the calibration procedure in a manner that minimizes the amount of calibration gas used.

The system shall have the capability of printing historical calibration data for specified date ranges by the AIR Program Auditor. (Audit menu, calibration history)

For HC, CO and CO<sub>2</sub>, analyzer manufacturers shall limit gas usage during the gas calibration procedure to two liters per point. The analyzer shall also be designed to keep the loss of calibration gas to an absolute minimum (less than 0.5 liters in 24 hours) if the calibration gas valve(s) is/are not shut off. Manufacturers shall provide an evaluation of this capability, consisting of at least four (4) analyzers, with their certification application materials and shall demonstrate this feature during certification.

The analyzer shall be equipped with a gas calibration port for the purpose of performing a probe to calibration port comparison for audit purposes. Gas auditing shall be accomplished by introducing standard gases into the analyzer either through the calibration port or through the probe. Span gases utilized for calibration shall be within two percent (2%) of the following points: Ambient air may be used to calibrate the O<sub>2</sub> sensor.

(HC)	300	ppm propane
	1.0	% carbon monoxide (CO)
	6.0	% carbon monoxide (CO <sub>2</sub> )
	Bal.	Nitrogen (N <sub>2</sub> )
(HC)	1200	ppm propane
	4.0	% carbon monoxide (CO)
	12.0	% carbon monoxide (CO <sub>2</sub> )
	Bal.	Nitrogen (N <sub>2</sub> )

The standard gases used to calibrate, and audit the analyzers shall satisfy the criteria included in the Federal Clean Air Act, Section 207 (b) and described in Subpart W of Part 85 of Chapter I, Title 40 of the Code of Federal Regulations. In order to ensure that the quality of the standard gases used in the program meet these specifications, all standard gases purchased by the inspection facility for use in the analyzer must conform to the requirements established in 1990 by the California BAR for Test Analyzer System Calibration Gases. Calibration gases must be purchased from a vendor that is approved by the Division,. These requirements include the testing and certification of the concentration, accuracy, precision, and purity of the standard gases to within the referenced limits and the labeling of individual gas canisters describing these and other specified parameters.

#### Automatic EVAP Pressure Calibration

The pressure test system is to be calibrated every 24 or 72 hours and zero/span checked before each inspection. Pressure calibration checks should be performed simultaneously with the gas calibration procedure. Calibration and/or zero span checks must pass or the analyzer must lockout from further testing until the discrepancies are corrected. All calibrations will be stored to the Cal.Dat file. Pressure system calibrations shall be performed in a maximum time period of 5 minutes, calculated independently from the gas calibration and leak check. The optional 24-hour option shall be selectable and defaulted to 72 hours.

#### A. Automatic Leak Check

An automatic leak checking system shall be provided that will allow the vacuum side of the system to be checked for leakage. Appropriate valves lines, and switches shall be installed to permit this operation. Minimal activity by the inspector, such as setting the probe in a holder or capping the probe, is permitted, provided errors resulting from improper inspector action would be identified by the computer and would require corrective actions. Improper action would cause the system to fail a leak check, and automatically lockout. User-friendly prompts shall be provided to the inspector to indicate every step needed to properly perform the required leak check (including when it is necessary to turn the gas cylinder valve on and off).

A system leak check shall be accomplished every 4 or 24 hours and in conjunction with the gas calibration performed every 24/72 hours, activated by the internal clock. The 4-hour option shall be software selectable with the 24 hours as the default value. Four-hour leak checks are required only for those facilities performing more than 4000 inspections per year. The analyzer shall not allow an error of more than  $\pm 3\%$  of reading using mid-range Colorado certified span gas to perform the leak check. Fittings and connectors used on the sample hose and probe shall be constructed to inhibit the bypass of the leak check. A maximum of two liters of calibration gas may be used to perform the leak check. If the system is not leak checked, or the system fails a leak check, an error message or fault indication shall be displayed, and the analyzer will be locked out to prevent the performance of an emission inspection, until the system is properly leak checked and passes.

#### B. Automatic HC Hang-Up Check

The analyzer shall be designed for using ambient air induced through the sample probe, prior to each test sequence. The analyzer shall have a CRT prompt/indicator. "Hang-up" activation shall cause the analyzer to automatically sample ambient air through the sample line and probe. The system shall continue to sample room air for a maximum of **150** seconds or until the HC response is below 20-ppm hexane.

If the HC hang-up does not drop below 20 ppm within **150** seconds, a message shall be displayed indicating possible dirty filters or sample line. If after **150** seconds HC levels are not below specified values, the test shall be discontinued until HC hang-up is corrected. When the level stabilizes below this value, an indication that testing may begin shall be displayed. The analyzer shall be locked out from operating until the HC level is met.

C. Vehicle Diagnostics

During analyzer warm-up, emissions diagnostics and other gas reading functions shall be prohibited. After successful warm-up and for the purpose of vehicle diagnosis or repairs, the analyzer shall have a menu selection that will allow the analyzer to continuously monitor the vehicle exhaust.

The automatic data collection system shall be prevented from operating anytime the analyzer is not being used in the official emissions inspection mode.

D. Dilution

The analyzer manufacturer shall document to the satisfaction of the Colorado Department of Public Health and Environment that the flow rate on the analyzer shall not cause more than 10% dilution during sampling of the exhaust at normal idle (10% dilution defined as sample of 90% exhaust and 10% ambient air). Manufacturers shall utilize the procedures specified by the BAR for demonstrating this dilution criterion. The analyzer shall be equipped with a feature to identify vehicle exhaust system leaks and sample dilution. The preferred method for identifying leaks is monitoring the CO & CO<sub>2</sub> levels in the exhaust. Other additional techniques that can demonstrate improved sensitivity to leaks may also be used.

DILUTION VALUES:

All light duty vehicles: 6%

All heavy-duty vehicles: 5%

If the CO + CO<sub>2</sub> reading is less than the limit, the inspector shall be prompted to check the exhaust system for leaks and to make sure that the sample probe is all the way into the tailpipe. If the excessive dilution is detected after the initiation of the test sequence, the analyzer output shall display "SAMPLE DILUTION". If dilution continues the inspector shall be required to "Abort Test". The system shall store the "Abort Test" indication.

E. Engine Tachometer

A digital display tachometer shall be CRT displayed for the purpose of measuring engine speed. The tachometer operation shall be by two means; (1) radio frequencies "RF" type transmitter/receiver that requires no direct vehicle connection and can detect engine RPM on vehicles utilizing "DIS" systems. (2) a cable type connection capable of detecting engine RPM from all forms of current O.E.M. ignition technology. Tachometer performance shall be no less than; RPM with a 0.5 second response time and an accuracy of  $\pm 3.0\%$  of actual RPM. During an official inspection process, the software will prompt the inspector to shut the engine off while connecting the RPM probe (only if a cable connection is being made). A software "HELP" screen will be available to assist the inspector in locating an RPM signal. This information may be supplied or reviewed by the Colorado Department of Public Health and Environment. Based on the vehicle identification information available to the inspector, the analyzer will prompt the inspector as to which vehicles require a specific type or method of connection of the tachometer pick-up. Analyzers shall be provided with all the software and hardware that is necessary to make them capable of reading engine RPM from all O.E.M. ignition technologies in use at the time of certification, Possible updates may be required to enable future ignition systems to be monitored for engine RPM.

F. Analytical Bench Accuracy

Each analyzer shall meet the following analytical accuracy requirement:

<u>Channel</u>	<u>Range</u>	<u>Accuracy</u>
HC ppm	0-400	$\pm 12$ ppm
	401-1000	$\pm 30$ ppm
	1001-2000	$\pm 80$ ppm
CO%	0-2.00	$\pm 0.15\%$
	2.01-5.00	2.040%
CO <sub>2</sub> %	04.0%	$\pm 0.6$
	4.1-14.0	$\pm 0.5\%$
	14.1-16.0	$\pm 0.6\%$
O <sub>2</sub> %	0-10.0	$\pm 0.5\%$
	0-10	$\pm 1.3\%$

The analyzer display resolution electronics shall have sufficient resolution and accuracy to achieve the following:

HC	1 ppm	HC
CO	0.01%	CO
CO <sub>2</sub>	0.1%	CO <sub>2</sub>
O <sub>2</sub>	0.1%	O <sub>2</sub>

G. Drift

If zero and/or calibration drift cause the infrared signal levels to move beyond the adjustment range of the analyzer, the inspector shall be locked out from testing and instructed to call for service.

H. Warm-Up

The analyzer shall reach stabilized operation in an inspection station environment within 15 minutes at ° 41 degrees Fahrenheit from “power on”. The instrument shall be considered “warmed-up” when the zero and span readings for HC, CO, and CO<sub>2</sub> have stabilized, within ± 3% of full range of low scale, for five minutes without adjustment.

Functional operation of the gas-sampling unit shall remain disabled through a system lockout until the instrument meets stability and warm-up requirements. If the analyzer does not achieve stability with 15 minutes, from “power-on” , it shall be locked out from I/M testing and a message shall be displayed instructing the inspector to call for service.

During the warm-up, the Main Menu shall be displayed unless an optional functional menu or menus are offered. The analyzer system shall lock out all bench related functions during warm-up. During warm-up, a message under the main menu shall be prominently displayed as follows: “Warm-up in progress - checking for stability”. During the initial entry into the “warm-up” period, and before any other menu can be selected, the software will automatically enter a “bulletin display” function and display any messages or bulletins forwarded from the AIR Program host system via modem transfer in the past 72 hours. This screen will reference the inspector.dat file and require each inspector to enter their access code as verification of receipt, before allowing that inspector to Proceed with an inspection. No inspector can enter into an official inspection without having “logged on” as having seen the Bulletin screen. When stability is achieved and the warm-up requirements are satisfied, access to gas bench functions shall be permitted.

I. System Response Time Requirements

The response time from the probe to the display shall not exceed eight (8) seconds to 90% of a step change in input, nor will it exceed 12 seconds to 95% of a step change in input. For the O<sub>2</sub> sensor, the response time shall be no more than fifteen (15) seconds to 90% of full scale.

J. Optical Correction Factors

The hexane/propane equivalency factor (PEF) shall be limited to values between 0.49 and 0.52. If an optical bench is used that can demonstrate accuracy of propane/hexane identification within specification, using a range greater or lesser than indicated, it will be considered. Factor confirmation shall be made on each analyzer assembly by measuring both N-hexane and propane on assembly line quality checks. The PEF shall be permanently stored in non-volatile memory. The PEF shall be displayed on the monitor on request by inquiry through the menu system. The optical bench shall be marked with a permanent “stamped” type tag identifying its PEF.

The signal strength from the source to the detector for all channels shall be monitored such that when the signal degrades beyond the adjustment range of the analyzer, the analyzer shall be locked out from operation, i.e. fail calibration.

K. Interference Effects

The effect of extraneous gas interference on the HC, CO, and CO<sub>2</sub> analyzers shall not exceed ±10 ppm HC, ± 0.05% CO, and ±0.20% for CO<sub>2</sub>.

The instrument design shall insure that readings do not vary as a result of electromagnetic radiation and induction devices normally found in the inspection environment (including high energy vehicle ignition systems, RF transmission radiation sources, and building electrical systems). In addition, the manufacturer shall ensure that the analyzer processor and memory components are sufficiently protected to prevent the loss of programs and test records.

2.12 Gas Calibration File

At the conclusion of each gas calibration the required data shall be placed in the CAL.DAT file.

2.13 Microcomputer Specifications

A. A standard microcomputer must be included in the analyzer and is to be used to control all analyzer functions. Each vendor is to develop DOS executable programs for each required function. These programs shall:

1. control each of the analyzer functions and time of function;
2. examine and obtain values from all of the analyzer sensors;
3. read and write information to diskette in standard DOS format; and
4. copy the analyzer, inspection station identification information from the hard disk onto each new floppy diskette when formatted.

The Colorado Department of Public Health and Environment reserves the right to add additional programs and functional performance requirements, up to the technical limits of the hardware, to improve the I/M program.

Sufficient flexibility shall be provided in the design of the microcomputer system to allow expansion of the analyzer to include, but not be limited to, the following additional capabilities:

1. connect and recover data from vehicle on-board diagnostic systems (OBD) meeting SAE specifications when they become available;
2. monitor vehicle recall data; identify, record and process data as required when an official EPA/SAE format is identified.
3. accommodate additional input channels in both analog and digital form. Two free slots, 16 bit capability.

The manufacturer may offer additional features that utilize the microcomputer as a stand-alone personal computer by providing optional software to perform various non-I/M functions. Such offerings must not interfere with the inspection requirements, or in any manner affect or allow the inspector to tamper with the inspection-related computer programming or data files.

The analyzer shall be equipped with an internal clock that operates independently from the power source and will provide accurate and automatic date and time information for the following functions:

- a. each test performed;

- b. automatic gas calibration and pressure test check (72 hours); (24 hour) optional
- c. automatic leak check (4 or 24 hours and every 24/72 hours for automatic gas calibration), and leak check combination.
- d. audit sequence:

All equipment and software submitted for Colorado certification must be the full and current configuration proposed for sale. Partial, dated, or incomplete models are not acceptable.

Acceptance of the microcomputer portion of the Colorado 94 Analyzer system will be dependent upon the satisfactory performance of the full-proposed configuration meeting all the requirements of this specification.

The proposed hardware configuration must be fully supported by all software and/or operating systems listed in the acceptance requirements or elsewhere in these specifications. Performance tests to prove compatibility will be conducted. The vendor will bear all shipping and equipment preparation charges for the certification testing.

2.14 Standard Hardware: Minimum Required Configuration

1. Operating System

DOS Version 6.2 or most current

2. Processor

The microprocessor must be fully compatible with the Intel 80486 microprocessor. Upgradable to Pentium technology.

3. RAM Memory

The system must contain at least 2 MB of user available RAM. (expandable to 16 MB)

4. Power Up Sequence

The system must include a power up sequence that provides a self-diagnostic routine to check the on-line presence of critical PC components (including, at a minimum, the processor, firmware ROM, hard disk controller, keyboard, clock, modem, printers, bar code reader I/O ports, setup RAM and memory).

5. Video

The CRT display must be at least 12" in diagonal measure and operate in a VGA mode.

The software shall automatically blank the screen or use a screen saver mode, if no keyboard entry is made for 10 minutes. The display shall return when the inspector strikes any key.

6. Floppy Disk

Each unit must come with an IBM compatible floppy disk drive that will permit full usage of 2sHD 1.44 Mb 3.5" removable media. The drive must be located in a secured area accessible only to authorized AIR Program Service representatives. That secured drive must also include an approved method to limit logical access. Colorado Department of Public Health and Environment will test the system for drive security and it should not provide access to the secured floppy except through the approved security procedure. The secured floppy drive shall be designated the "A" drive.

7. Hard Disk

Each unit must come with at least 120 megabytes of hard disk storage. The vendor may use up to 40 megabytes for their programs and data provided at least a full 80 megabytes of usable storage is available for Colorado Department of Public Health and Environment and user information. The hard disk is to be self-parking (where applicable), shock mounted, and able to operate reliably in the inspection environment. The hard disk must also include a Colorado Department of Public Health and Environment approved method of limiting access to data and programs. The hard disk containing programs and data files shall be designated the "C" drive.

8. I/O Ports

The unit must include sufficient I/O ports of proper configuration to allow the connection of all required options and the capability to add additional I/O boards.

9. Keyboard

The Colorado 94 Analyzer keyboard must be fully interfaced with the microcomputer and have all of the necessary normal, numeric, cursor, control, shift, alternate, and function keys needed to operate a standard IBM PC compatible microcomputer, preferably 101 keys should be provided.

10. Bar Code Scanner

The bar code scanner shall be equivalent to the PDF 1000 "HV" (High Visibility) Scanner from Symbol Technologies. Performance specifications are included in Technical Specification Appendix A. The PDF 1000 "HV" is a scanner capable of reading both 1-D and PDF-417(2-D) bar codes.

11. Hard Disk Expansion

System must include a hard disk interface that will fully support a second internal disk drive of the same type as the original type drive or a functional equivalent approved by the Colorado Department of Public Health and Environment that does not compromise tamper-resistance.

12. Additional Storage

3.5" 1.44 Mb Floppy Disk Drive IBM Optical disk drive, floptical, CD ROM reader etc., these options would be for manufacturer offered look up tables, service information or other options requiring additional storage capability.



13. Communications

Hayes compatible modem at 14,400B, M.N.P. Level 5. Error correction: Microcom networking protocol (M.N.P.) levels 1-4 and V.42 data compression: M.N.P. level 5 and V.32BIS/V.42BIS. Protocol will be provided within the operational software package. Modem communications will be necessary during the inspection process for V.I.N. verification, multiple "I" Test Control, vehicle recall etc., from the Network System Host Computer.

2.15 Required Printers

A. Diagnostic printer:

A 24 pin impact printer shall be supplied which is dedicated to the task of printing designated information on a VEHICLE DIAGNOSTIC FORM, or other repair type information. Continuous, fanfold, preprinted (ghost printed certificates) will be used. The printer shall print information on the certificate using 12 characters per inch and 80 characters per line.

B. Certificate Printer:

The certificate printer is to be a "thermal transfer" technology printer, capable of producing PDF 417, two dimensional bar code and Code 39, one-dimensional bar code. As of date, Standard Register produces a model of printer that meets or exceeds all requirements necessary to print upon the required certificate. This model is a PT650 Thermal/Thermal Transfer Printer. Specifications of the certificate printer shall be Standard Register FT650 or equivalent. With equivalency being defined as successful completion of printing, security, storing and dispensing of the required certificate. Final acceptance of alternative printers lies with written State approval.

Standard Register PT650 technical specifications are included in the Technical Specification Appendix B.

PHYSICAL SPECIFICATIONS OF CERTIFICATE:

Physical specifications of the certificate, to include print fields, physical design, materials and sizing are to be determined by the Department of Revenue.

C. Certificate Security:

The inspection certificate printer and certificate storage area shall be located in a secured area. Access to the area securing the printer and certificates shall be available only to the licensed inspector at the station. The certificate storage area shall have a redundant security system utilizing both a hardware lock and a software lock that meets Colorado Department of Public Health and Environment approval. Certificates will be prevented from being "pulled" through the printer. A form of printer locking must be utilized. The secured area containing certificates and the certificate printer, shall be designed so that the same key can be used to open any access doors that secure any optional storage media. If any of these doors are opened, a microswitch (or equivalent) shall be used which prevents the printing of certificates and records each event with time and date to an entry.dat file.

The purpose of the software lock is to restrict access to the printer with the following exceptions: loading and aligning certificates prior to printing, clearing paper misfeed or jam problems, etc., and to provide a record of the personnel performing those functions.

The area containing the certificates shall be located so that proper routing is maintained on the certificates as they are fed through the printer.

If tampering occurs, a software lockout algorithm shall be activated which aborts any existing test sequence and prevents further emission testing until an AIR Program official clears the lockout.

There shall be easy access to the vehicle diagnostic report printer so that the inspector can easily replace paper, clear paper jams and change ribbons.

**2.16 Clock/Calendar**

The analyzer unit shall have a real time clock/calendar which shall make available the current date and time. Date will be in month, day, year format and time will be in 24-hour format. The AIR Program system host computer shall update both time and date during each transfer of data via the system modem.

The date/time, along with the time the test started and when it ended, is to be included on the test record. The start time is when the inspector's access code is entered and the end time is when the analyzer data is written to the test file.

If the clock/calendar fails or becomes unstable (as referenced to the program host system during modem data transfer), the analyzer unit shall be locked out from I/M testing and a message shall be displayed indicating that service is required.

Resetting of the clock, independent of the host updating, shall require controlled access.

**2.17 Lockout Notification**

The analyzer shall alert the inspector of any lockout situation by prominently displaying a message on the CRT. Any lockout condition will be stored to file.

**2.18 Vehicle Diagnosis**

The analyzer shall be capable of menu selection that will allow the analyzer to be used as an ordinary garage type emissions analyzer for general automotive repair work and diagnostics.

**2.19 Software Loading**

The inspector shall not have to load the microcomputer's operating or applications software to operate the analyzer. On each POWER ON of the analyzer, the analyzer shall automatically do all microcomputer component self-diagnostics, memory checking, and loading of all necessary operating software without inspector intervention. Upon satisfactory computer component check out, the applications software is to present a menu of available analyzer operations. All offered features are to be menu-driven. For each feature, a context sensitive, on-line help facility is to be provided which can be accessed preferably with a single keystroke.

**3.0 DISPLAY PROMPTS AND PROGRAMMING CRITERIA REQUIREMENTS**

Operational software requirements will be available from the Division upon request.

**ATTACHMENT I PDF 1000 Scanner**

This document is contained in the Air Pollution Control Division's Emissions Technical Center Procedures Manual and is incorporated by reference.

**ATTACHMENT II Thermal Transfer Printer**

This document is contained in the Air Pollution Control Division's Emissions Technical Center Procedures Manual and is incorporated by reference.

**ATTACHMENT III Colorado Automobile Dealers Transient Mode Test Analyzer System**

This document is contained in the Air Pollution Control Division's Emissions Technical Center Procedures Manual and is incorporated by reference.

**ATTACHMENT IV Specifications for Colorado 97 Analyzer**

**INTRODUCTION**

Colorado's current enhanced I/M program contains a two-speed idle (TSI) emissions testing component, the Colorado 94 Test Analyzer System that is based upon BAR 90 technology. The TSI program utilizes a decentralized, independent inspection only format encompassing the nine Front Range counties. The DMA program is expanding to the North Front Range counties of Weld and Larimer in 2010. This inspection only population of independent inspectors will conduct inspections utilizing a new Colorado 97 emissions analyzer.

The demands for more accurate analytical information as well as a more automated inspection process with real-time data transfer has superseded the capabilities of BAR 90 (Colorado 94) technology. System enhancements are necessary to meet Colorado's inspection needs. These enhancements and other technical details are described in this document.

**1.0 GENERAL**

It is expected that the Colorado 97 software will be Colorado 94 software upgraded to BAR 97 and SAE J1978 and J1979 compliance.

**1.1 Design Goals**

The specifications that have been developed are designed utilizing a personal computer system. The analyzer system must be capable of performing uniform and consistent emission tests for Colorado's Automotive Inspection and Readjustment (AIR) Program. Features of the analyzer include: vehicle emissions measurements of hydrocarbon (HC), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and oxygen (O<sub>2</sub>); engine RPM measurements, exhaust dilution determinations, pressure test system for EVAP; OBD II monitor readiness and diagnostic trouble code retrieval; data entry; data retrieval tables; a dedicated printer (for vehicle inspection certificates; data recording on hard drive or removable media; modem for "on-line real time" data transmission; monitor information display to the inspector; bar code reader and printing capabilities; and fully menu driven, interactive simple microprocessor controlled operation.

Additional, automatic features required include: gas calibrations, zero and span checks, pressure calibrations, gas auditing procedure; leak checks, HC hang-up checks, audit menus (i.e., data read system), test sequencing, and low-flow checks. The analyzer shall be designed and constructed to provide reliable and accurate service in the automotive environment. The software used in the analyzer shall consist of a process control system as well as data look-up files. Security shall be provided to prevent unauthorized modifications to the software or test data and recording unauthorized entry (tampering) and locking out of the inspection process when detected.

The emissions analyzer software shall be designed for maximum operational simplicity.

It shall also be capable of providing emission-reading characteristics, independent of the inspection function, which can be used for vehicle diagnostic.

1.2 Useful Life

The useful life of the analyzer shall be a minimum of five years.

1.3 Nameplate Data

A nameplate including the following information shall be permanently affixed to the housing of the analyzer:

Name and Address of Manufacturer

Model Description

Serial Number

Date of Assembly

The manufacturer shall affix a stick-on type label to the analyzer that contains a toll-free telephone number for customer service. This number can also be included in a service software message.

1.4 Manuals

Each analyzer shall be delivered with the following manuals:

- A. Reference Operating Instructions
- B. Operation Instruction Manual
- C. Maintenance Instruction Manual (limited)
- D. Initial Start-up Instructions

Colorado 97 Analyzer manufacturers may consolidate manuals. The manuals shall be constructed of durable materials and shall not deteriorate as a result of normal use over a five-year period. The analyzer housing shall provide convenient storage for each manual in a manner that will:

- E. Allow easy use.
- F. Prevent accidental loss or destruction.

1.5 Certification Documentation

The analyzer software shall be fully documented. Two copies of the documentation listed below shall be submitted to Colorado Department of Public Health and Environment as part of the certification application.

- A. Complete program listings. Program listings may be on disk. They are not required to be submitted with the application for certification.
- B. Functional specifications.

- C. Functional flowcharts of the software.
- D. Example inputs and outputs from all processes.
- E. Detailed interface information on system components including the identification of protocol and output specifications.
- F. All file layouts with file names, file types, file security, field names, field types, field sizes, and field editing criteria.

Documentation provided by the vendor to meet this requirement will be treated as proprietary information by Colorado Department of Public Health and Environment.

Prior to certification of any Colorado 97 emissions analyzer for sale in Colorado, the manufacturer of such analyzer shall provide the Division with software source codes and all other technical information (including, but not limited to all working codes, schematics and drawings) necessary to operate, maintain, calibrate and repair such analyzer in the event that the manufacturer or its agent ceases providing adequate maintenance, calibration and repair services in Colorado. The manufacturer shall keep such information current, and will provide the Division with copies of any and all changes. So long as such maintenance, calibration and repair, services are available from the manufacturer or its agent, the Division shall protect such information as confidential commercial data if it is clearly marked as such. In the event that the manufacturer becomes insolvent or stops providing adequate maintenance, repair or calibration services in Colorado all such information shall be the property of the Division and may be released to a third party as necessary to repair, calibrate and maintain the analyzers.

#### 1.6 Warranty Coverage/Service Contract

A written warranty coverage agreement, signed by an authorized representative of the equipment manufacturer and the vehicle inspection station owner, which provides a complete description of coverage for all systems and components and all manufacturer provided services listed in Section 1.8, must accompany the sale or lease of each Colorado 97 emissions analyzer.

An extended service contract shall be available upon the expiration of the manufacturers original warranty period. Original manufacturer's warranty shall be a minimum of one year from the date of purchase. The "service contract" shall be offered in one-year increments. The "service contract" agreement shall include the inspection station owner's name, inspection station address, telephone number, inspection station identification number, analyzer serial number and detailed terms of the agreement. The agreement must extend for at least one year and if purchased, the expiration date must be entered to software file and monitored by the system clock. Approaching expiration messages must be displayed at daily system start-up beginning thirty days prior to expiration and messaging "30 days until expiration, 29 days etc." Renewals shall be offered at the inspection station owner's request and governed by "good business" practices between the parties involved. Service contract agreements must be available by the manufacturer for the mandated life of Colorado AIR Program. Cost disclosures and detailed descriptions of coverage's must be available in printed form and distributed to all Colorado 97 users. Cost disclosure shall also be made for "consumable" inventory items 1.8B. This information would most appropriately be presented with the original manufactures warranty.

## 1.7 Tampering Resistance

Controlled access design shall be the responsibility of the manufacturer and is subject to approval by Colorado Department of Public Health and Environment. Analyzer service personnel, inspectors or others shall be prohibited, to Colorado Department of Public Health and Environment satisfaction, from creating or changing any test results, programs or data files contained in the analyzer. Manufacturers shall utilize special BIOS partitions, or other appropriate software and hardware provisions, deemed necessary to protect the I/M files and programs. The protection features shall prevent access to the secured floppy disk drive and those portions of the hard disk containing I/M programs and test data or files.

The emission analyzer and the sampling system shall be made tamper-resistant to the Colorado Department of Public Health and Environment satisfaction. At a minimum, the manufacturer shall develop tamper-resistant features to prevent unauthorized access through the cabinet. Microswitches, keyed locks, or software algorithms requiring the use of a password which can be changed by the Colorado Department of Public Health and Environment would all be acceptable provided the physical or logical design effectively prevents unauthorized access.

Manufacturers may offer analyzers with additional disk drives that can run optional software application programs.

If tampering occurs, a software lockout algorithm shall be activated which aborts any existing test sequence and prevents further inspections until an authorized AIR Program official clears the lockout.

The lockout system shall be designed so that an AIR Program official from the audit menu can activate it. Only AIR Program Auditors may remove lockouts put in place from the audit menu. Manufacturers shall develop a system by which their service technicians shall be prevented from clearing "tamper" lockouts.

Optional software packages shall not interfere with the normal operation of the I/M inspection and testing software, and shall not compromise the tamper-resistant features of the analyzer.

Manufacturer field service representatives will not have access to DOS, unless assurances acceptable to Colorado Department of Public Health and Environment have been provided that insure, integrity of the system will not be jeopardized.

## 1.8 Manufacturer Provided Services

The manufacturer shall agree to provide the following services to the inspection station as part of the manufacturer's original warranty and thereafter as a portion of the service contract agreement. The cost of a service agreement is to be listed on a year-by-year basis. Future charges cannot exceed the amount published.

- A. Delivery, installation, calibration, and verification of the proper operating condition of a Colorado 97 emissions analyzer.
- B. Quarterly (90 days) examination, calibration, and routine maintenance of the analyzer and sampling systems. Full systems support and repair, including loaner units. Upon initial sale or loan, provide "extra" printer medium (1 ea.) sample filter(s) (2), sample hose (1) and sample probes (1). Maintain the "extra" consumable inventory upon examination and provide a software history file for the replacement of consumables accessible to AIR Program officials. Consumables and the cost(s) thereof must be disclosed in the service agreement.

- C. Instruct all certified inspectors employed by the inspection station at the time of installation in the proper use, maintenance, and operation of the analyzer. The analyzer shall contain a feature that will allow an inspector to go through the complete inspection procedure without generating an official inspection record. This function will be used for evaluating inspector performance, by AIR Program officials, or by the manufacturer for demonstration purposes. The "training mode" shall not require the use of an inspector's access code or allow access to secured areas of hardware or software. The display shall show a message throughout the inspection that this is not an official inspection. Vehicle inspection reports shall indicate to the satisfaction of Colorado Department of Public Health and Environment that they are for training only. No official Certificate of Compliance will be generated during the training exercise.
- D. On-site service response by a qualified repair technician within two (2) business days, (48 hours) excluding Sundays and national holidays, of a request from the inspection station. The names, toll-free telephone numbers, and service facility addresses of all manufacturer representatives responsible for equipment service shall be provided to the inspection station. A service representative shall be available at all times during normal working hours. Sundays and national holidays are not included. All system repairs, component replacements, and/or analyzer adjustments, shall be accomplished on-site within 48 hours after a service request has been initiated. If the completion of this work is not possible within this time period, a Colorado 97 loaner unit shall be provided until the malfunctioning unit is properly repaired and returned to service. Service representatives shall have a software driven menu option that allows the transfer of inspection station, inspector information and other applicable data files from one analyzer to another without manual inputs and without transfer of previous test files.
- E. Updates of the "Functional" software will be limited to once per year at no cost.
- Updates of operational software, i.e., file based information will be on an "as required" basis. All forms of software updating will utilize modem technology for the updating process. File updates are at no cost and every effort will be made to minimize them.
- F. The analyzer software shall be designed so that AIR Program officials can insert a disk, prepared by the manufacturer, into the Program system host, and update the existing software version, via modem. A system of manual updating by program officials utilizing the auditor's menu shall also be available. Look-up tables and message screens shall be designed sufficiently separate from the main operations software so that it is not possible, to interfere in any way with the operations of the analyzer.

Colorado Department of Public Health and Environment will require the manufacturer to render updates as necessary in the first year of the program to ensure the program meets all design criteria. Thereafter software updates will be limited to once per year at no cost. Since modem software updating will be utilized, there are no costs to the analyzer owner. A software version number, consisting of a four character alpha-numeric code made up of the last two digits of the year followed by a two character version number, shall be recorded in the analyzer and included on each vehicle test record. The analyzer manufacturer shall not modify any existing software version without obtaining written approval from Colorado Department of Public Health and Environment.

Colorado Department of Public Health and Environment may require the manufacturers to conduct on-site or laboratory testing of in-use analyzers in order to document continued compliance. When an analyzer is removed from the field, for repair or testing, manufacturers shall supply the inspection station from which it was removed with a temporary replacement unit meeting all program requirements. Manufacturers shall pay for all necessary shipping and transfer costs for the replacement of the analyzer selected for compliance testing. Manufacturers shall also pay for any required testing performed by their personnel or by an independent company.

The manufacturers shall provide training to AIR Program officials on all operational, maintenance, and quality control features of the analyzers, including full access to and use of inspection menus, audit menus and calibration menus, as well as optional programs offered to inspectors. Such training shall be conducted at the manufacturer's expense as a condition of certification and thereafter at reasonable intervals upon written request by Colorado Department of Public Health and Environment

#### 1.9 Certification Requirements

The manufacturer shall submit a formal certificate to Colorado Department, of Public Health and Environment that states that any analyzer sold or leased by the manufacturer or its authorized representatives for use in Colorado AIR Program will satisfy all design and performance criteria described in these specifications. The manufacturer shall also provide sufficient documentation to demonstrate conformance with these criteria including a complete description of all hardware components, the results of appropriate performance testing, and a point-by-point response to specific requirements. Previous certification by the California Bureau of Automotive Repair (BAR) is necessary for the analytical bench.

In addition, a full description of the company's service procedures and policies, as well as sample contracts, warranties, and extended service agreements, shall be provided as part of the certification application to ensure proper maintenance of all analyzers throughout their useful life. One fully functional analyzer shall be presented for evaluation and one additional fully functional analyzer for the certification process. If certified these units will remain in AIR Program possession for continued in-use evaluation for the life of the AIR Program. In the event that 1 % of overall unit sales exceed this two-unit base, in-use evaluation will require 1 % of overall unit sales for in use evaluation.

### 2.0 HARDWARE SPECIFICATIONS

#### 2.1 General

Colorado 97 hardware shall be compliant with the BAR 97 Section 2 specification, the August 2008 revision available at: <http://www.bar.ca.gov/pdf/Industry/GasBlenderSpecifications.pdf>

And/or current SAE on-board diagnostic "J" standards including but not limited to J1978 and J1979 available from SAE.

NOTE: The Colorado 97 is not an ASM system. ASM hardware, i.e. the dynamometer and NOx sensor, are not needed. By extension, ASM software is also unnecessary.

#### 2.2 Span Gases

The Colorado 97 shall use two tri-blend span gas blends meeting the current California BAR97 calibration span gas low (blend 31) and high (blend 34) specifications, bearing an official "Colorado Approved Calibration Gas" label as shown in Attachment VI of this Appendix A, and supplied by a vendor approved by the Division.



2.3 Audit Gases

Audit gases shall meet California BAR97 audit gas specifications for low range and mid range #2 audit gases without NO, as approved by the Division.

**3.0 SOFTWARE COMPONENTS**

3.1 Communication and Data Field Specification

Operational software requirements at a minimum must support the existing Colorado 94 Communication Protocol and Data Field Specification. For inquiries referencing the Communication and Data Field Specification, please contact the Colorado Air Pollution Control Division

3.2 Society of Automotive Engineers (SAE) "J" Standards

The Colorado 97 shall be compliant with current SAE on-board diagnostic "J" standards including but not limited to J1978 and J1979.

3.3 OBD II

The Colorado 97 must be capable of accessing OBD II readiness monitors and diagnostic trouble codes. The operational software requirements will be available from the Division upon request.


3.4 Forms

The Colorado 97 shall be capable of completing the current, print on demand Vehicle Inspection Report (VIR) form. Examples of the VIR are following this Section 3.0.

3.5 Upgrades

Software shall be updated/upgraded per Section 1.8 of this Attachment IV.

Vehicle Inspection Report – Passing Form




DR 2071A (01/31/12)

## VEHICLE INSPECTION REPORT

### STATE OF COLORADO

### RESULTS

A2510FEL9H

Overall Result	Emissions	Equipment Inspection	On Board Diagnostics	Smoke	Total Amount Paid
PASS	PASS	PASS	PASS	PASS	0.00

VEHICLE INFORMATION				OFFICIAL USE ONLY	
DATE: 26-OCT-2011 11:29:41	YEAR: 2007	STATION: 5025E	TEST: 2		
VIN:	MAKE: CHR	LANE: 01	TVFY: B8B6		
PLATE:	MODEL: PT CRUISER	ODOMETER: 22000	VVFY: E7BA		

EMISSIONS TEST INFORMATION				EQUIPMENT INSPECTION	
	READINGS	LIMITS	RESULTS		
HC GPM	0.0099	4.0000	PASS	Catalytic Converter Presence:	PASS
CO GPM	0.0011	20.0000	PASS	Air Injection System Presence:	PASS
CO2 GPM	204.1342			Oxygen Sensor Presence:	PASS
NOx GPM	0.0002	9.0000	PASS	Gas Cap Presence:	PASS
				Gas Cap Integrity:	


ON BOARD DIAGNOSTICS	
Check Engine Light: PASS	Check Engine Light Command Status: Off
Diagnostic Trouble Codes:	P0190, Mass or Volume Air Flow Circuit Malfunction
	P0200, Injector Circuit Malfunction
	P0201, Injector Circuit Malfunction - Cylinder 1
	P0300, Random/Multiple Cylinder Misfire Detected
	P0308, Cylinder 2 Misfire Detected

**CONSUMER INFORMATION**

Congratulations, your vehicle has passed the emissions inspection. If you are renewing your registration by mail, follow the instructions regarding the renewal process located on the back side of your renewal notice. If you are renewing your registration in person, the Certificate of Emissions Control, located below, must accompany all supporting documents at the time of registration. After 24 hours, you may renew your registration online at [www.colorado.gov/renewplates](http://www.colorado.gov/renewplates). If the Certificate of Emission Control is lost, a new inspection is required at the owner's operating expense. For questions, comments and complaints contact Air Care Colorado at 303-456-7090 or the Department of Revenue at 303-205-5603 and if located outside the Denver Metro Area, call 888-200-8827. Retain this document in the vehicle as proof of emission compliance.

PLEASE REMOVE THE "CERTIFICATE OF EMISSIONS CONTROL", LOCATED BELOW, AND INCLUDE IT WITH YOUR RENEWAL CARD AND REGISTRATION PAYMENT. DO NOT STAPLE THIS DOCUMENT OR PAYMENT TO YOUR RENEWAL CARD.

----- CUT HERE -----



State of Colorado

# VOID

A2510FEL9H

DATE 26-OCT-2011

YEAR 2007

PLATE


VIN

MAKE



FACILITY 5025E

PT CRUISER

INSPECTOR 55555



Vehicle Inspection Report – Failing Form

DR 20718 (01/18/12) 	<h2 style="margin:0;">VEHICLE INSPECTION REPORT</h2> <h3 style="margin:0;">STATE OF COLORADO</h3> <h2 style="margin:0;">RESULTS</h2>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">B1610DL P91</div> 			
Overall Result	Emissions	Equipment Inspection	On Board Diagnostics	Smoke	Total Amount Paid
FAIL	FAIL	FAIL	ADVISE	FAIL	0.00
<b>VEHICLE INFORMATION</b>					<b>OFFICIAL USE ONLY</b>
DATE: 20-SEP-2012 10:32:06	YEAR: 2001	STATION: 5016E	TEST: 1		
VIN:	MAKE: FORD	LANE: 01	IVFY: F161		
PLATE: TEST1	MODEL: FOCUS	ODOMETER: 12345	VVFY:		
<b>EMISSIONS TEST INFORMATION</b>			<b>EQUIPMENT INSPECTION</b>		
	READINGS	LIMITS	RESULTS	Catalytic Converter Presence:	FAIL
HC GPM	3.8625	1.2000	FAIL	Air Injection System Presence:	FAIL
CO GPM	27.1893	15.0000	FAIL	Oxygen Sensor Presence:	FAIL
CO2 GPM	433.8854			Gas Cap Presence:	PASS
NOx GPM	2.9067	1.5000	FAIL	Gas Cap Integrity:	FAIL
<b>ON BOARD DIAGNOSTICS</b>					
Check Engine Light: FAIL		Check Engine Light Command Status: On			
Diagnostic Trouble Codes:		0113, Engine Coolant Temperature Circuit Malfunction			
		0130, O2 Sensor Circuit Malfunction (Bank 1 Sensor 1)			
		0172, System too Rich (Bank 1)			
<b>CONSUMER INFORMATION</b>					
Your vehicle has failed to comply with required State regulations for emissions inspection. All items listed as failure must be addressed prior to your next inspection. For questions, comments and complaints contact Air Care Colorado at 303-456-7090 or the Department of Revenue at 303-205-5603 and if located outside the Denver Metro Area, call 888-200-8827. You are entitled to one free reinspection within 10 calendar days, the reinspection can be performed at any one of Air Care Colorado's centers. The information recorded on this report is extremely valuable to a repair technician when having your vehicle repaired. If your vehicle fails the reinspection, you may be entitled to a waiver. Waiver eligibility information, to include hardship waivers, is available at the inspection station or by calling the Department of Revenue at 303-205-5603.					
<b>HIGH HC READINGS</b>		<b>HIGH CO READINGS</b>		<b>HIGH NOx READINGS</b>	
HIGH HC READINGS ARE A RESULT OF UNBURNED OR PARTIALLY BURNED FUEL.		HIGH CO READINGS OCCUR WHEN THE AIR/FUEL MIXTURE IS TOO RICH.		HIGH NOx READINGS ARE THE RESULT OF HIGH COMBUSTION TEMPERATURES AND/OR PRESSURES.	
----- CUT HERE -----					
<b>VEHICLE REPAIR FORM</b>					
This form must be completed by the person performing the repairs AND accompany the vehicle at the time of reinspection.					
Mark here if some or all repairs were warranty or recall related: <input type="checkbox"/>			Parts Costs:	\$	
Repaired by Vehicle Owner: <input type="checkbox"/>		Repaired by Repair Facility: <input type="checkbox"/>		Labor costs:	\$
Repair Date:			Miscellaneous Costs:	\$	
Name of Repair Facility:			Diagnostic Costs:	\$	
Name of Person Filling Out Form:			Total Repair Costs:	\$	
Technician Number:					
Facility Number:					
Signature:					
VIN:					

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**ATTACHMENT V            Specifications for Colorado On-Board Diagnostic (OBD) Stand-Alone  
Analyzer**

**INTRODUCTION**

This document contains specifications for manufacturers to design a Colorado (CO) Onboard Diagnostic (OBD) Test Analyzer System (CO-OBD-TAS) for use in the Colorado Automobile Inspection and Readjustment (AIR) program. The CO-OBD-TAS certified for use shall be capable of conducting OBD emissions inspections, malfunction indicator lamp/check engine light (MIL) visual inspections, gas cap visual and pressure tests and a visual opacity check.

Changes to Regulation 11 allow for OBD Inspections as of January 1st 2015. Light-duty vehicles in their eighth through eleventh (8th-11th) model years will receive a mandatory (i.e., pass/fail determination) OBD inspection.

The OBD, MIL, gas cap and opacity inspections shall be conducted in accordance with the procedures set forth in AQCC Regulation No. 11, 40 C.F.R. Part 51, and EPA guidance document 420-R-01-015, *Performing Onboard Diagnostic System Checks as Part of a Vehicles Inspection and Maintenance Program*.

**Design Goals**

The CO-OBD-TAS must be designed and constructed to provide reliable and accurate service in the automotive service environment and have a useful life of at least five years. The software used in the CO-OBD-TAS must consist of a process control system capable of using reference data. The software also must be designed for maximum operational simplicity and be capable of providing testing information that can be used for vehicle diagnostics. In addition, the CO-OBD-TAS must include security measures that will prevent unauthorized modifications to the software or inspection data, record unauthorized entry, also known as tampering, and prevent subsequent inspections when tampering is detected.

The CO-OBD-TAS specifications contain the minimum requirements for CO-OBD-TAS used to perform emissions inspections in the AIR Program. Manufacturers may include additional items with approval from the Colorado Department of Public Health and Environment (CDPHE).

It is expected that the CO-OBD-TAS software will be SAE 1978 and J1979 compliant. The OBD inspection will include a visual and functional (bulb) check of the Malfunction Indicator Light (MIL) and an electronic examination of the vehicle's OBD computer. As outlined in the EPA guidance document, there are seven steps in this OBD inspection:

- Initiate the inspection by collecting and entering the vehicle identification information;
- Perform a visual inspection of the MIL and perform a key-on, engine-off inspection;
- Locate the vehicle's data link connector (DLC) and connect the OBD test equipment;
- Start and run the vehicle;
- With the OBD test equipment connected, determine the following:
  - The status of the vehicle's non-continuous readiness monitors;
  - The status of the MIL (commanded on or off);
  - The Diagnostic Trouble Codes (DTCs);

- Electronically record the results of the OBD inspection; and
- Turn off the vehicle and disconnect the scan tool.

### **Pass/Fail Requirement**

The CO-OBD-TAS shall fail vehicles for the following reasons:

- Gas Cap visual fails; or
- Gas Cap integrity does not meet the standards; or
- Visual opacity greater than 5%; or
- The MIL does not illuminate at all during the Bulb check (Fail); or
- The MIL stays illuminated when the vehicle is running (Fail); or
- MIL status is commanded on; regardless of whether or not the MIL is actually illuminated (Fail).

The CO-OBD-TAS shall pass vehicles for the following reasons:

- Gas Cap visual inspection passes;
- Gas Cap integrity is within standards;
- Visual opacity less than 5%;
- The readiness requirements in Section 4 are met;
- The MIL visual bulb check passes;
- The MIL is not commanded on; and
- No Fraud is detected, as per Section 7.

### **Readiness Monitors**

As part of the OBD inspection, the status of the vehicle's non-continuous readiness monitors is to be queried. The OBD TAS Manufacturer will implement EPA's listing of "Manufacturers Known to Have OBD Readiness Issues" and apply corrections to the readiness monitor requirements for those vehicles.

If the readiness evaluation indicates that a vehicle has more than one unset (not ready) readiness monitor, and the malfunction indicator light (MIL) is commanded off, then the inspection shall be automatically aborted with the reason printed out on the vehicle Inspection Report (VIR).

If a vehicle is unable to receive an OBD inspection (i.e. unable to communicate, DLC or readiness monitor issues), then the inspection will be aborted and the reason printed out the vehicle Inspection Report (VIR).

### **Keyless Ignitions**

If a vehicle has a keyless ignition, then the OBD TAS software shall bypass the MIL bulb check. The software shall determine keyless ignition systems electronically, by way of an OBD test information look-up table. The software shall provide for an override (changes the default, from the table, for the keyless ignition data field) in case the keyless ignition vehicle is not listed in the table.

### **OBD Retest Requirements**

The same readiness monitor requirements in Section 4 shall apply to OBD re-tests.

### **OBD Fraud Prevention**

The contractor will build an OBD inspection fraud detection module as approved by the CDPHE in the CO-OBD-TAS software.

### **OBD Equipment Requirements**

The CO-OBD-TAS must include hardware and software necessary to access the on-board computer systems on all model-year 1996 and newer vehicles. The equipment design and operation of the CO-OBD-TAS must meet the federal requirements contained in Title 40 of the Code of Federal Regulations (CFR), Chapters 85.2207-2231 and the recommended practices regarding OBD inspections contained in the J1962, J1978 and J1979 published by the Society of Automotive Engineers (SAE). The CO-OBD-TAS must be able to connect to the vehicle's OBD connector and access, at a minimum, the following OBD data:

- The engine revolutions per minute (RPM);
- The readiness monitor status;
- The malfunction indicator light (MIL) status;
- The OBD communications protocol;
- The electronic VIN; and
- The diagnostic trouble codes (DTCs).

At a minimum, the CO-OBD-TAS must also be capable of communicating with all OBD vehicles that use the following communications protocols:

- International Organization for Standardization (ISO) 9141;
- Variable pulse width (VPW) as defined in the SAE's J1850;
- Pulse width modulation (PWM) as defined in the SAE's J1850;
- Keyword protocol 2000 (KWP); and
- Controller area network (CAN) as defined in the ISO 15765-4.3:2001.

The OBD interrogation process must be fully integrated into the CO-OBD-TAS, automated, and require no inspector intervention to collect and record the OBD data retrieved via the OBD connector link. No separate interface may be used.

The CO-OBD-TAS shall meet the design and performance specifications in the Air Quality Control Commission's (AQCC) Regulation Number 11.

### **Gas Cap Tester**

The gas cap tester must be able to supply air pressure significant enough to produce and measure a leak rate of 60 cubic centimeters per min (cc/min) of air at 30 inches of water pressure. The tester must be tamper resistant; control the air supply pressure and prevent over pressurization; provide a visual or digital signal that the required air supply pressure is within the acceptable range and a flow comparison test is ready to be conducted; be supplied with a reference passing gas cap, or equivalent, with a nominal 52-56 cc/min leak rate; and be supplied with a reference failing gas cap, or equivalent, with a nominal 64-68 cc/min leak rate.

The tester may use: a squared edged circular orifice to generate the required leak rate; and ambient air or any convenient low pressure source.

The gas cap tester connector must be a minimum length of 20 feet so that it can reach gas caps that are attached to vehicles.

The CO-OBD-TAS must prevent all inspections if the gas cap tester calibration has not passed in the last 24 hours.

Gas Cap adapters must be available for at least 95 percent of the gas caps used for the most recent 12 model-year light-duty vehicles and trucks. Varying internal volumes of the gas caps and adapter assemblies must not affect the accuracy of the inspection results. Adapters must be made available the first day of each year upon the introduction of new model-year vehicles.

### **Opacity**

The CO-OBD-TAS software shall require an entry for a visual opacity inspection.

### **Recording of Test Results/Documentation**

The CO-OBD-TAS shall automatically record the date, start time, station, and inspector ID for each test. Required data for each element of the inspection shall be collected and entered into the CO-OBD-TAS. A data specification is available from CDPHE upon request. Due to possible systems changes or new requirements, the required data list may be changed.

The CO-OBD-TAS shall print the test results in the form of a state-approved Vehicle Inspection Report (VIR, Form DR2071). The CO-OBD-TAS shall print these forms from plain security paper or some other paper as approved by CDPHE. The VIR shall contain at a minimum the OBD test results. VIRs for vehicles with a passing OBD test shall include a Certificate of Emissions Compliance (CEC) printed on the VIR.

### **Computers and Peripheral Requirements**

The CO-OBD-TAS functions must be controlled by a personal computer (PC), or functional equivalent, and include the hardware and software needed to perform the functions required by this specification.

The CDPHE reserves the right to add additional programs and performance requirements, up to the technical limits of the hardware, to improve the AIR program.

The manufacturer may offer a CO-OBD-TAS with additional disk drives that can run optional software hardware application programs, however, the computer must not be bootable from any additional drive, nor must any program run from one of these drives have access to the computer's operating system. Additional drives must be located in a limited access secured area within the CO-OBD-TAS cabinet. The peripheral equipment, such as bar code readers, OBD scanners, and keyboards may use wireless communication to interact with the CO-OBD-TAS.

#### *VID Communications Overview*

A required component of the AIR program is the electronic transmission of inspection data. The

Centralized Emissions Testing Contractor for the Colorado AIR program has an electronic network that enables the CO-OBD-TAS to automatically connect to a centralized vehicle identification database (VID). The CO-OBD-TAS must demonstrate the ability to receive, install, use, and transmit data to and receive data from the VID using the communications protocol. The communications protocol will be provided by the CDPHE.

Each inspection station must obtain and maintain VID communication services. The CO-OBD-TAS must use the communications protocol to access the features of the VID communications services in order to conduct vehicle inspections.

#### *Printer*

A laser printer or a CDPHE approved equivalent printer must be supplied with each CO-OBD-TAS purchased, leased, or upgraded. The CO-OBD-TAS's printer must be interchangeable with a locally purchased off-the-shelf laser printer.

#### *Power and Telephone Cord*

The modem must be, at a minimum, designed to connect to the CO-OBD-TAS with a modular telephone connector that has a standard wiring configuration. The connector must be located on the back of the CO-OBD-TAS cabinet. Alternatives to this requirement may be proposed to the CDPHE for evaluation.

The telephone and power cords must be at least 25 feet long and enclosed in a protective cable meeting the Underwriter's Laboratory approval. Alternative methods to protect the telephone and power cords may be submitted to the CDPHE for approval. The manufacturer shall design the cabinet so that convenient storage is provided for the excess telephone and power cords.

#### *Power Requirements*

The CO-OBD-TAS must operate on an alternating current (AC) and must not be powered by a portable AC generating unit. Input power must be 115 volts of alternating current (VAC) with 60 hertz. The instruments must meet the specified requirements over an input voltage variation of at least +/- 12 volts.

#### **Construction**

The CO-OBD-TAS must be designed and constructed to provide reliable and accurate service in the automotive service environment. The CO-OBD-TAS must be supplied with a cabinet that is equipped with a storage area large enough to secure all accessories and operating manuals.



### *Materials*

The materials used in construction of the CO-OBD-TAS must be resistant to corrosive substances found in the automotive service environment and be designed to last for at least five years. The exterior and interior finish of the entire cabinet and console must be sufficiently durable to withstand the chemicals and environmental conditions normally encountered in the automotive service environment for the period of the warranty.

### *Mobility*

The CO-OBD-TAS may be permanently mounted or mobile with the use of wheels. Wheels must be at least five inches in diameter and have a locking mechanism capable of preventing movement on a 15 degree incline.

The CO-OBD-TAS must be designed to move over rough surfaces, through three-inch deep holes, and on 15 degree inclines without tipping over. The CO-OBD-TAS must not tip over when placed at the center of an inclined plane and rotated 360 degrees stopping in the position where it is most likely to tip over. The incline plane must make an angle of 10 degrees with the horizontal floor. In addition, the CO-OBD-TAS must not become unstable or tip over when rolled straight off the edge of a two-inch high platform or when one wheel is rolled over a drain, two inches below the surface, or inside an 18-inch diameter depression.

### *Electrical Design*

Fuses or circuit breakers must be used to protect individual electrical circuits in the CO-OBD-TAS. The main circuit breaker and fuses must be readily accessible from the exterior of the cabinet. CO-OBD-TAS operation must be unaffected by electrical line noise and voltage surges. The CO-OBD-TAS must be protected from voltage surges to prevent damage to the internal components from a simultaneous start up of a 220 volt compressor, an arc welder, hydraulic controls, and other equipment commonly found in the typical automotive service environment.

### *Bar Code Scanner*

The bar code scanner must be able to read a one-dimensional (1-D) and a two-dimensional (2-D) bar code through a windshield and use visible laser diode technology or an equivalent approved by the CDPHE. The bar code scanner must not be able to read Universal Product Code (UPC) 1-D bar codes. The bar code scanner must be able to withstand multiple drops to concrete covering a distance of at least 4 feet and be environmentally sealed to withstand the normal operating conditions of an automotive service environment.

### **Additional Specifications**

The useful life of the CO-OBD-TAS shall be a minimum of five years.

A nameplate including the following information shall be permanently affixed to the housing of the CO-OBD-TAS: Name and Address of Manufacturer, Model Description, Serial Number, and Date of Assembly.

Each CO-OBD-TAS shall be delivered with the following manuals: Reference Operating Instructions,

Operation Instruction Manual, Maintenance Instruction Manual (limited), and Initial Start-up Instructions

CO-OBD-TAS manufacturers may consolidate manuals. The manuals shall be constructed of durable materials and shall not deteriorate as a result of normal use over a five-year period. The CO-OBD-TAS housing shall provide convenient storage for each manual in a manner that will allow easy use and prevent accidental loss or destruction.

The CO-OBD-TAS software shall be fully documented. Two copies of the documentation listed below shall be submitted to CDPHE as part of the Certification application.

### **Functional Specifications**

CO-OBD-TAS manufacturers shall provide for use during the Acceptance Testing Process:

- Functional flowcharts of the software;
- Example inputs and outputs from all processes;
- Detailed interface information on system components including the identification of protocol and output specifications; and
- All file layouts with file names, file types, file security, field names, field types, field sizes, and field editing criteria.

Documentation provided by the vendor to meet this requirement will be treated as proprietary information by Colorado Department of Public Health and Environment.

Prior to certification of any CO-OBD-TAS for sale in Colorado, the manufacturer shall provide the CDPHE technical information (including, but not limited to all working codes, schematics and drawings) necessary to operate, maintain and repair such CO-OBD-TAS in the event that the manufacturer ceases providing adequate maintenance, and repair services in Colorado.

The CO-OBD-TAS manufacturer shall keep such information current, and will provide CDPHE with copies of any and all changes. So long as such maintenance and repair services are available from the manufacturer or its agent, the CDPHE shall protect such information as confidential commercial data if it is clearly marked as such. In the event that the manufacturer becomes insolvent or stops providing adequate maintenance or repair services in Colorado all such information shall be the property of the CDPHE and may be released to a third party as necessary to repair and maintain the CO-OBD-TAS.

### **Warranty Coverage**

A written warranty coverage agreement, signed by an authorized representative of the equipment manufacturer and the vehicle inspection station owner, which provides a complete description of coverage for all systems and components and all manufacturer provided services must accompany the sale or lease of each CO-OBD-TAS. Original manufacturer's warranty shall be a minimum of one year from the date of purchase. An extended service contract shall be available upon the expiration of the manufacturer's original warranty period.

### **Tampering Resistance**

Controlled access design shall be the responsibility of the manufacturer and is subject to approval by CDPHE. CO-OBD-TAS service personnel, inspectors or others shall be prohibited, to satisfaction of CDPHE, from creating or changing any test results, programs or data files contained in the CO-OBD-TAS. The CO-OBD-TAS shall be made tamper-resistant to the satisfaction of CDPHE and DOR.

If tampering occurs, a software lockout algorithm shall be activated which aborts any existing test sequence and prevents further inspections until an authorized AIR Program official clears the lockout.

## **Auditing Requirements**

Title 42, Article 4, Part 3, C.R.S. establishes the I/M Program-based authority of the Colorado Department of Revenue (DOR). As such, DOR is responsible for emissions inspector and station licensing as prescribed by C.R.S., AQCC Regulation 11, and DOR Regulation 1. In order to maintain the integrity of the I/M Program, DOR conducts various quality assurance audits of the CO-CO-OBD-TAS units. The specification for this audit will be provided by CDPHE and DOR.

## **Manufacturer Provided Services**

The CO-OBD-TAS manufacturer shall agree to provide the following services to the inspection station as part of the manufacturer's original warranty:

The delivery, installation, calibration, and verification of the proper operating condition of a CO-OBD-TAS.

Instruction of all certified inspectors employed by the inspection station, at the time of installation, in the proper use, maintenance, and operation of the CO-OBD-TAS.

On-site service response by a qualified repair technician within two (2) business days, (48 hours) excluding Sundays and national holidays, of a request from the inspection station.

CDPHE will require the manufacturer to render updates as necessary in the first year of the program to ensure the program meets all design criteria. Thereafter software updates will be limited to once per year at no cost. Since modem software updating will be utilized, there are no costs to the CO-OBD-TAS owner. A software version number, consisting of a four character alpha-numeric code made up of the last two digits of the year followed by a two character version number, shall be recorded in the CO-OBD-TAS and included on each vehicle test record. The CO-OBD-TAS manufacturer shall not modify any existing software version without obtaining written approval from CDPHE.

CO-OBD-TAS manufacturers shall provide training to AIR Program officials on all operational, maintenance, and quality control features of the CO-OBD-TAS units, including full access to and use of inspection menus and audit menus. Such training shall be conducted at the manufacturer's expense as a condition of certification.

## **Certification Requirements**

The CO-OBD-TAS manufacturer shall submit a formal certificate to CDPHE that states that any CO-OBD TAS sold or leased by the manufacturer or its authorized representatives for use in Colorado AIR Program will satisfy all design and performance criteria described in these specifications. The manufacturer shall also provide sufficient documentation to demonstrate conformance with these criteria including a complete description of all hardware components, the results of appropriate performance testing, and a point-by-point response to specific requirements.

In addition, a full description of the company's service procedures and policies, as well as sample contracts, warranties, and extended service agreements, shall be provided as part of the certification application to ensure proper maintenance of all CO-OBD-TAS throughout their useful life. One fully functional CO-CO-OBD-TAS shall be presented for evaluation and certification process.

The Acceptance Testing Procedure (ATP) for CO-OBD-TAS will include a verification that the unit meets all requirements in this specification and federal requirements contained in 40 CFR §§85.2207 - 85.2231 and the recommended practices contained in the J1962, J1978, and J1979 published by the SAE. The ATP procedures and acceptance criteria are contained in the EPA's guidance document, "*Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection and Maintenance Program*" (EPA, 2001) or EPA's applicable update to this document.

ATTACHMENT VI "Colorado Approved" Calibration Span Gas Label Samples

	<b>Colorado Approved Calibration Gas</b> <u>AIR94 LOW</u> BLENDER AIR LIQUIDE LOT # 031820131 FILL DATE 03/18/2013 EXPIRES 05/13/2016 AIR # CO13L00001		<b>Colorado Approved Calibration Gas</b> <u>AIR94 MID</u> BLENDER AIR LIQUIDE LOT # 031820132 FILL DATE 03/18/2013 EXPIRES 05/13/2016 AIR # CO13M00001
 *CO13L00001*		 *CO13M00001*	

Emission Budgets for Nonattainment Areas in the State of Colorado

A. Budgets

A.1. The following Motor Vehicle Emissions Budgets shall be utilized to assess the conformity of Transportation Plans, TIPs, and where appropriate, Projects, for the applicable periods and geographic areas indicated:

Denver Nonattainment Area (Modeling Domain)	<u>PM<sub>10</sub></u> :
	1995: 41.2 tons/day
	1996-97: 44 tons/day
	1998-2005: 54 tons/day
	2006 and Beyond: 60 tons/day
	<u>Nitrogen Oxides</u>
	1995 and Beyond: 119.4 tons/day

A.2. Geographic Coverage

Unless otherwise specified, the geographic coverage of each of the area Motor Vehicle Emissions Budgets shall be the nonattainment or attainment maintenance area as defined in the respective state implementation plans.

A.3. The Motor Vehicle Emissions Budget for PM<sub>10</sub> applies to total primary PM<sub>10</sub> emissions, including emissions from tailpipe exhaust, unpaved roads (except for the Denver PM<sub>10</sub> nonattainment area), reentrained road dust and street sand. It does not include precursor or secondary emissions, which, where appropriate, are covered under separate budgets.

B. Requirement Regarding Enforceability

B.1. Projects, programs, or control measures which require a regulation in order to be implemented shall not qualify for credit toward attainment of the applicable Motor Vehicle Emissions Budget in the conformity determination unless the regulation has been adopted by the enforcing jurisdiction. Adopted regulations are required for demand management strategies and other measures that are not specifically

identified in the Applicable Implementation Plan or a fiscally constrained Plan or TIP, and for control programs which are external to the transportation system itself, such as tailpipe or evaporative emission standards, limits on gasoline volatility, inspection and maintenance programs, and oxygenated or reformulated gasoline or diesel fuel programs.

B.2. A regulatory program may be considered to be adopted if an opt-in to a Federally enforced program has been approved by EPA, if EPA has promulgated the program, or the Clean Air Act requires the program without need for individual state action and without any discretionary authority for EPA to set its stringency, delay its effective date or not implement the process.

B.3. Any control measure which does not require a regulation in order to be implemented must be made enforceable in order for resulting emissions reduction to qualify for credit toward attainment of the Motor Vehicle Emissions Budget in the Conformity determination. A project shall be considered to be an enforceable control measure for purposes of this provision if it is included in a fiscally constrained Plan or TIP, and the project sponsor and/or operator has provided written commitments to construct the project and operate the resulting facility or service prior to the conformity finding.

B.4. Although control measures must be enforceable prior to the conformity determination, such control measures need not become effective until such a date, which may be later than the date of the conformity determination, as necessary to ensure conformity with the Applicable Implementation Plan.

B.5. Any control measures relied on for a conformity determination shall be included in a revised attainment or maintenance SIP unless it is not necessary to demonstrate attainment or maintenance of the standard.

## C. Additional Requirements for the Denver PM<sub>10</sub> Attainment/Maintenance Area

### C.1. Geographic Coverage

The geographic coverage for the Denver PM<sub>10</sub> Motor Vehicle Emissions Budget is the modeling domain contained in the most recent revision to the Denver PM<sub>10</sub> state implementation plan and technical support documentation, which are available for inspection at the offices of the AQCC located at 4300 Cherry Creek Drive South, Denver, Colorado.

### C.2. Regional Emissions Analysis

The emissions budgets set out in this section shall be used for regional emissions analyses required for conformity determinations.

### C.3. Dispersion Modelling

In the Denver PM<sub>10</sub> Nonattainment Area only, the regional emissions analysis supporting a conformity determination shall include dispersion modeling analysis to demonstrate that implementation of the Plan, TIP, or project not from a conforming plan or TIP, will not cause or contribute to any violations of the federal PM<sub>10</sub> standards for each horizon year and analysis year for which a regional emissions analysis is performed. The dispersion modeling shall be based on the latest dispersion and mobile source emissions estimation models specified by EPA for use in the preparation or revision of PM<sub>10</sub> implementation plans and will use the most recent estimate of attainment year (or maintenance year for a maintenance plan) emissions from other non-mobile source categories. The dispersion analysis shall use the meteorological data contained in the most recent PM<sub>10</sub> state implementation plan demonstration of attainment.

## I. Street Sanding Materials Specifications

### I.A. Applicability

The provisions of this Section I shall apply to street sanding materials purchased after October 1, 1991 or used after June 1, 1992 by: any governmental entity; any employee, official, representative, or agent of such governmental entity; and any person who contracts with such governmental entity for the purpose of applying street sanding material in the AIR program area, as defined in Section 42-4-307(8) C.R.S. This Section I shall also apply to all suppliers of street sanding materials to be used by these governmental entities.

### I.B. Definitions

I.B.1. "Percent Fines" means the percent material passing a #100 sieve as determined by the American Society for Testing Materials' (ASTM) "Standard Method for Sieve Analysis of Fine and Coarse aggregates", designation C136-84a (1988) (American Association of State Highway and Transportation Officials designation T27-88.)

I.B.2. "Durability Index" means the percent loss of weight as determined using ASTM "Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine". Designation C131-89.

I.B.3. "High Degree of Angularity" means that grains exhibit sharply intersecting, planar faces over entire surface.

I.B.4. "Street Sanding Material(s)," when used in Section I, Street Sanding Materials Specifications, means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.

I.B.5. "Recycled Street Sanding Material" means previously used street sanding material which has been collected from roadways or paved areas and is then re-used as is, after washing, or after blending with new street sanding material.

I.B.6. "Full Deployment" means that all roadways targeted for treatment during a snow/ice event are sanded.

I.B.7. "Independent Laboratory" means a facility capable of performing the specified tests in a competent, professional, and



unbiased manner with no financial, family, or personal connection to the supplier or user of street sanding materials.

I.B.8. "User(s)" means any governmental entity, and any employee, official, representative, or agent of such governmental entity responsible for the application of street sanding materials, and any person who contracts with such governmental entity for the purpose of applying street sanding material.

#### I.C. Street Sanding Material Standards

##### I.C.1. Material Standards

All street sanding material, whether new or recycled, shall equal or exceed either of the following standards:

I.C.1.a. less than 2% fines and less than 45% durability index or;

I.C.1.b. less than 4% fines, less than 33% durability index, and a high degree of angularity exhibited by the majority of the grains.

#### I.D. Testing Requirements

##### I.D.1. General

Testing of street sanding material covered by this regulation shall consist of the determination of:

I.D.1.a. the percent fines;

I.D.1.b. the durability index; and

I.D.1.c. the high degree of angularity exhibited by the majority of the grains.

##### I.D.2. Supplier Requirements

I.D.2.a. Suppliers of street sanding material covered by this regulation shall perform at least one test to determine the percent fines each week on the material as it is produced.

I.D.2.b. Suppliers shall have one test per month performed by an independent laboratory to determine the percent fines on a representative sample of their street sanding material. This

shall be performed each month in which street sanding material is produced.

I.D.2.c. Suppliers shall have one test performed by an independent laboratory to determine the durability index on a representative sample from the pit source between July 1 and September 30 each year in which they sell street sanding material covered by this regulation.

I.D.2.d. If Section C.1.b. applies, supplier shall furnish once per month of production, a signed statement certifying that a visual examination for angularity was performed on the street sanding material and the results of that visual exam.

#### I.D.3. User Requirements

Users shall have a test performed by an independent laboratory to determine the percent fines index on all recycled materials at least once for the first 250 tons of recycled material used each winter and at least once for every 500 tons of recycled material thereafter.

#### I.D.4. Division Audit Authority

The Air Pollution Control Division (Division) may enter the site of any supplier or user of sanding material covered by this regulation for the purpose of obtaining a sample of material to determine if the material meets the applicable standards.

#### I.E. Reporting Requirements

##### I.E.1. Suppliers Requirements

I.E.1.a. Suppliers shall submit to the Division a monthly report that contains a summary of the results of all percent fines tests performed by the supplier and independent laboratories as required by the provisions of Section I.D.2.a. and b. For material conforming to Section I.C.1.b., suppliers shall submit monthly certification that visual examination of angularity of grains has been performed and the results of that visual exam.

I.E.1.b. For every year that street sanding material is produced, the supplier shall submit to the Division a copy of the results of the annual durability index test performed by independent labs as required by Section I.D.2.c. no later than 60 days after the test is conducted.

I.E.1.c. Prior to, or upon, delivery of street sanding material, suppliers shall provide users of street sanding material covered by this regulation with a report demonstrating that the supplier has met all testing requirements of this regulation applicable to the time period in which deliveries are made.

#### I.E.2. Users Requirements

I.E.2.a. Users of recycled street sanding material shall submit to the Division copies of the results of testing conducted according to Section D.3. no later than 30 days after the tests are conducted.

I.E.2.b. Within 7 calendar days of awarding a contract for the purchase of street sanding material to a supplier, the user shall notify the Division of the supplier's name and the location of the aggregate pit(s) from which the material will be supplied.

I.E.2.c. The user shall maintain on file reports received under the provisions of Section E.1.c. for a period of three (3) years.

#### I.E.3. Division Audit Authority

All records generated under the provisions of this regulation shall be made available for inspection upon request by the Division.

#### I.F. Alternative Test Methods and Standards

Alternative percent fines and durability index test procedures for percent fines and durability may be approved by the Division and EPA should they be determined to provide a measure that is equivalent to the test procedures of this regulation.

#### I.G. Alternative Sanding Materials

Experimentation with new street sanding materials may be approved by the Division and EPA provided that the impact of such experiments or tests does not contribute appreciably to air quality degradation.

### II. Street Sanding Requirements Specific to the Denver PM-10 Attainment/Maintenance Area

#### II.A. Applicability

II.A.1. The provisions of this Section II shall apply to any governmental entity and any employee, official, representative, or agent of such governmental entity responsible for applying street sanding material to any roadway in the Denver PM-10 Attainment/Maintenance area as defined in the AQCC Ambient Air Standards Regulation (effective date: July 30, 1991). The provisions of this Section II shall also apply to any person who contracts with such governmental entity for the purpose of applying street sanding material to any roadway in the Denver PM-10 Attainment/Maintenance area.

## II.B. Additional Definitions

II.B.1 "Base Sanding Amount" is the average amount of street sanding material applied per land mile driven by maintenance trucks during snow and ice removal operations. The base sanding amount shall be calculated using 1989 data. If reliable 1989 data is not available, another base year period may be used after approval by the Division.

II.B.2. "Street Sanding Material(s)," when used in Section II, Street Sanding Requirements Specific to the Denver PM-10 Attainment/Maintenance Area, means natural geologic material, including sand and sodium chloride rock salt, but excluding other de-icing chemicals, used to provide increased traction or de-icing on roadways.

II.B.3. "Foothills Area" refers to the area defined as follows:

The western edge of the Denver PM10 attainment/maintenance area from the southern Jefferson County line to the northern Boulder County line;

the northern Boulder County line east to the western edge of US Highway 36;

the western edge of US Highway 36 from the northern Boulder County line south to the Boulder City limits;

the western edge of the Boulder City limits south to the CO Highway 93;

the western edge of CO Highway 93 south to the Golden City limits;

the western edge of the Golden City limits south to US Highway 40;

the western edge of US Highway 40 southwest to CO Highway 26;

CO Highway 26 south to US Highway 93;

US Highway 93 south to the Morrison City limits;

the western and southern edge of the Morrison City limits to Highway C-470;

the western edge of C-470 south to South Platte Canyon Road;

the western edge of South Platte Canyon Road south to Kassler Road;

the western edge of Kassler Road to the southern edge of Douglas County Road 7;

the southern edge of Douglas County Road 7 east to the western edge of Douglas County Road 5;

the western edge of Douglas County Road 5 south to Roxborough Park Road;

proceeding on a line from the intersection of Douglas County Road 5 and Roxborough Park Road to the intersection of Colorado Highways 67 and 105 (Perry Park Road);

south along the western edge of Perry Park Road to the southern Douglas County line; and

west along the southern Douglas & Jefferson County lines to the western edge of the Denver PM10 attainment/maintenance area.

II.B.4. "Uncontrolled levels of wintertime street sand and road dust emissions" shall be calculated using historical 1989 data.

#### II.C. Requirements

II.C.1 Each user shall establish and document its base sanding amount. Documentation of the base sanding amount shall be submitted to the Division and the Regional Air Quality Control (RAQC) by September 30, 1993.

II.C.2. Except as otherwise provided in sections II.C.4, II.C.5 and II.C.6; each user shall achieve a 30% reduction of uncontrolled levels of wintertime street sand and paved road dust emissions on roadways within their jurisdiction in the PM10 attainment/maintenance area, excepting those roadways within the foothills area.

II.C.3. Each user shall achieve a 20% reduction from uncontrolled levels of wintertime street sand and paved road dust emissions on those roadways within the foothills area of their jurisdiction.

II.C.4. The City and County of Denver shall achieve a 72% reduction from uncontrolled levels of wintertime street sand and paved road dust emissions on roadways in the central business district (CBD). The CBD is defined as the area bounded by and inclusive of Colfax Avenue, Speer Boulevard, Wynkoop Street, 20th Street, and Broadway.

II.C.5. The Colorado Department of Transportation (CDOT) shall achieve a 54% reduction from uncontrolled levels of wintertime street sand and paved road dust emissions from Interstate 25 and its entrance/exit ramps between 6th Avenue and University Boulevard.

II.C.6. The City and County of Denver and CDOT shall achieve a 50% reduction from uncontrolled levels of wintertime street sand and paved road dust emissions on roadways within the area bounded by, and including, Federal Boulevard, Downing Street, 38th Avenue, and Louisiana, except as otherwise provided by sections II.C.4 and II.C.5.

#### II.D. Recordkeeping and Reporting

II.D.1. No later than June 30, 2001 and each year thereafter, users of street sanding material covered by this section shall submit a report to the Division and the RAQC containing the following information for the preceding twelve months or the preceding calendar year:

II.D.1.a. the total number of miles driven by maintenance trucks during snow and ice removal operations;

II.D.1.b. the total amount of sanding material (both new and recycled), salt, and other de-icing chemicals used;

II.D.1.c. the number and dates of full deployment episodes;

II.D.1.d. the number of lane miles typically sanded during each full deployment.

II.D.1.e. the percent of the sanded roadways swept within 4 days of a sanding event; and

II.D.1.f. the type of street sweeping equipment used.

II.D.2. Those entities with roadways in the foothills area shall provide two reports with the information listed in Section II.D.1. One report shall contain the information for roadways in the foothills area and the other for roadways within the remainder of their jurisdiction.

II.D.3. The City and County of Denver and CDOT shall provide two reports with the information listed in Section II.D.1. One report shall contain the information for roadways in the areas described in Sections II.C.4 and II.C.5, and the other for other roadways in their jurisdictions within the Denver PM10 attainment/maintenance area.

II.D.4. Beginning June 30, 2002, the City and County of Denver and the CDOT shall provide an additional report of information listed in Section II.D.1. for the area bounded by, and including, Federal Boulevard, Downing Street, 38<sup>th</sup> Avenue, and Louisiana Avenue, as described II.C.6.

II.E. Compliance Methodology

II.E.1. The calculation of the percent reduction from uncontrolled levels of wintertime street sand and paved road dust emissions shall be based on the reduction in street sand from the base sanding amount, the percent of roadways swept within four days of a sanding event, and the latest data on the emission benefits of street sanding materials, de-icing agents, and street sweeping equipment, which is consistent with the methodology used for the 2001 PM10 maintenance plan.

### **III. Aspen/Pitkin County PM-10 Attainment/Maintenance Area**

#### **A. Applicability**

The control measures adopted by these regulations are intended to be implemented and enforced locally. All affected parties shall take all actions necessary, to implement no later than December 10, 1993, all provisions of the regulations set forth herein. The provisions of these regulations shall apply throughout the Aspen/Pitkin County PM-10 attainment/maintenance area. The control measures adopted by these regulations recognize that the largest source, by far, of the material causing the air quality in the City of Aspen to exceed National Ambient Air Quality Standards for particulate matter is from re-entrained dust from traffic on paved roads. This phenomenon is caused primarily by vehicle mile trips that originate from outside the Aspen/Pitkin County attainment/maintenance area.

Nothing contained in these regulations shall be intended or construed to limit or impair the home rule or legislative authority of the City as provided under the Constitution and laws of the State of Colorado or the Home Rule Charter of the City of Aspen. Nothing contained in these regulations shall be intended or construed to limit or impair the home rule or legislative authority of the County of Pitkin as provided under the Constitution and laws of the State of Colorado or the Home Rule Charter of Pitkin County. No emission control regulation may be considered a part of the Aspen/Pitkin County PM<sub>10</sub> attainment/maintenance area control strategy unless and until the same has been adopted as part of the State of Colorado's State Implementation Plan pursuant to Section 25-7-105(1)(a)(II), C.R.S.

#### **B. Definitions**

1. "Aspen/Pitkin County PM-10 attainment/maintenance area" means that area defined by the Colorado State Implementation Plan for PM-10, Aspen Element, adopted November 21, 1991.
2. "Department" means the Aspen/Pitkin Environmental Health Department.
3. "Division" means the Colorado Department of Health, Air Pollution Control Division.
4. "Durability Index" means the percent loss of weight as determined using American Society for Testing Materials (ASTM) "Standard Test Method for Resistance to Degradation of Small-size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine", Designation C131-89.
5. "Deployment" means an episode when any roadway is sanded.
6. "Governmental Entity" shall include, but not necessarily be limited to, the State of Colorado, Pitkin County, City of Aspen, Roaring Fork Transit Agency, the Colorado Department of Transportation (CDOT), and the U.S. Postal Administration.
7. Reserved
8. "Independent Laboratory" means a facility capable of performing the tests specified in these regulations in a competent, professional, and unbiased manner with no financial, family, or personal connection to the supplier or user of street sanding materials.
9. "Percent Fines" means the percent material passing a #200 sieve as determined by the American Society for Testing Materials (ASTM) "Standard Method for Sieve Analysis of Fine and Coarse Aggregates", designation C136-84a (1988) (American Association of State Highway and Transportation Officials designation T27-88).



10. "Recycled Street Sanding Materials" means previously used street sanding material which has been collected from roadways or paved areas and is then re-used as is, after washing, or after blending with new street sanding material.
11. "Street Sanding Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.
12. "User" means any Governmental Entity, and any employee, official, representative, or agent of such governmental entity responsible for the application of street sanding materials and any person who contracts with such governmental entity for the purpose of applying street sanding material in the defined Aspen/Pitkin County PM-10 attainment/maintenance area.
13. Reserved
14. "Base Sanding Amount" is the average amount of street sanding material applied per lane mile driven by maintenance trucks during snow and ice removal operations. The base sanding amount shall be calculated for the year that the Environmental Protection Agency (EPA) determines that the nonattainment area failed to attain the PM National Ambient Air Quality Standards (NAAQS). If reliable data for this year is not available, another base year period may be used after approval by the Division.

### **C. Primary Control Strategy Regulations**

#### 1. Specifications for Street Sanding Materials.

##### a. Applicability.

The provisions of this subsection shall apply to any user that applies any street sanding material, salt, or other de-icing material within the Aspen/Pitkin County PM-10 attainment/maintenance area on or after December 1, 1993.

##### b. Standards for Quality for Street Sanding Materials.

All street sanding material, whether new or recycled, shall equal or exceed a standard of less than 1% fines and less than 30% durability index, and only such sanding material shall be used for street sanding operations and purposes.

##### c. Alternate Sanding Materials.

Experimentation with new street sanding materials may be approved by the Division and the EPA provided that the impact of such experiments or tests does not contribute appreciably to air quality degradation.

##### d. Testing Requirements.

Prior to, or upon, delivery of street sanding materials, and prior to the use of any recycled street sanding material, suppliers of street sanding materials shall have a test performed upon representative samples of the material by an independent laboratory to determine compliance with the standards of quality set forth above at subsection C.1.b. The test results shall be provided to the purchaser upon delivery. Alternative percent fines and durability index test procedures for percent fines and durability must be approved by the

Division and EPA should they be determined to provide a measure that is equivalent to the test procedures set forth in this regulation.

e. Recordkeeping Requirements

i. Each user that uses street sanding materials shall maintain on file all reports received or prepared in accordance with these regulations for a period of two years, including the information described below. All records generated under provisions of this regulation shall be made available for inspection upon request by the Department or Division.

(a) The number of lane miles typically sanded during each deployment;

(b) The dates of deployment episodes;

(c) A list of all streets where sanding was typically deployed;

(d) A copy of all independent tests performed in accordance with subsection C.1.d. above; and

(e) The name and address of all suppliers of street sanding material along with a full description of the location of the supplier's aggregate pit from which all material was supplied.

2. Street Sweeping Requirements for Highway 82

a. Applicability

The provisions of this subsection shall apply to any user that has applied any street sanding material on Highway 82 within the Aspen/Pitkin County PM-10 attainment/maintenance area on or after December 1, 1993. The provisions of this subsection shall be applicable between December 1 and March 31 of each year.

b. Sweeping Requirements

i. Users that use street sanding materials upon State Highway 82 from the Cooper Avenue bridge to the west entrance (city limit) of the city of Aspen, excluding CDOT, shall sweep the traffic lanes of this portion of Highway 82 within four days of the roadway becoming free and clear of snow and ice following each sanding deployment, as weather and street conditions permit.

ii. Users that use street sanding materials upon State Highway 82 from the west entrance (city limit) of the city of Aspen to the Aspen/Pitkin County Airport (Sardy Field) shall sweep traffic lanes of the highway within four days of the roadway becoming free and clear of snow and ice following each sanding deployment, as weather and street conditions permit.

c. Sweeping Equipment Required

Broom sweepers using liquid, or any other method of equal efficiency approved by the Division and EPA, must be utilized to sweep the specified streets and roadways set forth above at subsection b.

d. Recordkeeping Requirements

Operators of street sweeping equipment working for users of street sanding materials shall maintain records to document the information described below and governmental entities shall maintain on file all

reports received or prepared in accordance with these regulations for a period of two years. All records generated under provisions of this regulation shall be made available for inspection upon request by the Division.

- i. Date of sweeping operation;
- ii. Miles and names of streets or roadways swept;
- iii. Type of equipment used;
- iv. Reserved
- v. Equipment malfunctions and downtime, if any;
- vi. Conditions of driving lanes (dry, wet, snow packed, patchy ice, etc.); and
- vii. General weather conditions at time of sweeping operations.

3. Commercial Core Paid Parking, Commuter Day Pass Parking, and Resident Only Permit Parking in Outlying Areas.

a. Beginning June 1, 1994, within an area of the City of Aspen bounded by and including Main Street, Spring Street, Durant Avenue, and Monarch Street, the City of Aspen shall permit all passenger vehicles to park only upon the payment of one dollar (\$1.00) per hour parking fee.

b. Beginning June 1, 1994, within an area bounded by and including Aspen Mountain, Fourth Street, Hallam Street, Second Street, Francis Street, the bluff south of the Post Office, Spring Street, the Roaring Fork River, Aspen Mountain and Durant Street, and Dean Street, the City of Aspen shall permit parking for those who display resident parking permits and for those commuters who have purchased an all day parking pass.

4. Implementation of Local Control Strategies.

a. City of Aspen.

The City of Aspen shall implement and enforce Ordinance No. 74, Series of 1992, as amended by Ordinance No. 47, Series of 1993, as it exists on September 24, 1993. This ordinance limits future growth in emissions from wood burning fireplaces, stoves and restaurant grills. In addition, the City of Aspen shall implement and enforce any ordinance adopted in accordance with these regulations.

The City of Aspen may revise the ordinances as necessary to allow greater use of natural gas burning devices without revising the state implementation plan. Any revision to the ordinances to allow greater use of woodburning devices shall be submitted immediately to the Colorado Air Quality Control Commission and EPA as revisions to the State Implementation Plan. Any amendments to these ordinances shall not constitute a revision to the State Implementation Plan until such time as the State Implementation Plan is appropriately revised. All ordinances shall remain in full force and effect until such time as the City obtains full approval of a State Implementation Plan revision.

b. Pitkin County

Pitkin County shall implement and enforce Ordinance No. 18, Series of 1992, as it exists on January 1, 1993. This ordinance limits future growth in emissions from wood burning fireplaces, stoves and restaurant grills. In addition, Pitkin County shall adopt and enforce any resolutions adopted in accordance with these regulations.

Pitkin County may revise the ordinances as necessary to allow greater use of natural gas burning devices without revising the state implementation plan. Any revision to the ordinances to allow greater use of woodburning devices shall be submitted immediately to the Colorado Air Quality Control Commission and the EPA as revisions to the State Implementation Plan. Any amendments to these resolutions shall not constitute a revision to the State Implementation Plan until such time as the State Implementation Plan is appropriately revised. Resolution 18, Series 1992, shall remain in full force and effect until such time as the County obtains full approval of a State Implementation Plan revision.

c. Recordkeeping Requirements

The City and County shall maintain records for a period of two years that document compliance and enforcement activities in order to verify that the ordinances and resolutions have been properly implemented.

## **II. Telluride Attainment/Maintenance Area**

### **A. Implementation of Local Control Strategies**

1. Town of Telluride

a. The Town of Telluride must implement and enforce Ordinance Number 829, Series 1988, as it exists on January 1, 1993. This ordinance will limit future growth in emissions from wood burning fireplaces and stoves and coal burning devices.

2. San Miguel County

a. San Miguel County must implement and enforce Resolutions #1986-20, #1990-33, and #1992-27, as they exist on January 1, 1993. These resolutions limit future growth in emissions from wood burning fireplaces and stoves and coal burning devices.

3. Recordkeeping Requirements

a. The Town of Telluride and San Miguel County must each retain records for 2 years that describe the implementation, tracking and enforcement of the local control strategies listed in 1.a. and 2.a. above. The reports must include information on permits, inspections, compliance, tracking, and enforcement activities in order to verify that the ordinances and resolutions have been implemented.

### **B. Street Sanding Requirements**

1. Definitions

a. "Deployment" means an episode where the roadways designated below are sanded.

b. "Street Sanding Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.

c. "User" means any private or governmental entity, and any employee, official, representative, or agent of such private or governmental entity responsible for the application of street sanding materials and any person who contracts with such private or governmental entity for the purpose of applying street sanding materials to the roadways in the defined Telluride Attainment/Maintenance area.

d. "Division" means the Colorado Department of Public Health and Environment, Air Pollution Control Division.

e. "Independent Laboratory" means a facility capable of performing the tests specified in these regulations in a competent, professional, and unbiased manner with no financial, family, or personal connection to the supplier or user of street sanding materials.

f. "Percent Fines" means the percent material passing a #200 sieve as determined by the American Society for Testing Materials (ASTM) "Standard Method for Sieve Analysis of Fine and Coarse Aggregates", designation C136-84a (1988) (American Association of State Highway and Transportation Officials designation T27-88).

g. "Recycled Street Sanding Materials" means previously used street sanding material which has been collected from roadways or paved areas and is then re-used as is, after washing, or after blending with new street sanding material.

h. "Street Sanding Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.

## 2. Specifications for Street Sanding Materials

### a. Applicability

The provisions of this subsection shall apply to any user that applies any street sanding material within the Telluride Attainment/Maintenance area.

### b. Standards for Quality for Street Sanding Materials

i. Beginning November 1, 1996, all street sanding material used within the Telluride Attainment/Maintenance area, whether new or recycled, shall equal or exceed a standard of less than 2 percent fines as defined in B.1.f above, and only such sanding material shall be used for street sanding operations and purposes.

ii. Alternative methods for achieving the 2 percent fines standard described above must be submitted for approval to the Division and the United States Environmental Protection Agency (EPA) prior to ninety (90) days before the method is implemented.

### c. Alternative Sanding Materials

Experimentation with new street sanding materials may be approved by the Division and EPA provided that the impact of such experiments or tests does not contribute appreciably to air quality degradation.

### d. Testing Requirements

i. Prior to, or upon, delivery of street sanding materials, and prior to the use of any recycled street sanding material, suppliers of street sanding materials to be used in the Telluride Attainment/Maintenance area shall have a test performed upon representative samples of the material by an independent laboratory to determine compliance with the standards of quality set forth above at subsection B.2.b. The test results shall be provided to the purchaser upon delivery.

ii. Alternative percent fines test procedures must be approved by the Division and EPA should they be determined to provide a measure that is equivalent to the test procedures set forth in this regulation.

iii. Reporting Requirements

Each user of street sanding materials in the Telluride Attainment/Maintenance area shall retain records for 2 years for the information described below. All records generated under provision of this regulation shall be made available for inspection upon request by the Division.

(A) A copy of all independent tests performed in accordance with subsection B.2.d. above; and

(B) The name and address of all suppliers of street sanding material along with a full description of the location of the supplier's aggregate pit from which all material was supplied.

e. Division Audit Authority

The Division may enter the storage site of any user of street sanding material covered by these regulations at all times reasonable for the purpose of obtaining a sample of materials, inspecting the records required by this regulation or as otherwise allowed by statute.

**C. Statement of Basis, Specific Statutory Authority and Purpose**

1. August 17, 1995 revisions

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Administrative Procedures Act, C.R.S. 1973, Section 24-4-103(4) for adopted or modified regulations.

Section 172 of the Clean Air Act requires that control measures be adopted as part of nonattainment area state implementation plans. The Colorado Attorney General's Office has determined that any emission control measure for a nonattainment area must be adopted as a State regulation in order for the measure to be enforceable by the State of Colorado. Sections 25-7-105 and -109 of the Colorado Air Pollution Prevention and Control Act provides the specific statutory authority to adopt these emission control regulations.

Revisions to the "State Implementation Plan-Specific Regulations for Nonattainment Areas (Local Elements) Regulation", applicable to Telluride, requires revision to correct a mistake that was made when processing a previous revision that was adopted in October 1994. In 1994, the AQCC adopted a two percent standard for the amount of fine materials in street sand; a one percent standard was inadvertently filed with the Secretary of State and published in the Colorado Register. This rendered the October 1994 regulation unenforceable. The revisions also change the street sand standard's effective date from November 1, 1995 to November 1, 1996. This is necessary because all SIP revisions must now go to the Colorado legislature for review. To accommodate this review, the effective date must be after the 1996 legislative session.

These emission control measures were developed through a cooperative effort between the Town of Telluride, San Miguel County, the Colorado Department of Transportation, The Mountain Village Metropolitan District, and the Colorado Air Pollution Control Division. The submittal of these revisions to the AQCC demonstrates the commitment from local and State governments, and the citizens that they represent, to develop and implement control measures which improve the air quality in the metro Denver area and which comply with federal requirements.

2. March 16, 2000

The amendments to the "State Implementation Plan Specific Regulations for Nonattainment - Attainment/Maintenance Areas" adopted by the Commission establish control measures adequate to maintain the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in diameter (PM-10) in Telluride and Pagosa Springs. The purpose of this rule change is to implement the associated changes to the "Ambient Air Quality Standards" for the State of Colorado to redesignate Pagosa Springs and Telluride as PM-10 attainment areas.

The revisions delete 1) obsolete road paving requirements for Pagosa Springs (the paving has been completed); 2) eliminate unnecessary street sanding reporting requirements for users of street sand in Telluride and Pagosa Springs areas, and 3) delete unnecessary mandatory contingency measures in the Telluride and Pagosa Springs areas. No additional control measures are needed in these areas to demonstrate long-term maintenance of the PM-10 NAAQS.

#### Federal Requirements

Sections 42 USC 7407(d)(3)(E) and 7505a require the State to submit a maintenance plan that will provide for maintenance of the standard for ten years in order to redesignate areas to attainment. The federal requirements for preparation, adoption and submittal of implementation plans, including the maintenance plan, are set out at 40 CFR, Part 51. The maintenance plans adopted by the Commission must include the control measures necessary to maintain the national standard for PM-10 in Pagosa Springs and Telluride for the requisite ten-year period. The Commission has codified the control measures necessary to maintain the PM-10 NAAQS in order to comply with requirement of 42 USC 7410(a)(2)(A) for such measures to be enforceable.

The regulatory revisions do not include any provisions that are not necessary to maintain the NAAQS, or that are otherwise more stringent than requirements of the federal act.

#### Statutory Authority

Specific and general authority to control PM-10 emissions is set out at sections 25-7-105(1) and 25-7-109(1) and (2), C.R.S. (1999).

#### Findings pursuant to section 25-7-110.8

The control measures in the maintenance plan are calculated to maintain the PM-10 NAAQS for the requisite ten-year period. The estimates of PM-10 pollution associated with sand on streets and roads are based on EPA-approved models and assumptions. The Commission believes the EPA-approved model is inaccurate, but federal rules require the State to use such model to demonstrate the adequacy of the maintenance plan. In spite of the problems with the computer model used to develop the regulation, the regulation is based on the most reasonably available, validated, reviewed and sound scientific methodologies currently available under federal law. All methodologies and information made available by interested parties have been considered.

Evidence in the record supports the finding that the rule shall result in demonstrable reduction in particulate pollution. The record reflects that reducing sand on streets and roads will reduce particulate pollution.

The regulatory revisions adopted by the Commission are the most cost-effective means of maintaining the PM-10 NAAQS, and provide flexibility for the regulated community.

The regulatory alternatives selected by the Commission will maximize the air quality benefits of the regulation in the most cost-effective manner.

#### IV. Lamar Attainment/Maintenance Area

Statement of Basis, Specific Statutory Authority and Purpose; Adopted: November 15, 2001

The November 15, 2001 amendments repeal the contingency measures for the Lamar area, which measures are no longer required by federal law because the area is being redesignated to an attainment area for particulate matter. Nothing in this rule change exceeds the minimum requirements of the federal act.

#### Statutory Authority

Specific and general authority to control PM-10 emissions is set out at sections 25-7-105(1) and 25-7-109(1) and (2), C.R.S. (1999).

#### **Footnote:**

See also corrections notice at 12/6/05 (70 FR 72597)

### **I. Pagosa Springs Attainment/Maintenance Area**

#### **A. Definitions**

1. "Deployment" means an episode where the roadways designated below are sanded.
2. "Street Sanding Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.
3. "User" means any governmental entity, and any employee, official, representative, or agent of such governmental entity responsible for the application of street sanding materials and any person who contracts with such governmental entity for the purpose of applying street sanding materials to the designated roadways in the defined Pagosa Springs Attainment /Maintenance area.
4. "Division" means the Colorado Department of Health, Air Pollution Control Division.
5. "Governmental Entity" shall include, but not necessarily be limited to, the State of Colorado, Archuleta County, Town of Pagosa Springs, and the Colorado Department of Transportation.
6. "Independent Laboratory" means a facility capable of performing the tests specified in these regulations in a competent, professional, and unbiased manner with no financial, family, or personal connection to the supplier or user of street sanding materials.



7. "Percent Fines" means the percent material passing a #200 sieve as determined by the American Society for Testing Materials (ASTM) "Standard Method for Sieve Analysis of Fine and Coarse Aggregates", designation C136-84a (1988) (American Association of State Highway and Transportation Officials designation T27-88).

8. "Recycled Street Sanding Materials" means previously used street sanding material which has been collected from roadways or paved areas and is then re-used as is, after washing, or after blending with new street sanding material.

9. "Street Sanding Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.

10. "Base Sanding Amount" is the average amount of street sanding material applied per lane mile driven by maintenance trucks during snow and ice removal operations. The base sanding amount shall be calculated using 1988 data. If reliable 1988 data is not available, another base year period may be used after approval by the Division.

## **B. Specifications for Street Sanding Materials**

### 1. Applicability

The provisions of this subsection shall apply to any user that applies any street sanding material on Highway 160 and Highway 84 within the Pagosa Springs PM-10 Attainment/Maintenance area on or after December 1, 1993.

### 2. Standards for Quality for Street Sanding Materials.

a. All street sanding material used on the subject portions of Highway 160 and Highway 84, whether new or recycled, shall equal or exceed a standard of less than 1% fines as defined in I.A.7. above, and only such sanding material shall be used for street sanding operations and purposes.

b. Alternative methods for achieving the 1% fines standard described above must be submitted for approval to the Division and the United States Environmental Protection Agency (EPA) prior to ninety (90) days before the method is implemented.

### 3. Alternative Sanding Materials.

Experimentation with new street sanding materials may be approved by the Division and EPA provided that the impact of such experiments or tests does not contribute appreciably to air quality degradation.

### 4. Testing and Recordkeeping Requirements.

a. Prior to, or upon, delivery of street sanding materials, and prior to the use of any recycled street sanding material, suppliers of street sanding materials to be used on the subject portions of Highway 160 and Highway 84 shall have a test performed upon representative samples of the material by an independent laboratory to determine compliance with the standards of quality set forth above at subsection I.B.2. The test results shall be provided to the purchaser upon delivery.

b. Alternative percent fines test procedures must be approved by the Division and EPA should they be determined to provide a measure that is equivalent to the test procedures set forth in this regulation.

c. Each user that uses sanding materials shall maintain on file all reports received or prepared with these regulations for a period of two (2) years. All records generated under provisions of this regulation shall be made available for inspection upon request by the Division. The report(s) shall include:

- i. A copy of all independent tests performed in accordance with subsection B.4. above; and
- ii. The name and address of all suppliers of street sanding material along with a full description of the location of the supplier's aggregate pit from which all material was supplied.

5. Division Audit Authority.

The Division may enter the storage site of any user of street sanding material covered by these regulations at all times reasonable for the purpose of obtaining a sample of materials, inspecting the records required by this regulation or as otherwise allowed by statute.

**C. Reduction in the Amount of Street Sand Applied.**

1. Applicability.

The provisions of this Section shall apply to any governmental entity and any employee, official, representative, or agent of such governmental entity responsible for applying street sanding material to Highway 160 and Highway 84 in the Pagosa Springs PM-10 nonattainment area. The provisions of this Section shall also apply to any person who contracts with such governmental entity for the purpose of applying street sanding material to these roadways.

2. Requirements.

a. Each user shall establish and document its base sanding amount. Documentation of the base sanding amount shall be submitted to the Division by December 1, 1993.

b. By December 1, 1993, each affected entity shall submit to the Division a plan and implementation schedule describing the methods to be used to reduce the amount of street sanding materials applied by ten (10) percent from the base sanding amount for the 1993/94 and the 1994/95 sanding seasons.

c. By September 30, 1995, each affected entity shall submit to the Division a plan and implementation schedule describing the methods to be used to reduce the amount of street sanding materials applied by fifteen (15) percent from the base sanding amount for the 1995/96 sanding season and thereafter.

d. Beginning December 1, 1993, all measures set forth in the plans described in Sections I.C.2.a.-c. above must be implemented.

3. Recordkeeping.

a. Users of street sanding material covered by Section C.2. of this regulation shall maintain records for 2 years containing the following information for the preceding twelve months or the preceding calendar year:

- i. the total number of miles driven by maintenance trucks during snow and ice removal operations;

- ii. the total amount of sanding material (both new and recycled), salt, and other de-icing chemicals used;
- iii. the number and dates of full deployment episodes; and
- iv. the number of lane miles typically sanded during each full deployment.

#### **D. Statement of Basis, Specific Statutory Authority and Purpose for Pagosa Springs**

1. March 16, 2000

The amendments to the "State Implementation Plan Specific Regulations for Nonattainment - Attainment/Maintenance Areas" adopted by the Commission establish control measures adequate to maintain the National Ambient Air Quality Standard (NAAQS) for particulate matter less than ten microns in diameter (PM-10) in Telluride and Pagosa Springs. The purpose of this rule change is to implement the associated changes to the "Ambient Air Quality Standards" for the State of Colorado to redesignate Pagosa Springs and Telluride as PM-10 attainment areas.

The revisions delete 1) obsolete road paving requirements for Pagosa Springs (the paving has been completed); 2) eliminate unnecessary street sanding reporting requirements for users of street sand in Telluride and Pagosa Springs areas, and 3) delete unnecessary mandatory contingency measures in the Telluride and Pagosa Springs areas. No additional control measures are needed in these areas to demonstrate long-term maintenance of the PM-10 NAAQS.

##### Federal Requirements

Sections 42 USC 7407(d)(3)(E) and 7505a require the State to submit a maintenance plan that will provide for maintenance of the standard for ten years in order to redesignate areas to attainment. The federal requirements for preparation, adoption and submittal of implementation plans, including the maintenance plan, are set out at 40 CFR, Part 51. The maintenance plans adopted by the Commission must include the control measures necessary to maintain the national standard for PM-10 in Pagosa Springs and Telluride for the requisite ten-year period. The Commission has codified the control measures necessary to maintain the PM-10 NAAQS in order to comply with requirement of 42 USC 7410(a)(2)(A) for such measures to be enforceable.

The regulatory revisions do not include any provisions that are not necessary to maintain the NAAQS, or that are otherwise more stringent than requirements of the federal act.

##### Statutory Authority

Specific and general authority to control PM-10 emissions is set out at sections 25-7-105(1) and 25-7-109(1) and (2), C.R.S. (1999).

##### Findings pursuant to section 25-7-110.8

The control measures in the maintenance plan are calculated to maintain the PM-10 NAAQS for the requisite ten-year period. The estimates of PM-10 pollution associated with sand on streets and roads are based on EPA-approved models and assumptions. The Commission believes the EPA-approved model is inaccurate, but federal rules require the State to use such model to demonstrate the adequacy of the maintenance plan. In spite of the problems with the computer model used to develop the regulation, the regulation is based on the most reasonably available, validated, reviewed and sound scientific

methodologies currently available under federal law. All methodologies and information made available by interested parties have been considered.

Evidence in the record supports the finding that the rule shall result in demonstrable reduction in particulate pollution. The record reflects that reducing sand on streets and roads will reduce particulate pollution.

The regulatory revisions adopted by the Commission are the most cost-effective means of maintaining the PM-10 NAAQS, and provide flexibility for the regulated community.

The regulatory alternatives selected by the Commission will maximize the air quality benefits of the regulation in the most cost-effective manner.

#### VIII. Steamboat Springs PM10 Attainment/Maintenance Area

##### A. Definitions

1. "Deployment" means an episode where the roadways designated below are sanded.

2. "Street Sanding Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.

3. "User" means any governmental entity, and any employee, official, representative, or agent of such governmental entity responsible for the application of street sanding materials and any person who contracts with such governmental entity for the purpose of applying street sanding materials to the designated roadways in the defined Steamboat Springs PM10 Attainment/Maintenance Area.

4. "Division" means the Colorado Department of Public Health and Environment, Air Pollution Control Division.

5. "Governmental Entity" shall include, but not necessarily be limited to, the State of Colorado, Routt County, the City of Steamboat Springs, and the Colorado Department of Transportation.

3. "Independent Laboratory" means a facility capable of performing the tests specified in these regulations in a competent, professional, and unbiased manner with no financial, family, or personal connection to the supplier or user of street sanding materials.

4. "Percent Fines" means the percent material passing a #200 sieve as determined by the American Society for Testing Materials (ASTM) "Standard Method for Sieve Analysis of Fine and Coarse Aggregates", designation C136-84a (1988) (American Association of State Highway and Transportation Officials designation T27-88).

5. Reserved.

## B. Specifications for Street Sanding Materials

### 1. Applicability

The provisions of this subsection shall apply to any user that applies any street sanding material within the Steamboat Springs PM10 Attainment/Maintenance Area, except for U.S. Highway 40 from the junction of U.S. Highway 131 towards Rabbit Ears Pass.

### 2. Standards for Quality for Street Sanding Materials

a. All street sanding material used in the Steamboat Springs PM10 Attainment/Maintenance Area shall contain 2% or less fines as defined in VIII.A.7. above, and only such sanding material shall be used for street sanding operations and purposes.

b. Alternative methods for achieving the 2% fines standard described above must be submitted for approval to the Division and the EPA prior to ninety (90) days before the method is implemented.

### 3. Alternative Sanding Materials

Experimentation with new street sanding materials may be approved by the Division and the EPA provided that the impact of such experiments or tests does not contribute appreciably to air quality degradation.

### 4. Testing Requirements

a. Prior delivery of street sanding

materials, suppliers of street sanding materials to be used in the Steamboat Springs PM10 Attainment/Maintenance Area shall have a test performed upon representative samples of the material by an independent laboratory to determine compliance with the standards of quality set forth above at subsection VIII.B.2. The test results shall be provided to the purchaser upon delivery.

b. Alternative percent fines test procedures must be approved by the Division and the EPA. Any such alternative test procedure will only be approved if they provide a measure that is equivalent to the test procedures set forth in this regulation.

#### 5. Recordkeeping Requirements

Each user that uses street sanding materials shall maintain on file for a period of two (2) years the information described below. All records generated under provisions of this regulation shall be made available for inspection upon request by the Division.

a. A copy of all independent tests performed in accordance with subsection B.4. above; and

b. The name and address of all suppliers of street sanding material along with a full description of the location of the supplier's aggregate pit from which all material was supplied.

#### 6. Division Audit Authority

The Division may enter the storage site of any user of street sanding material covered by these regulations at all times reasonable for the purpose of obtaining a sample of materials, inspecting the records required by this regulation or as otherwise allowed by statute.

C. Reserved.

D. Street Sweeping Requirements for Lincoln Avenue

## 1. Applicability

The sweeping provisions of this subsection shall apply to the City of Steamboat Springs. The provisions of this subsection shall be applicable between December 1 and March 31 of each year.

## 2. Sweeping Requirements

The City of Steamboat Springs shall sweep the traffic lanes of Lincoln Avenue from 13th Street to Old Fish Creek Falls Road at least once each day after the roadway becomes free and clear of snow and ice following each sanding deployment, as weather and street conditions permit, until the City has swept the lanes at least two times.

## 3. Sweeping Equipment Required

Vacuum sweepers, or any other method of equal efficiency approved by the Division and the EPA, must be utilized to sweep Lincoln Avenue as set forth above at Section D.2.

## 4. Recordkeeping Requirements

The City of Steamboat Springs shall maintain records for a period of two (2) years to document the information described below. All records generated under provisions of this regulation shall be made available for inspection upon request by the Division and maintained on file for a period of two (2) years.

- a. Date of sweeping operation;
- b. Specific segments of Lincoln Avenue swept;
- c. Type of equipment used;
- d. Equipment malfunctions and downtime, if any;
- e. Conditions of traffic lanes (dry, wet, snow packed, patchy ice, etc.); and
- f. General weather conditions at time of

sweeping operations.

## E. Implementation of Local Control Strategies

### 1. City of Steamboat Springs

The City of Steamboat Springs shall implement and enforce Ordinance No. 1191 (1991), Ordinance No. 1148 (1990), Ordinance No. 1045 (1988), and Ordinance No. 977 (1987), as they exist on February 1, 1995. A copy of each ordinance is included in Appendix A to this regulation. These ordinances limit the number and type of solid fuel burning devices. In addition, the City of Steamboat Springs shall implement and enforce any ordinance in accordance with these regulations.

These ordinances may be amended in the sole discretion of the City Council of the City of Steamboat Springs, provided that they shall be submitted immediately to the Colorado Air Quality Control Commission and the EPA as revisions to the State Implementation Plan. Any amendments to these ordinances shall not constitute a revision to the State Implementation Plan until such time as the State Implementation Plan is appropriately revised. These ordinances shall remain in full force and effect until such time as the City obtains full approval of a State Implementation Plan revision.

### 2. Routt County

Routt County shall implement and enforce Resolution No. 91-032 (1991), as it exists on February 1, 1995. A copy of this resolution is included in Appendix A to this regulation. This resolution limits the number and type of solid fuel burning devices. In addition, Routt County shall adopt and enforce any resolutions adopted in accordance with these regulations.

This resolution may be amended in the sole discretion of the Board of County Commissioners, provided that they shall be submitted immediately to the Colorado Air Quality Control Commission and the EPA as revisions to the State Implementation Plan. Any amendments to this resolution shall not constitute a revision to the State Implementation Plan until such time as the State Implementation Plan is appropriately revised. Resolution No. 91-032 (1991) shall remain in full force



and effect until such time as the County obtains full approval of a State Implementation Plan revision.

### 3. Recordkeeping Requirements

The City and County shall maintain records for a period of two (2) years that document compliance and enforcement activities in order to verify that the ordinances and resolution have been properly implemented.

## **V. Cañon City Nonattainment Area - PM-10**

### **A. Contingency Measures**

#### 1. Definitions

a. "Deployment" means an episode where the roadways designated for street sweeping in Section V.A.2.a. below are sanded.

b. "Street Sanding Materials" means natural geologic materials, excluding salt and other de-icing chemicals, used to provide increased traction on roadways or paved areas.

c. "User" means any governmental entity, and any employee, official, representative, or agent of such governmental entity responsible for the application of street sanding materials and any person who contracts with such governmental entity for the purpose of applying street sanding material in the defined Canon City Nonattainment Area.

#### 2. Street Sweeping

a. Within two (2) months following EPA's determination that the Canon City Nonattainment Area failed to attain the PM<sub>10</sub> NAAQS or make reasonable further progress (RFP) in reducing emissions, the City of Canon City must sweep the roadway(s) that the user applies street sanding material to:

- i. Royal Gorge Blvd. - 1st to 15th
- ii. South 9th Street - Royal Gorge to City Limit
- iii. South 4th Street - Royal Gorge to City Limit
- iv. 9th Street - Royal Gorge to Washington
- v. College Avenue - 4th to 15th
- vi. 15th Street - Royal Gorge to Harding
- vii. Central Street - 15th to City Limit
- viii. Main Street - 1st to 15th

- ix. Macon - 3rd to 12th
- x. Phay - 9th to 15th
- xi. Yale Place - College to Phay
- xii. 10th Street - Royal Gorge to Phay
- xiii. 12th Street - Main to College
- xiv. 5th Street - Main to Fairview
- xv. 7th Street - Main to College
- xvi. Harding - 5th to Central
- xvii. Orchard - Elizabeth to Pear
- xviii. Diamond - Pear to Florence
- xix. Cottonwood - Pear to Florence
- xx. Cherry - Orchard to Delray
- xxi. Franklin - 15th to 19th
- xxii. 16th Street - Main to Franklin
- xxiii. East Main - Hwy. 50 to Dozier
- xxiv. Frontage Road - East from Dozier to Highway
- xxv. South 1st Street - Royal Gorge to City Limit
- xxvi. Myrtle - 4th to 12th
- xxvii. South 5th Street - Griffith to Myrtle
- xxviii. South 6th Street - Griffith to Myrtle
- xxvix. Park Avenue - 9th to 12th

b. Each traffic lane of the specified roadways must be swept within four days of the roadways becoming free and clear of snow and ice following each street sanding deployment, as weather and street conditions permit.

c. Broom sweepers using water, or any other method of equal efficiency approved by the APCD and EPA, must be utilized to sweep the specified streets and roadways.

d. The street sweeping measures could be implemented at any time prior to EPA's determination that the area failed to attain the PM<sub>10</sub> NAAQS or make RFP. Early implementation of this contingency measure will not result in the requirement to implement additional contingency measures if the area eventually is determined to fail to attain the PM<sub>10</sub> NAAQS or make RFP. Additional control measures, including best available control measures and "serious-area" contingency measures, would be necessary, however, if the area is redesignated as a serious nonattainment area, as required by the Federal Clean Air Act.

## 2. Recordkeeping and Reporting Requirements

a. Once the requirements of Section V.A.2. become effective, each user of street sanding materials on the specified roadways shall begin and continue to keep records of street sanding deployments and sweeping activities. Each user that uses street sanding materials shall notify the City within 24 hours of each sanding deployment and shall maintain on file a record of the notifications provided to the City for a period of two (2) years. All records generated under provisions of this regulation shall include a list of all streets where sanding occurred and shall be made available for inspection upon request by the City of Canon City and the APCD.

b. Once the requirements of Section V.A.2. become effective, the City of Canon City shall maintain records to document the information described below for a period of two (2) years. On the fifth day of each month following a month where street sanding occurred, the City of Canon City shall submit a report to the APCD which shall contain the information described below. All records generated under provisions of this regulation shall be made available for inspection upon request by the APCD.

i. Dates of street sanding deployments;

ii. Dates of street sweeping operations;

iii. Miles and names of streets or roadways sanded and swept;

iv. Type of sweeping equipment used;

v. Sweeping equipment malfunctions and downtime, if any;

vi. Conditions of driving lanes on the days following each sanding deployment (dry, wet, snow packed, patchy ice, etc.); and

vii. General weather conditions at time of sweeping operations.

## DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

### Air Quality Control Commission

## REGULATION NUMBER 21 CONTROL OF VOLATILE ORGANIC COMPOUNDS FROM CONSUMER PRODUCTS AND ARCHITECTURAL AND INDUSTRIAL MAINTENANCE COATINGS

### 5 CCR 1001-25

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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#### Outline of Regulation

PART A CONCERNING CONSUMER PRODUCTS

PART B CONCERNING ARCHITECTURAL AND INDUSTRIAL MAINTENANCE COATINGS

PART C STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE

Pursuant to Colorado Revised Statutes Section 24-4-103(12.5), materials incorporated by reference are available for public inspection during normal business hours or copies may be obtained at a reasonable cost from the Air Quality Control Commission (Commission), 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. The material incorporated by reference may also be available through the United States Government Printing Office, online at [www.govinfo.gov](http://www.govinfo.gov). Materials incorporated by reference are those editions in existence as of the date indicated and do not include any later amendments.

### PART A CONCERNING CONSUMER PRODUCTS

#### I. Applicability

I.A. This part applies to any person who sells, supplies, offers for sale, distributes for sale, or manufactures for sale consumer products in

I.A.1. The 8-hour Ozone Control Area.

I.A.2. (State Only) Colorado. As marked by (State Only), the requirements are not federally enforceable.

#### I.B. This part does not apply to

I.B.1. Consumer products manufactured in Colorado solely for shipment and use outside of Colorado.

I.B.2. Consumer products that do not comply with the VOC limits in Table 1 as long as the manufacturer or distributor can demonstrate both that the consumer product is intended for shipment and use outside of Colorado and that the manufacturer or distributor has taken reasonable prudent precautions to assure that the consumer product is not distributed to Colorado. Section I.B.2. does not apply to consumer products that are sold, supplied, or offered for sale by any person to retail outlets in Colorado.

- I.B.3. Consumer products that have been granted an Innovative Product exemption by the California Air Resources Board (CARB) under the Innovative Products provisions in Subchapter 8.5, Article 2, Section 94511 (January 2019) or Subchapter 8.5, Article 1, Section 94503.5 (January 2019) of Title 17 of the California Code of Regulations are exempt from the VOC content limits in Table 1 for the period of time during which the CARB Innovative Products exemption remains in effect.
  - I.B.4. Consumer products that have been granted an Alternative Control Plan (ACP) by the CARB under the provisions in Subchapter 8.5, Article 4, Sections 94540-94555 (January 2019) of Title 17 of the California Code of Regulations are exempt from the VOC content limits in Table 1 for the period of time during which the CARB ACP agreement remains in effect. Aerosol adhesives, adhesive removers, electronic cleaners, electrical cleaners, energized electrical cleaners, and contact adhesives granted an ACP must be labeled with the term “ACP” or “ACP product” if the product exceeds the applicable VOC limit specified in Table 1. Any manufacturer claiming an ACP agreement must make a copy of the ACP decision available to the Division upon request.
  - I.B.5. Consumer products that have been granted a variance by CARB under the Variances provisions in Subchapter 8.5, Article 2, Section 94514 (January 2019) of Title 17 are exempt from complying with the VOC limits established in Table 1 for the period of time during which the variance remains in effect. Any person claiming a variance must make a copy of the variance available to the Division upon request.
- II. Standards
- II.A. On or after May 1, 2020, no person can manufacture for sale in Colorado any consumer product with a VOC content in excess of the VOC limit specified in Table 1.
  - II.B. No person can sell, supply, offer for sale, or distribute for sale in Colorado any consumer product that is manufactured on or after May 1, 2020, with a VOC content in excess of the VOC limit specified in Table 1.
  - II.C. On or after May 1, 2021, no person can manufacture for sale in Colorado any consumer product registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 USC Section 136-136y (1996)) in excess of the VOC limits in Table 1.
  - II.D. No person can sell, supply, offer for sale, or distribute for sale in Colorado any consumer product registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 USC Section 136-136y (1996)) and manufactured on or after May 1, 2021, with a VOC content in excess of the VOC limits in Table 1.
  - II.E. Effective May 1, 2020, and until May 1, 2021, no person can manufacture for sale, sell, supply, or offer for sale any flammable or extremely flammable, as labeled or meeting the criteria in Title 16 CFR Section 1500.3(c)(6) (February 27, 2018), paint thinner or multi-purpose solvent labeled as a clean-up solvent or paint clean-up product unless the product is clearly and prominently labeled with
    - II.E.1. “DANGER,” “WARNING,” or “CAUTION” and “Formulated to meet California VOC limits; see warnings on label”; or
    - II.E.2. The common name of the chemical compound (e.g., acetone, methyl acetate, etc.) that results in the product meeting the criteria for flammable or extremely flammable.

- II.F. Charcoal lighter material products must be issued a certification in accordance with Subchapter 8.5, Article 2, Section 94509(h) (January 1, 2019) of Title 17 of the California Code of Regulations.
- II.G. For consumer products for which the label, packaging, or accompanying literature specifically states that the product should be diluted with water or non-VOC solvent prior to use, the limits specified in Table 1 apply to the product only after the minimum recommended dilution has taken place. For purposes of this part, “minimum recommended dilution” does not include recommendations for incidental use of a concentrated product to deal with limited special applications such as hard to remove soils or stains.
- II.H. For consumer products for which the label, packaging, or accompanying literature states that the product should be diluted with any VOC solvent prior to use, the limits specified in Table 1 apply to the product only after the maximum recommended dilution has taken place.
- II.I. For consumer products for which the label, packaging, or accompanying literature indicates that the product may be used, or is suitable for use, as a consumer product for which a lower VOC limit is specified in Table 1, then the lowest VOC limit applies. This requirement does not apply to general purpose cleaners, antiperspirant/deodorant products, insecticide foggers, or aerosol lawn and garden insecticides claiming to kill insects or other arthropods.
- II.J. Consumer products specified in Table 1 cannot contain any of the following
  - II.J.1. CFC-11 (trichlorofluoromethane).
  - II.J.2. CFC-12 (dichlorodifluoromethane).
  - II.J.3. CFC-113 (1,1,1-trichloro-2,2,2-trifluoroethane).
  - II.J.4. CFC-114 (1-chloro-1,1-difluoro-2-chloro-2,2-difluoroethane).
  - II.J.5. CFC-115 (chloropentafluoroethane).
  - II.J.6. Halon 1211 (bromochlorodifluoromethane).
  - II.J.7. Halon 1301 (bromotrifluoromethane).
  - II.J.8. Halon 2402 (dibromotetrafluoroethane).
  - II.J.9. HCFC-22 (chlorodifluoromethane).
  - II.J.10. HCFC-123 (2,2-dichloro-1,1,1-trifluoroethane).
  - II.J.11. HCFC-124 (2-chloro-1,1,1,2-tetrafluoroethane).
  - II.J.12. HCFC-141b (1,1-dichloro-1-fluoroethane).
  - II.J.13. HCFC-142b (1-chloro-1,1-difluoroethane).
  - II.J.14. 1,1,1-trichloroethane.
  - II.J.15. Carbon tetrachloride.

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- II.K. The following consumer products cannot contain trichloroethylene in a combined amount greater than 0.01 percent by weight (i.e., an impurity)
    - II.K.1. Adhesive removers.
    - II.K.2. Aerosol adhesives.
    - II.K.3. Bathroom and tile cleaners.
    - II.K.4. Contact adhesives.
    - II.K.5. Construction, panel, floor covering adhesives.
    - II.K.6. Electrical cleaners.
    - II.K.7. Electronic cleaners.
    - II.K.8. Electronic cleaners labeled as energized electronic equipment use only.
    - II.K.9. Footwear or leather care products.
    - II.K.10. General purpose cleaners.
    - II.K.11. General purpose degreasers.
    - II.K.12. Graffiti removers.
    - II.K.13. Multi-purpose solvent.
    - II.K.14. Oven or grill cleaners.
    - II.K.15. Paint thinners.
  - II.L. The medium volatility organic compound (MVOC) content specified for antiperspirants or deodorants does not apply to ethanol.
  - II.M. Paint thinners and multi-purpose solvents cannot contain greater than one percent (1%) aromatic compound content by weight.
  - II.N. The VOC content limits in Table 1 do not apply to
    - II.N.1. Any LVP-VOC.
    - II.N.2. Fragrances up to a combined level of 2 percent by weight.
    - II.N.3. Colorants up to a combined level of 2 percent by weight in any antiperspirant or deodorant.
    - II.N.4. VOCs in antiperspirants or deodorants that contain more than 10 carbon atoms per molecule and for which the vapor pressure is unknown or 2 mm Hg or less at 20°C.
    - II.N.5. Air fresheners that are comprised entirely of fragrance, less compounds exempt from the definition of VOC.
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- II.N.6. Adhesives sold in containers of 1 fluid ounce or less.
- II.N.7. Bait station insecticides designed to be ingested by insects, composed of solid material feeding stimulants with less than 5 percent active ingredients, and in containers less than or equal to 0.5 ounce by weight.
- II.N.8. Solid air fresheners, insecticides, and toilet/urinal care products containing at least 98% para-dichlorobenzene.

Table 1 – VOC content limits for consumer products manufactured on or after May 1, 2020	
Product category	VOC content limit (percent VOCs by weight)
<b>Adhesive removers</b>	
* Floor or wall covering	5
* Gasket or thread locking	50
* General purpose	20
* Specialty	70
<b>Adhesives</b>	
* Aerosol mist spray	65
* Aerosol web spray	55
* Specialty purpose spray adhesive – mounting, automotive engine compartment, and flexible vinyl	70
* Specialty purpose spray adhesive – polystyrene foam and automotive headliner	65
* Specialty purpose spray adhesive – polyolefin and laminate repair/edgebanding	60
* Construction, panel, and floor covering contact	7
* Contact general purpose	55
* Contact special purpose	80
* General purpose	10
* Structural waterproof	15
<b>Air fresheners</b>	
* Single-phase aerosol	30
* Double-phase aerosol	25
* Dual purpose air freshener/disinfectant aerosol	60
* Liquid/pump sprays	18
* Solids/semisolids	3



<b>Antiperspirants</b>	
* Aerosol	40 HVOC, 10 MVOC
* Non-aerosol	0 HVOC, 0 MVOC
<b>Anti-static product</b>	
* Aerosol	80
* Non-aerosol	11
Automotive rubbing or polishing compound	17
<b>Automotive wax, polish, sealant, or glaze</b>	
* Hard paste waxes	45
* Instant detailers	3
* All other forms	15
Automotive windshield cleaner	35
Automotive windshield washer fluids	35
<b>Bathroom and tile cleaners</b>	
* Aerosol	7
* Non-aerosol	1
Brake cleaner	10
Bug and tar remover	40
Carburetor or fuel-injection air intake cleaners	10
<b>Carpet and upholstery cleaners</b>	
* Aerosol	7
* Non-aerosol (dilutables)	0.1
* Non-aerosol (ready-to-use)	3
Charcoal lighter material	See Section II.F.
Cooking spray, aerosol	18
<b>Deodorants</b>	
* Aerosol	0 HVOC, 10 MVOC
* Non-aerosol	0 HVOC, 0 MVOC
<b>Disinfectant</b>	
* Aerosol	70
* Non-aerosol	1
<b>Dusting aids</b>	
* Aerosol	25
* Non-aerosol	7
Electrical cleaner	45

Electronic cleaner	75
<b>Engine degreasers</b>	
* Aerosol	10
* Non-aerosol	5
Fabric protectants	60
<b>Fabric refresher</b>	
* Aerosol	15
* Non-aerosol	6
<b>Floor polishes or waxes</b>	
* Resilient flooring materials	1
* Non-resilient flooring materials	1
* Wood floor wax	90
<b>Footwear or leather care products</b>	
* Aerosol	75
* Solid	55
* Other forms	15
<b>Furniture maintenance products</b>	
* Aerosol	17
* Non-aerosol (except solid or paste)	3
General purpose cleaners	
* Aerosol	8
* Non-aerosol	4
<b>General purpose degreasers</b>	
* Aerosol	10
* Non-aerosol	4
<b>Glass cleaners</b>	
* Aerosol	12
* Non-aerosol	4
<b>Graffiti remover</b>	
* Aerosol	50
* Non-aerosol	30
Hair mousses	6
Hairshines	55
Hairsprays	55
<b>Hair styling products</b>	

* Aerosol and pump sprays	6
* All other forms	2
Heavy-duty hand cleaner or soap	8
<b>Insecticides</b>	
* Crawling bug, aerosol	15
* Crawling bug, all other forms	20
* Flea and tick	25
* Flying bug, aerosol	25
* Flying bug, all other forms	35
* Foggers	45
* Lawn and garden, non-aerosol	3
* Lawn and garden, all other forms	20
* Wasp and hornet	40
<b>Laundry prewash</b>	
* Aerosols/solids	22
* All other forms	5
Laundry starch/sizing/fabric finish products	4.5
Metal polishes/cleansers	30
Multi-purpose lubricant (excluding solid or semi-solid products)	50
Multi-purpose solvent	3
Nail polish remover	1
Non-selective terrestrial herbicide, non-aerosols	3
<b>Oven or grill cleaners</b>	
* Aerosol	8
* Non-aerosol	4
Paint remover or strippers	50
Paint thinner	3
Penetrants	50
<b>Rubber/vinyl protectants</b>	
* Aerosol	10
* Non-aerosol	3
<b>Sanitizer</b>	
* Aerosol	70
* Non-aerosol	1

Sealants and caulking compounds	4
Shaving creams	5
Shaving gel	4
Silicone-based multi-purpose lubricants (excluding solid or semi-solid products)	60
<b>Spot removers</b>	
* Aerosol	25
* Non-aerosol	8
Temporary hair color, aerosol	55
Tire sealants and inflators	20
<b>Toilet/urinal care</b>	
* Aerosol	10
* Non-aerosol	3
Undercoatings, aerosol	40
<b>Wood cleaner</b>	
* Aerosol	17
* Non-aerosol	4

III. Container labeling

- III.A. The manufacturer of any consumer product subject to a VOC limit in Table 1, except products registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. Section 136-136y) (1996) and products containing VOCs at 0.10 percent by weight or less, must clearly display on the container or package the date the product was manufactured or a date code representing the date of manufacture. The date or date code must be displayed on the container such that it is readily observable without removing or disassembling any portion of the product container or packaging.
- III.B. If the label on a special purpose spray adhesive indicates that the product is suitable for use on any substrate or application not listed in the definition for special purpose spray adhesive, the product must be classified as either a web spray adhesive or mist spray adhesive and meet the associated limit in Table 1.
- III.C. The label on non-aerosol floor wax strippers must specify a dilution ratio for light or medium build-up of polish that results in an as-used VOC concentration of 3 percent by weight or less. The label on a non-aerosol floor wax stripper that is also intended to be used for removal of heavy build-up of polish that results must specify a dilution ratio for heavy build-up of polish that results in an as-used VOC concentration of 12 percent by weight or less.
- III.D. The label on energized electrical cleaners must clearly display "Energized equipment use only. Not to be used for motorized vehicle maintenance or their parts."
- III.E. The label on zinc rich primers must clearly display "for professional use only," "for industrial use only," or "not for residential use" or "not intended for residential use."

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- III.F. The label on aerosol adhesives, adhesive removers, electronic cleaners, electrical cleaners, energized electrical cleaners, and contact adhesive products must clearly display
    - III.F.1. The product category.
    - III.F.2. The applicable VOC standard for the product, except energized electrical cleaners, as a percentage by weight.
    - III.F.3. For special purpose spray adhesives, the applicable substrate and/or application that qualifies the product as special purpose.
  
  - IV. Reporting
    - IV.A. Manufacturers of a solid air freshener, insecticide, or toilet/urinal care consumer product that contains at least 98% para-dichlorobenzene must maintain records necessary to demonstrate the para-dichlorobenzene content. These records must be maintained for a minimum of three (3) years and made available to the Division within 90 days after written notice.
    - IV.B. Manufacturers of consumer products that have been granted an Innovative Product exemption must maintain records necessary to demonstrate that the exemption applies and remains in effect. These records must be maintained for a minimum of three (3) years and made available to the Division within 90 days after written notice.
    - IV.C. Manufacturers of consumer products that have been granted an Alternative Control Plan agreement must maintain records necessary to demonstrate that the agreement applies and during what time period the agreement was in effect. These records must be maintained for a minimum of three (3) years and made available to the Division within 90 days after written notice.
    - IV.D. Upon 90 days written notice, the Division may require any responsible party to report any of the following information for any consumer product subject to a VOC limit in Table 1. If the responsible party does not have or does not provide the information requested by the Division, the Division may require the reporting of this information by the person that has the information, including, but not limited to, any formulator, manufacturer, supplier, parent company, private labeler, distributor, or repackager.
      - IV.D.1. The company name of the responsible party, address, telephone number, and designated contact person.
      - IV.D.2. Any claim of confidentiality made pursuant to Colorado requirements.
      - IV.D.3. The consumer product brand name for each consumer product, product label, and product category to which the consumer product belongs.
      - IV.D.4. The applicable product form(s) listed separately.
      - IV.D.5. An identification of each product brand name and form as a "Household Product," "I&I Product," or both.
      - IV.D.6. Colorado sales in pounds per year, to the nearest pound, and the method used to calculate Colorado sales for each consumer product.
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- IV.D.7. For information submitted by multiple companies, an identification of each company which is submitting relevant data separate from that submitted by the responsible party.
- IV.D.8. For each consumer product brand name, the identity, including the specific chemical name and associated Chemical Abstract Services (CAS) number, of
- IV.D.8.a. Each Table B compound.
- IV.D.8.b. Each LVP-VOC that is not a fragrance.
- IV.D.9. For each consumer product brand name, the net percent by weight of the total product, less container and packaging, rounded to the nearest one-tenth of a percent, for each of the following
- IV.D.9.a. Total Table B compounds.
- IV.D.9.b. Total LVP-VOCs that are not fragrances.
- IV.D.9.c. Total all other carbon-containing compounds that are not fragrances.
- IV.D.9.d. Total fragrance.
- IV.D.9.e. For consumer products containing greater than two percent by weight fragrance, the percent of fragrance that are LVP-VOCs and the percent of fragrance that are all other carbon-containing compounds.
- IV.D.9.f. Total all non-carbon-containing compounds.
- IV.D.9.g. Total para-dichlorobenzene.
- IV.D.10. The type of propellant (e.g., Type A, Type B, or a blend of the different types) and weight percent comprised of propellant for each consumer product, if applicable.
- IV.D.11. The net percent by weight of each ozone-depleting compound listed in Section II.J. and contained in any amount greater than 0.1 percent by weight, if applicable.
- IV.D.12. Documentation that the consumer product meets the applicable VOC content limit specified in Table 1.
- IV.D.13. Documentation explaining the date portion of the date code indicating the date of manufacture.

V. Test methods

- V.A. Testing to determine compliance with the requirements of this part, except for charcoal lighter material products (see Section II.F.), may be performed using CARB Method 310, Determination of Volatile Organic Compounds (VOC) in Consumer Products, adopted September 25, 1997, and as last amended on December 31, 2018, or through calculation of the VOC content from records of the amounts of constituents used to make the product if

V.A.1. The manufacturer keeps accurate records for each day of production of the amount and chemical composition of the individual product constituents. Records must be maintained for three (3) years and made available to the Division upon request; and

V.A.2. VOC content is calculated according to the following equation:

$$\text{VOC content} = ((B-C)/A) \times 100$$

Where

A = total net weight of unit (excluding container and packaging)

B = total weight of all VOCs, per unit

C = total weight of VOCs exempted under Section II.N., per unit

V.A.3. If product records are contradicted by product testing performed using CARB Method 310, the results of CARB Method 310 take precedence.

V.B. Testing to determine whether a product is a liquid or solid must be performed using ASTM D4359-90(2000)e1 "Standard Test Method for Determining Whether a Material Is a Liquid or a Solid" (2012).

## VI. Definitions

VI.A. "8-Hour Ozone Control Area" means the Counties of Adams, Arapahoe, Boulder (includes part of Rocky Mountain National Park), Douglas, and Jefferson; the Cities and Counties of Denver and Broomfield; and the following portions of the Counties of Larimer and Weld:

VI.A.1. For Larimer County (includes part of Rocky Mountain National Park), that portion of the county that lies south of a line described as follows: Beginning at a point on Larimer County's eastern boundary and Weld County's western boundary intersected by 40 degrees, 42 minutes, and 47.1 seconds north latitude, proceed west to a point defined by the intersection of 40 degrees, 42 minutes, 47.1 seconds north latitude and 105 degrees, 29 minutes, and 40.0 seconds west longitude, thence proceed south on 105 degrees, 29 minutes, 40.0 seconds west longitude to the intersection with 40 degrees, 33 minutes and 17.4 seconds north latitude, thence proceed west on 40 degrees, 33 minutes, 17.4 seconds north latitude until this line intersects Larimer County's western boundary and Grand County's eastern boundary.

VI.A.2. For Weld County, that portion of the county that lies south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.

VI.B. "Adhesive" means any product that is used to bond one surface to another by attachment. Adhesive does not include products used on humans and animals, adhesive tape, contact paper, wallpaper, shelf liners, or any other product with an adhesive incorporated onto or in an inert substrate.

- VI.C. “Adhesive remover” means a product designed to remove adhesive from either a specific substrate or a variety of substrates but does not include products that remove adhesives intended exclusively for use on humans or animals. For the purposes of this definition, adhesive means a substance used to bond one or more materials including, but not limited to, caulks, sealants, glues, or similar substances used for the purpose of forming a bond.
- VI.C.1. “Floor and wall covering adhesive remover” means a product designed or labeled to remove floor or wall coverings and associated adhesive from the underlying substrate.
- VI.C.2. “Gasket or thread locking adhesive remover” means a product designed or labeled to remove gaskets or thread locking adhesives. Gasket or thread locking adhesive remover includes products labeled for dual use as a paint stripper and gasket remover and/or thread locking adhesive remover.
- VI.C.3. “General purpose adhesive remover” means a product designed or labeled to remove cyanoacrylate adhesives as well as non-reactive adhesives or residues from a variety of substrates. General purpose adhesive remover includes, but is not limited to, products that remove thermoplastic adhesives; pressure sensitive adhesives; dextrin or starch based adhesives; casein glues; rubber or latex-based adhesives; and stickers, decals, stencils, or similar materials. General purpose adhesive remover does not include floor or wall covering adhesive remover.
- VI.C.4. “Specialty adhesive remover” means a product designed to remove reactive adhesives from a variety of substrates. Reactive adhesives include adhesives that require a hardener or catalyst in order for the bond to occur such as, but not limited to, epoxies, urethanes, and silicones. Specialty adhesive remover does not include gasket or thread locking adhesive remover.
- VI.D. “Aerosol adhesive” means an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for hand-held application of adhesive without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose spray adhesive, mist spray adhesives, and web spray adhesives.
- VI.E. “Aerosol cooking spray” means any aerosol product designed either to reduce sticking on cooking and baking surfaces or to be applied on food, or both.
- VI.F. “Aerosol product” means a pressurized spray system that dispenses product ingredients by means of a propellant contained in a product or a product's container or a mechanically induced force but does not include pump spray.
- VI.G. “Agricultural use” means the use of any pesticide or method or device for the control of pests in connection with the commercial production, storage, or processing of any animal or plant crop. Agricultural use does not include the sale or use of pesticides in properly labeled packages or containers which are intended for home use (use in a household or its immediate environment), use in structural pest control (use requiring a license), industrial use (use for or in a manufacturing, mining, or chemical process or use in the operation of factories, processing plants, and similar sites), or institutional use (use within or on property necessary for the operation of buildings such as hospital, schools, libraries, auditorium, and office complexes).



- VI.H. "Air freshener" means any product including, but not limited to, sprays, wicks, wipes, diffusers, powders, and crystals, designed or labeled for the purpose of masking odors, or freshening, cleaning, scenting, or deodorizing the air. Air fresheners includes dual purpose air freshener/disinfectant products, which are aerosol products represented on the product container, label, packaging, or attached literature for use as both a disinfectant and an air freshener. Air freshener does not include products that are used on the human body, products that function primarily as cleaning products as indicated on the product label, odor remover/eliminator, toilet/urinal care products, or disinfectants when offered for sale solely through institutional and industrial channels of distribution.
- VI.I. "All other carbon-containing compounds" means other compounds which contain at least one carbon atom and are not a table B compound or a LVP-VOC.
- VI.J. "All other forms" means all consumer product forms for which no form-specific VOC standard is specified and include, but are not limited to, solids, liquids (including the liquid containing or liquid impregnated portion of the cloth or paper wipes), wicks, powders, and crystals.
- VI.K. "Antimicrobial hand or body cleaner or soap" means a cleaner or soap which is designed to reduce the level of microorganisms on the skin through germicidal activity and includes, but is not limited to, antimicrobial hand or body washes/cleaners, food handler hand washes, healthcare personnel hand washes, preoperative skin preparations, and surgical scrubs. Antimicrobial hand or body cleaner or soap does not include prescription drug products, antiperspirants, astringent/toner, deodorant, facial cleaner or soap, general-use hand or body cleaner or soap, hand dishwashing detergent (including antimicrobial), heavy-duty hand cleaner or soap, medicated astringent/medicated toner, and rubbing alcohol.
- VI.L. "Antiperspirant" means any product including, but not limited to, aerosols, roll-ons, sticks, pumps, pads, creams, and squeeze-bottles, that is intended by the manufacturer to be used to reduce perspiration in the human axilla by at least 20 percent in at least 50 percent of a target population.
- VI.M. "Anti-static product" means a product that is labeled to eliminate, prevent, or inhibit the accumulation of static electricity. Anti-static product does not include electronic cleaner, floor polish or wax, floor coating, aerosol coating products, or architectural coatings.
- VI.N. "Architectural coating" means a coating applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs.
- VI.O. "Aromatic compound" means a carbon containing compound, except compounds exempt from the definition of VOC, that contains one or more benzene or equivalent heterocyclic rings and has an initial boiling point less than or equal to 280 degrees C.
- VI.P. "Artist solvent/thinner" means any liquid product, labeled to meet ASTM D4236 – 94 (March 1, 2005) Standard Practice for Labeling Art Materials for Chronic Health Hazards, and packaged in a container equal to or less than 34 fluid ounces, labeled to reduce the viscosity of, and or remove, art coating compositions or components.
- VI.Q. "Astringent/toner" means any product not regulated as a drug by the United States Food and Drug Administration (FDA) which is applied to the skin for the purpose of cleaning or tightening pores including clarifiers and substrate-impregnated products. Astringent/toner does not include medicated astringent/medicated toner, cold cream, lotion, or antiperspirant.

- VI.R. “Automotive hard paste wax” means an automotive wax or polish that is designed to protect and improve the appearance of automotive paint surfaces, is solid at room temperature, and contains zero percent (0%) water by formulation.
- VI.S. “Automotive instant detailer” means a product designed for use in a pump spray that is applied to the painted surface of automobiles and wiped off prior to the product being allowed to dry.
- VI.T. “Automotive rubbing or polishing compound” means a product designed primarily to remove oxidation, old paint, scratches or “swirl marks”, and other defects from the painted surfaces of motor vehicles without leaving a protective barrier.
- VI.U. “Automotive wax, polish, sealant, or glaze” means a product designed to seal out moisture, increase gloss, or otherwise enhance a motor vehicle’s painted surfaces and includes, but is not limited to, products designed for use in auto body repair shops, drive-through car washes, and products designed for the general public. Automotive wax, polish, sealant, or glaze does not include automotive rubbing or polishing compounds, automotive wash and wax products, surfactant-containing car wash products, and products designed for use on unpainted surfaces such as bare metal, chrome, glass, or plastic.
- VI.V. “Automotive windshield cleaner” means a product labeled for automotive use only, packaged as an automotive windshield cleaner in the form of a moistened towelette, and designed to be used on automotive windshields, automotive mirrors, and automotive headlights. Automotive windshield cleaner does not include automotive windshield washer fluid.
- VI.W. “Automotive windshield washer fluid” means any liquid designed for use in a motor vehicle windshield washer system either as an antifreeze or for the purpose of cleaning, washing, or wetting the windshield. Automotive windshield washer fluid does not include fluids placed by the manufacturer in a new vehicle.
- VI.X. “Bathroom and tile cleaner” means a product designed or labeled to clean tile or surfaces in bathrooms. Bathroom and tile cleaner does not include toilet/urinal care product.
- VI.Y. “Brake cleaner” means a cleaning product designed to remove oil, grease, brake fluid, brake pad material, or dirt from motor vehicle brake mechanisms.
- VI.Z. “Bug and tar remover” means a product labeled to remove biological-type residues, such as insect carcasses and tree sap, and/or road grime, such as road tar, roadway paint markings, and asphalt, from painted motor vehicle surfaces without causing damage to the finish.
- VI.AA. “Carburetor or fuel-injection air intake cleaners” means a product designed or labeled to remove fuel deposits, dirt, or other contaminants from a carburetor, choke, throttle body of a fuel-injection system, or associated linkages. Carburetor or fuel-injection air intake cleaner does not include products designed or labeled exclusively to be introduced directly into the fuel lines or fuel storage tank prior to introduction into the carburetor or fuel injectors or products designed or labeled exclusively to be introduced during engine operation directly into air vacuum lines by using a pressurized sprayer wand.

- VI.BB. "Carpet and upholstery cleaner" means a cleaning product designed for the purpose of eliminating dirt and stains on rugs, carpeting, and the interior of motor vehicles and/or on household furniture or objects upholstered or covered with fabrics such as wool, cotton, nylon or other synthetic fabrics. Carpet and upholstery cleaner includes, but is not limited to, products that make fabric protectant claims. Carpet and upholstery cleaner does not include general purpose cleaners, spot removers, vinyl or leather cleaners, dry cleaning fluids, or products designed exclusively for use at industrial facilities engaged in furniture or carpet manufacturing.
- VI.CC. "Charcoal lighter material" means any combustible material designed to be applied on, incorporated in, added to, or used with charcoal to enhance ignition. Charcoal lighter material does not include electrical starters and probes, metallic cylinders using paper tinder, natural gas, propane, and fat wood.
- VI.DD. "Colorant" means any pigment or coloring material used in a consumer product for an aesthetic effect, or to dramatize an ingredient.
- VI.EE. "Construction, panel, and floor covering adhesive" means any non-aerosol, one-component adhesive that is designed or labeled for the installation, remodeling, maintenance, or repair of structural and building components that include, but are not limited to, beams, trusses, studs, paneling (drywall or drywall laminates, fiberglass reinforced plastic (FRP), plywood, particle board, insulation board, pre-decorated hardboard or tileboard, etc.), ceiling and acoustical tile, molding, fixtures, countertops or countertop laminates, cove or wall bases, and flooring or subflooring or floor or wall coverings that include, but are not limited to, wood or simulated wood covering, carpet, carpet pad or cushion, vinyl-backed carpet, flexible flooring material, nonresilient flooring material, mirror tiles and other types of tiles, and artificial grass. Construction, panel, and floor covering adhesive does not include floor seam sealer. Construction, panel and floor covering adhesive, does not include units of non-aerosol adhesive, less packaging, which weigh more than one pound and consists of more than 16 fluid ounces.
- VI.FF. "Consumer" means any person who purchases or acquires any consumer product for personal, family, household, or institutional use. Consumer does not include persons acquiring a consumer product for resale.
- VI.GG. "Consumer product" means a chemically formulated product used by household and institutional consumers including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; automotive specialty products; and aerosol adhesives. Consumer product does not include other paint products, furniture coatings, or architectural coatings.
- VI.HH. "Contact adhesive" means a non-aerosol adhesive that is designed for application to both surfaces to be bonded together, is allowed to dry before the two surfaces are placed in contact with each other, forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other, and does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces. Contact adhesive does not include rubber cements that are primarily intended for use on paper substrates or vulcanizing fluids that are designed and labeled for tire repair only. Contact adhesive does not include units of adhesive, less packaging, which consist of more than one gallon.
- VI.II. "Contact adhesive – general purpose" means any contact adhesive that is not a contact adhesive – special purpose.

- VI.JJ. "Contact adhesive – special purpose" means a contact adhesive that: is used to bond melamine-covered board, unprimed metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber, high pressure laminate or wood veneer 1/16 inch or less in thickness to any porous or nonporous surface, and is sold in units of product, less packaging, that contain more than eight fluid ounces; or is used in automotive applications that are automotive under-the-hood applications requiring heat, oil or gasoline resistance, or are body-side molding, automotive weatherstrip or decorative trim.
- VI.KK. "Container/packaging" means the part or parts of the consumer or institutional product which serve only to contain, enclose, incorporate, deliver, dispense, wrap or store the chemically formulated substance or mixture of substances which is solely responsible for accomplishing the purposes for which the product was designed or intended. Container/packaging includes any article onto or into which the principle display panel and other accompanying literature or graphics are incorporated, etched, printed or attached.
- VI.LL. "Crawling bug insecticide" means any insecticide product that is designed for use against ants, cockroaches, or other household crawling arthropods, including, but not limited to, mites, silverfish, or spiders. Crawling bug insecticide does not include products designed to be used exclusively on humans or animals or any house dust mite product. A house dust mite product means a product whose label, packaging, or accompanying literature states that the product is suitable for use against house dust mites but does not indicate that the product is suitable for use against ants, cockroaches, or other household crawling arthropods. House dust mite means mites which feed primarily on skin cells shed in the home by humans and pets and which belong to the phylum Arthropoda, the subphylum Chelicerata, the class Arachnida, the subclass Acari, the order Astigmata, and the family Pyroglyphidae.
- VI.MM. "Date-code" means the day, month and year on which the consumer product was manufactured, filled, or packaged, or a code indicating such a date.
- VI.NN. "Deodorant" means any product including, but not limited to, aerosol, roll-ons, sticks, pumps, pads, creams, and squeeze-bottles, that indicates or depicts on the container or packaging, or on any sticker or label affixed thereto, that the product can be used on or applied to the human axilla to provide a scent and/or minimize odor. Deodorant includes deodorant body sprays that indicate or depict on the container, packaging, or label that it can be used on or applied to the human axilla.
- VI.OO. "Deodorant body spray" means a personal fragrance product with 20 percent or less fragrance that is designed for application all over the human body to provide a scent.
- VI.PP. "Device" means any instrument or contrivance (other than a firearm) that is designed for trapping, destroying, repelling, or mitigating any pest or any other form of plant or animal life (other than man and bacterium, virus, other microorganism on or in living man or other living animals). Device does not include equipment used for the application of pesticides when sold separately therefrom.

- VI.QQ. "Disinfectant" means a product labeled as a disinfectant or a product registered as a disinfectant under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 U.S.C. 136, et seq. (1996)) to destroy or irreversibly inactivate infectious or other undesirable bacteria, pathogenic fungi, or viruses on surfaces or inanimate objects. Disinfectant includes products labeled as both sanitizer and disinfectant. Disinfectant does not include products labeled solely for use on humans or animals; agricultural use; use in swimming pools, therapeutic tubs, or hot tubs; to be used on heat sensitive critical or semi-critical medical devices or medical equipment surfaces; to be applied to food-contact surfaces and are not required to be rinsed prior to contact with food; products which are pre-moistened wipes or towelettes sold exclusively to medical, convalescent, or veterinary establishments; or products labeled as bathroom and tile cleaners, glass cleaners, general purpose cleaners, toilet/urinal care products, metal polishes, carpet cleaners, or fabric refreshers that may also make disinfecting or anti-microbial claims on the label.
- VI.RR. "Distributor" means any person to whom a consumer product is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.
- VI.SS. "Double phase aerosol air freshener" means an aerosol air freshener with the liquid contents in two or more distinct phases that requires the product container be shaken before use to mix the phases, producing an emulsion.
- VI.TT. "Dry cleaning fluid" means any non-aqueous liquid product designed and labeled exclusively for use on fabrics which are labeled "for dry clean only," such as clothing or drapery, or "S-coded" fabrics. S-coded fabric means an upholstery fabric designed to be cleaned only with water-free spot cleaning products as specified by the Joint Industry Fabric Standards Committee. Dry cleaning fluid does not include spot removers or carpet and upholstery cleaners.
- VI.UU. "Dusting aid" means a product designed to assist in removing dust and other soils from floors and other surfaces without leaving a wax or silicone based coating. Dusting aid does not include pressurized gas duster.
- VI.VV. "Electrical cleaner" means a product labeled to remove heavy soils such as grease, grime, or oil from electrical equipment, including, but not limited to, electric motors, armatures, relays, electric panels, or generators. Electrical cleaner does not include general purpose cleaner, general purpose degreaser, dusting aid, electronic cleaner, energized electrical cleaner, pressurized gas duster, engine degreaser, anti-static product, or products labeled to clean the casings or housings of electrical equipment.
- VI.WW. "Electronic cleaner" means a product labeled for the removal of dirt, moisture, dust, flux or oxides from the internal components of electronic or precision equipment such as circuit boards and the internal components of electronic devices, including but not limited to, radios, compact disc (CD) players, digital video disc (DVD) players, and computers. Electronic cleaner does not include general purpose cleaner, general purpose degreaser, dusting aid, pressurized gas duster, engine degreaser, electrical cleaner, energized electrical cleaner, anti-static product, or products labeled to clean the casings or housings of electronic equipment or energized electrical cleaners. Electronic cleaner does not include products labeled to clean and/or degrease electronic equipment, where cleaning and/or degreasing is accomplished when electrical current exists, or when there is a residual electrical potential from a component and clearly displaying "energized electronic equipment use only."

- VI.XX. “Energized electrical cleaner” means a product labeled to clean and/or degrease electrical equipment, where cleaning and/or degreasing is accomplished when electrical current exists, or when there is a residual electrical potential from a component, such as a capacitor. Energized electrical cleaner does not include electronic cleaner.
- VI.YY. “Engine degreaser” means a cleaning product designed or labeled to remove grease, grime, oil and other contaminants from the external surfaces of engines and other mechanical parts.
- VI.ZZ. “Fabric protectant” means a product labeled to be applied to fabric substrates to protect the surface from soiling from dirt or other impurities or to reduce absorption of liquid into the fabric fibers. Fabric protectant does not include waterproofers; products labeled for use solely on leather; pigmented products that are designed to be used primarily for coloring; products used for construction, reconstruction, modification, structural maintenance or repair of fabric substrates; or products that renew or restore fabric and qualify as either clear coating or vinyl/fabric/leather/polycarbonate coating.
- VI.AAA. “Fabric refresher” means a product labeled to neutralize or eliminate odors on nonlaundered fabric including, but not limited to, soft household surfaces, rugs, carpeting, draperies, bedding, automotive interiors, footwear, athletic equipment, clothing and/or on household furniture or objects upholstered or covered with fabrics such as, but not limited to, wool, cotton, or nylon. Fabric refresher does not include anti-static product, carpet and upholstery cleaner, footwear or leather care product, spot remover, disinfectant, or products labeled for application to both fabric and human skin.
- VI.BBB. “Facial cleaner or soap” means a cleaner or soap designed primarily to clean the face and includes, but is not limited to, facial cleansing creams, semisolids, liquids, lotions, and substrate-impregnated forms. Facial cleaner or soap does not include prescription drug products, antimicrobial hand or body cleaner or soap, astringent/toner, general-use hand or body cleaner or soap, medicated astringent/medicated toner, or rubbing alcohol.
- VI.CCC. “Fat wood” means pieces of wood kindling with high naturally-occurring levels of sap or resin which enhance ignition of the kindling but does not include any kindling with substances added to enhance flammability, such as wax-covered or wax-impregnated wood-based products.
- VI.DDD. “Flea and tick insecticide” means any insecticide product that is designed for use against fleas, ticks, their larvae, or their eggs but does not include products that are designed to be used exclusively on humans or animals and their bedding.
- VI.EEE. “Floor coating” means an opaque coating that is labeled and designed for application to flooring, including, but not limited to, decks, porches, steps, and other horizontal surfaces which may be subject to foot traffic.
- VI.FFF. “Floor polish or wax” means a product designed or labeled to polish, wax, condition, protect, temporarily seal, or otherwise enhance floor surfaces by leaving a protective finish that is designed or labeled to be periodically replenished. Floor polish or wax includes products for resilient flooring materials (including, but not limited to, asphalt, cork, linoleum, no-wax, rubber, seamless vinyl, vinyl composite flooring), non-resilient flooring materials (including, but not limited to, terrazzo, marble, slate, granite, brick, stone, ceramic tile, concrete), and wood floor wax (i.e., wax-based products for use solely on wood floors). Floor polish or wax does not include spray buff products, floor wax strippers, or products designed or labeled for unfinished wood floors or coatings subject to architectural coatings regulations.

- VI.GGG. "Floor seam sealer" means any product designed and labeled exclusively for bonding, fusing, or sealing (coating) seams between adjoining rolls of installed flexible sheet flooring.
- VI.HHH. "Floor wax stripper" means a product designed to remove natural or synthetic floor polishes or waxes through breakdown of the polish or wax polymers or by dissolving or emulsifying the polish or wax. Floor wax stripper does not include aerosol floor wax strippers or products designed to remove floor wax solely through abrasion.
- VI.III. "Flying bug insecticide" means any insecticide product that is designed for use against flying insects or other flying arthropods, including, but not limited to, flies, mosquitoes, moths, or gnats. Flying bug insecticide does not include wasp and hornet insecticide, products designed to be used exclusively on humans or , or products designed and labeled to protect fabrics from damage by moths where the label does not also indicate the product is suitable for use against flying insects or other flying arthropods.
- VI.JJJ. "Footwear or leather care product" means any product designed or labeled to be applied to footwear or to other leather articles/components, to maintain, enhance, clean, protect, or modify the appearance, durability, fit, or flexibility of the footwear or leather article/component. Footwear or leather care product does not include fabric protectant, general purpose adhesive, contact adhesive, vinyl/fabric/leather/polycarbonate coating, rubber/vinyl protectant, fabric refresher, or products solely for deodorizing or sealant products with adhesive properties used to create external protective layers greater than 2 millimeters thick.
- VI.KKK. "Fragrance" means a substance or complex mixture of aroma chemicals, natural essential oils, and other functional components with a combined vapor pressure not in excess of 2 millimeters of Mercury (mm Hg) at 20 degrees C, the sole purpose of which is to impart an odor or scent or to counteract a malodor.
- VI.LLL. "Furniture maintenance product" means a wax, polish, conditioner, or any other product labeled for the purpose of polishing, protecting or enhancing finished wood surfaces, other than floors, and other furniture surfaces including, but not limited to, acrylics, ceramic, plastics, stone surfaces, metal surfaces, and fiberglass. Furniture maintenance product does not include dusting aids, wood cleaners, and products designed solely for the purpose of cleaning or products designed to leave a permanent finish such as stains, sanding sealers, and lacquers.
- VI.MMM. "Furniture coating" means any paint designed for application to room furnishings including, but not limited to, cabinets (kitchen, bath, and vanity), tables, chairs, beds, and sofas.
- VI.NNNN. "Gel" means a colloid in which the disperse phase has combined with the continuous phase to produce a semisolid material, such as jelly.
- VI.OOO. "General purpose adhesive" means any non-aerosol adhesive designed for use on a variety of substrates. General purpose adhesive does not include contact adhesives; construction, panel, and floor covering adhesives; adhesives designed exclusively for application on one specific category of substrates (i.e., substrates that are composed of similar materials, such as different types of metals, paper products, ceramics, plastics, rubbers, or vinyls); or adhesives designed exclusively for use on one specific category of articles (i.e., articles that may be composed of different materials but perform a specific function, such as gaskets, automotive trim, weatherstripping, or carpets). General purpose adhesive, does not include units of non-aerosol adhesive, less packaging, which weigh more than one pound and consists of more than 16 fluid ounces.

- VI.PPP. "General purpose cleaner" means a product labeled to clean a variety of hard surfaces, including, but not limited to, products designed or labeled for general floor cleaning, kitchen, countertop, or sink cleaning, and cleaners designed or labeled to be used on a variety of hard surfaces such as stovetops, cooktops, or microwaves.
- VI.QQQ. "General purpose degreaser" means any product labeled to remove or dissolve grease, grime, oil and other oil-based contaminants from a variety of substrates, including automotive or miscellaneous metallic parts. General purpose degreaser does not include engine degreaser, general purpose cleaner, adhesive remover, electronic cleaner, electrical cleaner, energized electrical cleaner, metal polish or cleanser, oven or grill cleaner, or products used exclusively in solvent cleaning tanks or related equipment (including, but not limited to, cold cleaners, vapor degreasers, conveyORIZED degreasers, film cleaning machines, products designed to clean miscellaneous metallic parts by immersion in a container) or products that are exclusively sold directly or through distributors to establishments which manufacture or construct goods or commodities and labeled exclusively for "use in the manufacturing process only."
- VI.RRR. "General-use hand or body cleaner or soap" means a cleaner or soap designed to be used routinely on the skin to clean or remove typical or common dirt and soils and includes, but is not limited to, hand or body washes, dual-purpose shampoo-body cleaners, shower or bath gels, and moisturizing cleaners or soaps. General-use hand or body cleaner or soap does not include prescription drug products, antimicrobial hand or body cleaner or soap, astringent/toner, facial cleaner or soap, hand dishwashing detergent (including antimicrobial), heavy-duty hand cleaner or soap, medicated astringent/medicated toner, or rubbing alcohol.
- VI.SSS. "Glass cleaner" means a cleaning product designed primarily for cleaning surfaces made of glass. Glass cleaner does not include products designed solely for the purpose of cleaning optical materials used in eyeglasses, photographic equipment, scientific equipment, and photocopying machines.
- VI.TTT. "Graffiti remover" means a product labeled to remove spray paint, ink, marker, crayon, lipstick, nail polish, or shoe polish from a variety of non-cloth or nonfabric substrates and products labeled for dual use as both a paint stripper and graffiti remover. Graffiti remover does not include paint remover or stripper, nail polish remover, or spot remover.
- VI.UUU. "Hair mousse" means a hairstyling foam designed to facilitate styling of a coiffure and provide limited holding power.
- VI.VVV. "Hair shine" means any product designed for the primary purpose of creating a shine when applied to the hair and includes, but is not limited to, dual-use products designed primarily to impart a sheen to the hair. Hair shine does not include hair spray, hair mousse, hair styling product, hair styling gel, or products whose primary purpose is to condition or hold the hair.
- VI.WWW. "Hair spray" means a consumer product that is applied to styled hair and is designed or labeled to provide sufficient rigidity, to hold, retain, and/or finish the style of the hair for a period of time. Hair spray includes aerosol hair sprays, pump hair sprays, spray waxes; color, glitter, or sparkle hairsprays that make finishing claims; and products that are both a styling (i.e., forming, sculpting, or manipulating the hair for a period of time) and finishing (i.e., maintain and/or hold the styled hair for a period of time) product. Hair spray does not include spray products that are intended to aid in styling but do not provide finishing of a hairstyle.



- VI.XXX. "Hair styling product" means a consumer product designed or labeled for the application to wet, damp, or dry hair to aid in defining, shaping, lifting, styling, and/or sculpting of the hair. Hair styling product includes, but is not limited, to hair balm, clay, cream, crème, curl straightener, gel, liquid, lotion, paste, pomade, putty, root lifter, serum, spray gel, stick, temporary hair straightener, wax, spray products that aid in styling but do not provide finishing of a hairstyle, and leave-in volumizers, detanglers, and/or conditioners that make styling claims. Hair styling product does not include hair mousse, hair shine, hair spray, or shampoos and/or conditioners that are rinsed from the hair prior to styling.
- VI.YYY. "Heavy-duty hand cleaner or soap" means a product designed to clean or remove difficult dirt and soils such as oil, grease, grime, tar, shellac, putty, printer's ink, paint, graphite, cement, carbon, asphalt, or adhesives from the hand with or without the use of water. Heavy-duty hand cleaner or soap does not include prescription drug products, antimicrobial hand or body cleaner or soap, astringent/toner, facial cleaner or soap, general-use hand or body cleaner or soap, medicated astringent/medicated toner, or rubbing alcohol.
- VI.ZZZ. "Herbicide" means a pesticide product designed to kill or retard a plant's growth, but excludes products that are for agricultural use or restricted materials that require a permit for use and possession.
- VI.AAAA. "High-temperature coating" means a high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204 degrees C (400 degrees F).
- VI.BBBB. "High volatility organic compound (HVOC)" means any volatile organic compound that exerts a vapor pressure greater than 80 mm Hg when measured at 20 degrees C.
- VI.CCCC. "Household product" means any consumer product that is primarily designed to be used inside or outside of living quarters or residences that are occupied or intended for occupation by individuals, including the immediate surroundings.
- VI.DDDD. "Industrial maintenance coating" means a high performance architectural coating, including primers, sealers, undercoaters, intermediate coats, and topcoats, formulated for application to substrates, including floors, and exposed to one or more of the following extreme environmental conditions: immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposures of interior surfaces to moisture condensation; acute or chronic exposure to corrosive, caustic, or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions; frequent exposure to temperatures above 121°C (250°F); frequent heavy abrasion, including mechanical wear and scrubbing with industrial solvents, cleansers, or scouring agents; or exterior exposure of metal structures and structural components. Industrial maintenance coatings must be labeled as specified in Part B, Section III.D.1.
- VI.EEEE. "Insecticide" means a pesticide product that is designed for use against insects or other arthropods. Insecticide does not include products that are for agricultural use, for a use which requires a structural pest control license, or restricted materials that require a permit for use and possession.
- VI.FFFF. "Insecticide fogger" means any insecticide product designed to release all or most of its content as a fog or mist into indoor areas during a single application.

- VI.GGGG. “Institutional product” or “industrial and institutional (I&I) product” means a consumer product that is designed for use in the maintenance or operation of an establishment (e.g., government agencies, factories, schools, hospitals, restaurants, hotels, stores) that manufactures, transports, or sells goods or commodities or provides services for profit or is engaged in the nonprofit promotion of a particular public, educational, or charitable cause. Institutional product does not include household products and products that are incorporated into or used exclusively in the manufacture or construction of the goods or commodities at the site of the establishment.
- VI.HHHH. “Label” means any written, printed, or graphic matter affixed to, applied to, attached to, blown into, formed, molded into, embossed on, or appearing upon any consumer product or consumer product package, for purposes of branding, identifying, or giving information with respect to the product or to the contents of the package.
- VI.IIII. “Laundry prewash” means a product that is designed for application to a fabric prior to laundering and that supplements and contributes to the effectiveness of laundry detergents and/or provides specialized performance.
- VI.JJJJ. “Laundry starch/sizing/fabric finish product” means a product that is labeled for application to a fabric, either during or after laundering, to impart and prolong a crisp, fresh look and may also act to help ease ironing of the fabric.
- VI.KKKK. “Lawn and garden insecticide” means an insecticide product labeled primarily to be used in household lawn and garden areas to protect plants from insects or other arthropods. Lawn and garden insecticides may claim to kill insects or other arthropods.
- VI.LLLL. “Liquid” means a substance or mixture of substances which is capable of a visually detectable flow as determined under ASTM D-4359-90(2000)e1 (2012) but does not include powders or other materials that are composed entirely of solid particles.
- VI.MMMM. “Lubricant” means a product designed to reduce friction, heat, noise, or wear between moving parts, or to loosen rusted or immovable parts or mechanisms. Lubricant does not include automotive power steering fluids; products for use inside power generating motors, engines, and turbines, and their associated power-transfer gearboxes; two cycle oils or other products designed to be added to fuels; products for use on the human body or animals or products that are exclusively sold directly or through distributors to establishments which manufacture or construct goods or commodities and labeled exclusively for “use in the manufacturing process only.”
- VI.NNNN. “LVP content” means the total weight, in pounds, of LVP compounds in an ACP product multiplied by 100 and divided by the product’s total net weight (in pounds, excluding container and packaging), expressed to the nearest 0.1.
- VI.OOOO. “LVP-VOC” means a chemical compound or mixture that contains at least one carbon atom and meets one of the following: has a vapor pressure less than 0.1 mm Hg at 20 degrees C, as determined by CARB Method 310 (December 31, 2018); is a chemical compound with more than 12 carbon atoms, or a chemical mixture comprised solely of compounds with more than 12 carbon atoms as verified by formulation data, and the vapor pressure and boiling point are unknown; is a chemical compound with a boiling point greater than 216 degrees C, as determined by CARB Method 310 (December 31, 2018); or is the weight percent of a chemical mixture that boils above 216 degrees C, as determined by CARB Method 310 (December 31, 2018). Chemical compound means a molecule of definite chemical formula and isomeric structure. Chemical mixture means a substrate comprised of two or more chemical compounds.

- VI.PPPP. "Manufacturer," for consumer product, means any person who imports, manufactures, assembles, produces, packages, repackages, or relabels a consumer product.
- VI.QQQQ. "Medicated astringent/medicated toner" means any product regulated as a drug by the FDA which is applied to the skin for the purpose of cleaning or tightening pores and includes, but is not limited to, clarifiers and substrate-impregnated products. Medicated astringent/medicated toner does not include hand, face, or body cleaner or soap products; cold cream; lotion; antiperspirants; or products that must be purchased with a doctor's prescription.
- VI.RRRR. "Medium volatility organic compound (MVOC)" means any volatile organic compound that exerts a vapor pressure greater than 2 mm Hg and less than or equal to 80 mm Hg when measured at 20 degrees C.
- VI.SSSS. "Metal polish/cleanser" means any product designed primarily to improve the appearance (e.g., remove or reduce stains, impurities, or oxidation from surfaces or to make surfaces smooth and shiny) of finished metal, metallic, or metallized surfaces by physical or chemical action and includes, but is not limited to, metal polishes used on brass, silver, chrome, copper, stainless steel, and other ornamental metals. Metal polish/cleanser does not include automotive wax, polish, sealant or glaze; wheel cleaner; paint remover or stripper; or products designed and labeled exclusively for automotive and marine detailing or products designed for use in degreasing tanks.
- VI.TTTT. "Mist spray adhesive" means any aerosol which is not a special purpose spray adhesive and which delivers a particle or mist spray, resulting in the formation of fine, discrete particles that yield a generally uniform and smooth application of adhesive to the substrate.
- VI.UUUU. "Multi-purpose dry lubricant" means any lubricant which is designed and labeled to provide lubricity by depositing a thin film of graphite, molybdenum disulfide (moly), or polytetrafluoroethylene or closely related fluoropolymer (Teflon) on surfaces and is designed for general purpose lubrication or for use in a wide variety of applications.
- VI.VVVV. "Multi-purpose lubricant" means any lubricant designed for general purpose lubrication, or for use in a wide variety of applications. Multi-purpose lubricant does not include multi-purpose dry lubricants, penetrants, or silicone-based multi-purpose lubricants.
- VI.WWWW. "Multi-purpose solvent" means any liquid product designed or labeled to be used for dispersing, dissolving, or removing contaminants or other organic materials. Multi-purpose solvent includes products that do not display specific use instructions on the product container or packaging; products that do not specify an end-use function or application on the product container or packaging; solvents used in institutional facilities, except for laboratory reagents used in analytical, educational, research, scientific or other laboratories; paint clean-up products (i.e., liquid product labeled for cleaning oil-based or water-based paint, lacquer, varnish, related coatings from, but not limited to, painting equipment or tools, plastics, or metals); and products labeled to prepare surfaces for painting. Multi-purpose solvent does not include solvents used in cold cleaners, vapor degreasers, conveyorized degreasers or film cleaning machines; solvents labeled exclusively for the clean-up of application equipment used for polyaspartic and polyurea coatings; solvents that are incorporated into, or used exclusively in the manufacture or construction of, the goods or commodities at the site of the establishment; products that are labeled exclusively to clean a specific contaminant, on a single substrate, in specific situations; or any product making any representation that the product may be used as or is suitable for use as a consumer product which qualifies under another definition.

- VI.XXXX. "Nail polish" means any clear or colored coating designed for application to the fingernails or toenails and including, but not limited to, lacquers, enamels, acrylics, base coats and top coats.
- VI.YYYY. "Nail polish remover" means a product designed to remove nail polish and coatings from fingernails or toenails.
- VI.ZZZZ. "Non-aerosol product" means any consumer product that is not dispensed by a pressurized spray system.
- VI.AAAAA. "Non-carbon containing compound" means any compound which does not contain any carbon atoms.
- VI.BBBBB. "Non-resilient flooring" means flooring of a mineral content which is not flexible and includes terrazzo, marble, slate, granite, brick, stone, ceramic tile, and concrete.
- VI.CCCCC. "Non-selective terrestrial herbicide" means a terrestrial herbicide product that is toxic to plants without regard to species.
- VI.DDDDD. "Oven or grill cleaner" means a product labeled exclusively to remove baked on greases and/or deposits from food preparation and/or food cooking surfaces. A product that is labeled as an oven or grill cleaner that makes claims that it is suitable for degreasing other hard surfaces is a general purpose degreaser. A product that is labeled as an oven or grill cleaner that makes claims that it is suitable for cleaning other hard surfaces is a general purpose cleaner.
- VI.EEEEE. "Paint" means any pigmented liquid, liquefiable, or mastic composition designed for application to a substrate in a thin layer which is converted to an opaque solid film after application and is used for protection, decoration, or identification or to serve some functional purpose such as the filling or concealing of surface irregularities or the modification of light and heat radiation characteristics.
- VI.FFFFF. "Paint remover or stripper" means any product designed to strip or remove paints or other related coatings, by chemical action, from a substrate without markedly affecting the substrate. Paint remover or stripper does not include multi-purpose solvents, paint brush cleaners, products designed and labeled exclusively as graffiti removers, and hand cleaner products that claim to remove paints and other related coatings from skin.
- VI.GGGGG. "Paint thinner" means any liquid product that prominently displays the term paint thinner, lacquer thinner, thinner, or reducer and used for reducing the viscosity of coating compositions or components. Paint thinner does not include artist's solvent/thinner; products that are sold in containers with a capacity of five (5) gallons or more and are labeled exclusively for the thinning of industrial maintenance coatings, zinc-rich primers, or high temperature coatings; and products labeled and used exclusively as an ingredient in a specific coating or coating brand line, whereby the coating would not be complete or useable without the specific ingredient. Paint thinner does not include a product with a principle display panel displaying language, in a font as large as or larger than the font size of the other words on the panel (not including the font size used for the company name, brand name, or logo), that the product is used exclusively for the thinning of industrial maintenance coatings, zinc-rich primers, or high temperature coatings and that makes no representation that the product is suitable for use or may be used for any other purpose except the thinning of industrial maintenance coatings, zinc-rich primers, or high temperature coatings.

- VI.HHHHH. "Penetrant" means a lubricant designed and labeled primarily to loosen metal parts that have bonded together due to rusting, oxidation, or other causes. Penetrant does not include multi-purpose lubricants that claim to have penetrating qualities but are not labeled primarily to loosen bonded parts.
- VI.IIIII. "Personal fragrance product" means any product which is applied to the human body or clothing for the primary purpose of adding a scent or masking a malodor, including cologne, perfume, aftershave, and toilet water. Personal fragrance product does not include deodorant; medicated products designed primarily to alleviate fungal or bacterial growth on feet or other areas of the body; mouthwashes, breath fresheners and deodorizers; lotions, moisturizers, powders, or other skin care products used primarily to alleviate skin conditions such as dryness and irritations; products designed exclusively for use on human genitalia; soaps, shampoos, and products primarily used to clean the human body; and fragrance products designed to be used exclusively on non-human animals.
- VI.JJJJJ. "Pesticide" means and includes any substance or mixture of substances labeled, designed, or intended for use in preventing, destroying, repelling or mitigating any pest, or any substance or mixture of substances labeled, designed, or intended for use as a defoliant, desiccant, or plant regulator, provided that the term "pesticide" will not include any substance, mixture of substances, or device which the United States Environmental Protection Agency does not consider to be a pesticide.
- VI.KKKKK. "Pressurized gas duster" means a pressurized product labeled to remove dust from a surface solely by means of mass air or gas flow, including surfaces such as photographs, photographic film negatives, computer keyboards, and other types of surfaces that cannot be cleaned with solvents. Pressurized gas duster does not include dusting aid.
- VI.LLLLL. "Principal display panel or panels" means that part, or those parts of a label that are so designed as to most likely be displayed, presented, shown or examined under normal and customary conditions of display or purchase. Whenever a principal display panel appears more than once, all requirements pertaining to the principal display panel shall pertain to all such principal display panels.
- VI.MMMMM. "Product brand name" means the name of the product exactly as it appears on the principal display panel of the product.
- VI.NNNNN. "Product category" means the applicable category which best describes the product as listed in the definitions and Table 1.
- VI.OOOOO. "Product form" means the applicable form that most accurately describes the product's dispensing form:
- A = aerosol product
  - S = solid
  - P = pump spray
  - L = liquid
  - SS = semi-solid
  - O = other

- VI.PPPPP. "Product line" means a group of products of identical form and function belonging to the same product category(ies).
- VI.QQQQQ. "Propellant" means a liquefied or compressed gas that is used in whole or in part, such as a cosolvent, to expel a liquid or any other material from the same self-pressurized container or from a separate container.
- VI.RRRRR. "Pump spray" means a packaging system in which the product ingredients within the container are not under pressure and in which the product is expelled only while a pumping action is applied to a button, trigger, or other actuator.
- VI.SSSSS. "Responsible party" means the company, firm, or establishment which is listed on the product's label. If the label lists two companies, firms, or establishments, the responsible party is the party which the product was "manufactured for" or "distributed by," as noted on the label.
- VI.TTTTT. "Retailer" means any person who sells, supplies, or offers consumer products for sale directly to consumers.
- VI.UUUUU. "Retail outlet" means any establishment at which consumer products are sold, supplied, or offered for sale directly to consumers.
- VI.VVVVV. "Roll-on product" means any antiperspirant or deodorant that dispenses active ingredients by rolling a wetted ball or wetted cylinder on the affected area.
- VI.WWWWW. "Rubber/vinyl protectant" means any product labeled to protect, preserve or renew vinyl, or rubber on vehicles, tires, luggage, furniture, and/or household products such as vinyl covers, clothing, or accessories. Rubber/vinyl protectant does not include products labeled to clean the wheel rim, such as aluminum or magnesium wheel cleaners; tire cleaners that do not leave an appearance-enhancing or protective substance on the tire; pigmented products designed or labeled to be used primarily for coloring; products used for construction, reconstruction, modification, or structural maintenance or repair of rubber or vinyl substrates; or products, other than those labeled to be used on vehicle tires, qualifying as either clear coating or vinyl/fabric/leather/polycarbonate coating.
- VI.XXXXX. "Rubbing alcohol" means any product containing isopropyl alcohol (also called isopropanol) or denatured ethanol and labeled for topical use, usually to decrease germs in minor cuts and scrapes, to relieve minor muscle aches, as a rubefacient, and for massage.
- VI.YYYYY. "Sanitizer" means a product labeled as a sanitizer or a product registered as a sanitizer under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 U.S.C. 136, et seq.) to reduce, but not necessary eliminate, microorganisms in the air, on surfaces, or on inanimate objects. Products that are labeled both sanitizer and disinfectant are considered disinfectants. Sanitizer does not include disinfectant; products labeled solely for use on humans or animals; products labeled solely for agricultural use; products labeled solely for use in swimming, therapeutic tubs, or hot tubs; products which are labeled to be used on heat sensitive critical or semi-critical medical devices or medical equipment surfaces; products which are pre-moistened wipes or towelettes sold exclusively to medical, convalescent or veterinary establishments; products which are labeled to be applied to food-contact surfaces and are not required to be rinsed prior to contact with food; or other products labeled bathroom and tile cleaners, glass cleaners, general purpose cleaners, toilet/urinal care products, metal polishers, carpet cleaners, or fabric refreshers that may also make sanitizing or anti-microbial claims on the label.

- VI.ZZZZZ. “Sealant and caulking compound” means any product with adhesive properties that is designed to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. Sealant and caulking compound does not include roof cements and roof sealants; insulating foams; removable caulking compounds (i.e., provides a three to six month temporary seal); clear/paintable/water resistant caulking compounds (i.e., contains no appreciable level of opaque fillers or pigments, transmits most or all visible light when cured, and is immediately resistant to precipitation upon application); floor seam sealers; products designed exclusively for automotive uses; sealers that are applied as continuous coatings; or units of product, less packaging, which weigh more than one pound and consist of more than 16 fluid ounces.
- VI.AAAAAA. “Semi-solid” means a product that, at room temperature, will not pour, but will spread or deform easily, including but not limited to gels, pastes, and greases.
- VI.BBBBBB. “Shaving cream” means an aerosol product which dispenses a foam lather intended to be used with a blade, cartridge razor, or other wet-shaving system in the removal of facial or other bodily hair. Shaving cream does not include shaving gel.
- VI.CCCCCC. “Shaving gel” means an aerosol product which dispenses a post-foaming semisolid designed to be used with a blade, cartridge razor, or other shaving system in the removal of facial or other bodily hair. Shaving gel does not include shaving cream.
- VI.DDDDDD. “Silicone-based multi-purpose lubricant” means any lubricant that is designed and labeled to provide lubricity primarily through the use of silicone compounds including, but not limited to, polydimethylsiloxane and is designed and labeled for general purpose lubrication or for use in a wide variety of applications. Silicone-based multi-purpose lubricant does not include products designed and labeled exclusively to release manufactured products from molds.
- VI.EEEEE. “Single phase aerosol air freshener” means an aerosol air freshener with the liquid contents in a single homogeneous phase and which does not require that the product container be shaken before use.
- VI.FFFFFFF. “Solid” means a substance or mixture of substances which, either whole or subdivided (such as the particles comprising a powder), is not capable of visually detectable flow as determined under ASTM D-4359-90(2000)e1 (2012).
- VI.GGGGGG. “Special purpose spray adhesive” means an aerosol adhesive that meets any of the following definitions:
- VI.GGGGGG.1. Mounting adhesive: designed to permanently mount photographs, artwork, and any other drawn or printed media to a backing (e.g., paper, board, cloth) without causing discoloration to the artwork.
- VI.GGGGGG.2. Flexible vinyl adhesive: designed to bond flexible vinyl to substrates. Flexible vinyl means a nonrigid polyvinyl chloride plastic with at least five percent, by weight, of plasticizer content. A plasticizer is a material, such as a high boiling point organic solvent, that is incorporated into a plastic to increase its flexibility, workability, or distensibility, and may be determined using ASTM Method E260-91 (2011) or from product formulation data.
- VI.GGGGGG.3. Polystyrene foam adhesive: designed to bond polystyrene foam to substrates.

- VI.GGGGGG.4. Automobile headliner adhesive: designed to bond together layers in motor vehicle headliners.
- VI.GGGGGG.5. Polyolefin adhesive: designed to bond polyolefins to substrates.
- VI.GGGGGG.6. Laminate repair/edgebanding adhesive: designed for the touch-up or repair (e.g., lifted edges, delaminations) of items laminated with high pressure laminates (i.e., temperatures exceeding 265°F and pressures between 1,000 and 1,400 psi) or for the touch-up, repair, or attachment of edgebanding materials, including but not limited to, other laminates, synthetic marble, veneers, wood molding, and decorative metals.
- VI.GGGGGG.7. Automotive engine compartment adhesive: designed for use in motor vehicle under-the-hood applications which require oil and plasticizer resistance, as well as high shear strength, at temperatures of 200 - 275°F.
- VI.HHHHHH. "Spot remover" means any product labeled to clean localized areas, or remove localized spots or stains on cloth or fabric such as drapes, carpets, upholstery, and clothing that does not require subsequent laundering to achieve stain removal. Spot remover does not include dry cleaning fluid, laundry prewash, or multi-purpose solvent.
- VI.IIIIII. "Spray buff product" means a product designed to restore a worn floor finish in conjunction with a floor buffing machine and special pad.
- VI.JJJJJJ. "Table B compound" means any carbon-containing compound listed as an exception to the definition of VOC.
- VI.KKKKKK. "Temporary hair color" means any product that applies color, glitter, or UV-active pigments to hair, wigs, or fur and is removable when washed. Temporary hair color includes hair color mousses and products labeled to add texture or thickness to cover thinning/balding areas. Temporary hair color does not include hair spray, hair styling product, or hair mousse.
- VI.LLLLLL. "Thermoplastic rubber coating and mastic" means a coating or mastic formulated and recommended for application to roofing or other structural surfaces and that incorporates no less than 40 percent by weight of thermoplastic rubbers in the total resin solids and may also contain other ingredients including, but not limited to, fillers, pigments, and modifying resins.
- VI.MMMMMM. "Tire sealant and inflation" means any pressurized product that is designed to temporarily inflate and seal a leaking tire.
- VI.NNNNNN. "Toilet/urinal care product" means any product designed or labeled to clean and/or to deodorize toilet bowls, toilet tanks, or urinals connected to permanent plumbing in buildings and other structures, portable toilets or urinals placed at temporary or remote locations, and toilet or urinals in vehicles such as buses, recreational motor homes, boats, ships, and aircraft. Toilet/urinal care product does not include bathroom and tile cleaner or general purpose cleaner.
- VI.OOOOOO. "Type A propellant" means a compressed gas such as CO<sub>2</sub>, N<sub>2</sub>, N<sub>2</sub>O, or compressed air which is used as a propellant and is either incorporated with the product or contained in a separate chamber within the product's packaging.



- VI.PPPPPP. "Type B propellant" means any halocarbon which is used as a propellant including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and hydrofluorocarbons (HFCs).
- VI.QQQQQQ. "Type C propellant" means any propellant which is not a Type A or Type B propellant, including propane, isobutane, n-butane, and dimethyl ether (also known as dimethyl oxide).
- VI.RRRRRR. "Undercoating" means any aerosol product designed to impart a protective, non-paint layer to the undercarriage, trunk interior, and/or firewall of motor vehicles to prevent the formation of rust or to deaden sound and includes, but is not limited to, rubberized, mastic, or asphaltic products.
- VI.SSSSSS. "Usage directions" means the text or graphics on the product label or accompanying literature that describes to the end user how and in what quantity the product is to be used.
- VI.TTTTTT. "Vinyl/fabric/leather/polycarbonate coating" means a coating designed and labeled exclusively to coat vinyl, fabric, leather, or polycarbonate substrates.
- VI.UUUUUU. "Wasp and hornet insecticide" means any insecticide product that is designed for use against wasps, hornets, yellow jackets or bees by allowing the user to spray from a distance a directed stream or burst at the intended insects or their hiding place.
- VI.VVVVVV. "Waterproofer" means a product designed and labeled exclusively to repel water from fabric or leather substrates. Waterproofer does not include fabric protectants.
- VI.WWWWWW. "Wax" means a material or synthetic thermoplastic substance generally of high molecular weight hydrocarbons or high molecular weight esters of fatty acids or alcohols, except glycerol and high polymers (plastics) and includes, but is not limited to, substances derived from the secretions of plants and animals such as carnuba wax and beeswax, substances of a mineral origin such as ozocerite and paraffin, and synthetic polymers such as polyethylene.
- VI.XXXXXX. "Web spray adhesive" means any aerosol adhesive that is not a mist spray adhesive or special purpose spray adhesive.
- VI.YYYYYY. "Wood cleaner" means a product labeled to clean wooden materials and includes, but is not limited to, decking, fences, flooring, logs, cabinetry, and furniture. Wood cleaner does not include dusting aid, general purpose cleaner, furniture maintenance product, floor wax stripper, floor polish or wax, or products designed and labeled exclusively to preserve or color wood.
- VI.ZZZZZZ. "Wood floor wax" means wax-based products for use solely on wood floors.
- VI.AAAAAA. "Zinc-rich primer" means a coating that contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids and is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of coatings. Zinc-rich primers must be labeled in accordance with Part B, Section III.D.10.

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**PART B            CONCERNING ARCHITECTURAL AND INDUSTRIAL MAINTENANCE COATINGS**

I.        Applicability

I.A.        This part applies to any person who supplies, sells, offers for sale, or manufacturers any architectural or industrial maintenance coating and any person who applies or solicits the application of any architectural or industrial maintenance coating in

I.A.1.     The 8-hour Ozone Control Area.

I.A.2.     (State Only) Colorado. As marked by (State Only), the requirements are not federally enforceable.

I.B.        This part does not apply to

I.B.1.     Any architectural or industrial maintenance coating that is sold, supplied, offered for sale, or manufactured for use outside Colorado or shipped to other manufacturers for reformulation or repackaging.

I.B.2.     Any aerosol coating product.

I.B.3.     Any architectural or industrial maintenance coating that is sold in a container with a volume of one liter (1.057 quart) or less, including kits containing containers of different colors, types, or categories of coatings and two component products. This exemption includes multiple containers or one liter or less that are packaged and shipped together with no intent or requirement to ultimately sell as one unit. This exemption does not include bundling of containers one liter or less that are sold together as a unit or any type of marketing that implies that multiple containers one liter or less be combined into one container. This exemption does not include packaging from which the coating cannot be applied.

II.       Standards

II.A.       On or after May 1, 2020, no person can manufacture or blend for sale in Colorado any architectural or industrial maintenance coating with a VOC content in excess of the VOC limit specified in Table 1.

II.B.       No person can supply, sell, offer for sale, repackage for sale, apply, or solicit for application in Colorado any architectural or industrial maintenance coating that is manufactured or blended on or after May 1, 2020, with a VOC content in excess of the VOC limit specified in Table 1.

II.C.       If an architectural or industrial maintenance coating is recommended for use for more than one of the coating categories listed in Table 1, then the most restrictive VOC content limit shall apply. This provision does not apply to the following coating categories

II.C.1.     Aluminum roof coatings.

II.C.2.     Bituminous roof primers.

II.C.3.     High temperature coatings.

II.C.4.     Industrial maintenance coatings.

- II.C.5. Low-solids coatings.
- II.C.6. Metallic pigmented coatings.
- II.C.7. Pretreatment wash primers.
- II.C.8. Shellacs.
- II.C.9. Specialty primers, sealers, and undercoaters.
- II.C.10. Wood coatings.
- II.C.11. Wood preservatives.
- II.C.12. Zinc-rich primers.
- II.C.13. Calcimine recoaters.
- II.C.14. Impacted immersion coatings.
- II.C.15. Nuclear coatings.
- II.C.16. Thermoplastic rubber coatings and mastic.
- II.C.17. Concrete surface retarders.
- II.D. For any architectural or industrial maintenance coating that is not identified in Table 1, the VOC content limit will be determined by classifying the coating as a flat coating, nonflat coating, or nonflat-high gloss coating and the corresponding coating limit of Table 1 applies.
- II.E. No person who applies or solicits the application of any architectural or industrial maintenance coating can apply the coating if additional solvent has been added to thin the coating such that the addition causes the coating to exceed the applicable VOC limit specified in Table 1.
- II.F. Containers of architectural and industrial maintenance coatings that are applied directly to a surface from the container by pouring, siphoning, brushing, rolling, padding, ragging, or other means must be closed when not in use. These containers include, but are not limited to, drums, buckets, cans, pails, trays, or other application containers. Containers of any VOC-containing materials used for thinning and cleanup must also be closed when not in use.

Table 1 – VOC content limits for architectural and industrial maintenance coatings manufactured on or after May 1, 2020	
Coating category	VOC content limit (grams per liter)*
Flat coatings	50
Nonflat coatings	100
Nonflat – high gloss coatings	150
<b>Specialty coatings</b>	
* Aluminum roof	450

* Basement specialty coatings	400
* Bituminous roof coating	270
* Bituminous roof primers	350
* Bond breakers	350
* Calcimine recoaters	475
Concrete curing compounds	350
Concrete/masonry sealer	100
Concrete surface retarders	780
Conjugated oil varnishes	450
Conversion varnish	725
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire-resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coating (sign paints)	500
High temperature coatings	420
Impacted immersion coatings	780
Industrial maintenance coatings	250
Low-solids coatings	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multi-color coating	250
Nuclear coatings	450
Pre-treatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealer	350
Reactive penetrating carbonate stone sealer	500
Recycled coatings	250
Roof coatings	250
Rust preventative coatings	250
<b>Shellacs</b>	
* Clear	730

* Opaque	550
Specialty primers, sealers, and undercoaters	100
Stains	250
Stone consolidant	450
Swimming pool coatings	340
Thermoplastic rubber coatings and mastics	550
Traffic marking coatings	100
Tub and tile refinish	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primer	340

\* Limits are expressed as VOC content, as determined in accordance with Section V., thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.

III. Container labeling

- III.A. The manufacturer of any architectural or industrial maintenance coating subject to a VOC limit in Table 1 must clearly display on the container label, lid, or bottom such that it is readily observable without disassembling the container or package the date the coating was manufactured or a date code representing the date of manufacture. The date or date code must be displayed on the product such that it is readily observable without removing or disassembling any portion of the product container or packaging.
- III.B. The manufacturer of any architectural or industrial maintenance coating must clearly display on the container label or lid a statement of the manufacturer's recommendation regarding thinning of the coating. This requirement does not apply to the thinning of coatings with water. If thinning is not necessary prior to use, the recommendation must specify that the coating is to be applied without thinning.
- III.C. The manufacturer of any architectural or industrial maintenance coating must clearly display on the container label, lid, or bottom the VOC content in grams per liter of coating. If the manufacturer recommends thinning, the container must display the VOC content including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the container must display the VOC content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredient that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.
- III.D. The manufacturer must clearly display on the container label
  - III.D.1. For any industrial maintenance coating, at least one of the following statements
    - III.D.1.a. "For industrial use only"
    - III.D.1.b. "For professional use only"

- III.D.1.c. "Not for residential use" or "Not intended for residential use"
- III.D.2. For any specialty primer, sealer, or undercoating, at least one of the following statements
  - III.D.2.a. "For blocking stains"
  - III.D.2.b. "For fire-damaged substrates"
  - III.D.2.c. "For smoke-damaged substrates"
  - III.D.2.d. "For water-damaged substrates"
- III.D.3. For any clear topcoat faux finishing coating, "This product can only be sold or used as part of a faux finishing coating system."
- III.D.4. For any clear brushing lacquer, "For brush application only" and "This product must not be thinned or sprayed."
- III.D.5. For any non-flat high-gloss coating, "High gloss."
- III.D.6. For any rust preventative coating, "For metal substrates only."
- III.D.7. For any reactive penetrating sealer, "Reactive penetrating sealer."
- III.D.8. For any stone consolidant, "Stone consolidant – for professional use only."
- III.D.9. For any wood coating, "For wood substrates only."
- III.D.10. For any zinc-rich primer, at least one of the following statements
  - III.D.10.a. "For industrial use only"
  - III.D.10.b. "For professional use only"
  - III.D.10.c. "Not for residential use" or "Not intended for residential use"

IV. Reporting

- IV.A. Within 180 days of written notice, the Division may require a manufacturer to report any of the following information for any architectural or industrial maintenance coating subject to a VOC limit in Table 1
  - IV.A.1. The name and mailing address of the manufacturer.
  - IV.A.2. The name, address, and telephone number of a contact person.
  - IV.A.3. The name of the coating product as it appears on the label and the application coating category.
  - IV.A.4. Whether the product is marketed for interior or exterior use or both.
  - IV.A.5. Whether the product is marketed as solvent-borne, waterborne, or 100% solids.
  - IV.A.6. Whether the coating is a single-component or multi-component product.

- IV.A.7. The description of resin or binder in the product.
- IV.A.8. The number of gallons sold in Colorado in containers greater than one liter (1.057 quart) and in containers equal to or less than one liter (1.057 quart).
- IV.A.9. The VOC content in grams per liter as determined in accordance with Section V. If thinning is recommended, the VOC content after maximum recommended thinning. If containers less than one liter have a different VOC content than containers greater than one liter, list separately. If the coating is a multi-component product, provide the VOC Content as mixed or catalyzed.
- IV.A.10. The names and CAS numbers of the VOC constituents in the product.
- IV.A.11. The names and CAS numbers of the VOC constituents in the product that are exempted from the definition of VOC.
- IV.A.12. The density of the product in pounds per gallon.
- IV.A.13. The percent by weight of solids, all volatile materials, water, and any compounds in the product that are exempted from the definition of VOC.
- IV.A.14. The percent by volume of solids, water, and any compounds in the product that are exempted from the definition of VOC.
- IV.A.15. Documentation explaining the date portion of the date code indicating the date of manufacture.

V. Test methods

- V.A. Manufacturers of architectural or industrial maintenance coatings must possess documentation that such coating complies with the VOC content limits in Table 1.

- V.A.1. The VOC content of a coating will be determined as follows

- V.A.1.a. For coatings that are low solids coatings

$$\text{VOC content} = (W_s - W_w - W_{ec})/V_m$$

Where:

VOC content = grams of VOC per liter of coating (must include the maximum amount of thinning solvent recommended by the manufacturer)

$W_s$  = weight of volatiles in grams

$W_w$  = weight of water in grams

$W_{ec}$  = weight of exempt compounds in grams

$V_m$  = volume of coating in liters

- V.A.1.b. For coatings that are not low solids coatings

$$\text{VOC content} = (W_s - W_w - W_{ec})/(V_m - V_w - V_{ec})$$

Where:

VOC content = grams of VOC per liter of coating (must include the maximum amount of thinning solvent recommended by the manufacturer)

Ws = weight of volatiles in grams

Ww = weight of water in grams

Wec = weight of exempt compounds in grams

Vm = volume of coating in liters

Vw = volume of water in liters

Vec = volume of exempt compounds in liters

V.A.1.b.(i) The VOC content of multi-component products must be calculated as mixed or catalyzed.

V.A.1.b.(ii) The VOC content of coatings containing silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process must include the VOCs emitting during curing.

V.A.1.c. The VOC content of a tint base must be determined without colorant that is added after the tint base is manufactured.

V.A.2. The physical properties of a coating must be determined using EPA Method 24 (40 CFR Part 60, Appendix A) (February 27, 2014) or SCAQMD Method 303-91 "Determination of Exempt Compounds" (revised 1993).

V.A.3. The exempt compounds content of a coating must be determined using ASTM D 3960-05 "Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings" (2018), SCAQMD Method 303-91 "Determination of Exempt Compounds" (revised 1993), BAAQMD Method 43 "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials" (adopted 1996) or BAAQMD Method 41 "Determination of Volatile Organic Compounds in Solvent-Based Coatings and Related Materials Containing Parachlorobenzotrifluoride" (adopted 1995).

V.A.4. The VOC content of a coating must be determined using EPA Method 24 (40 CFR Part 60, Appendix A) (February 27, 2014), formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). If there are inconsistencies between EPA Method 24 results and other means for determining VOC content, the Method 24 results will govern.

V.A.5. The analysis of methacrylate multicomponent coatings used as traffic marking coatings will be conducted according to a modification of EPA Method 24 "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (40 CFR 59, subpart D, Appendix A) (September 11, 1998).



VI. Definitions

- VI.A. "8-Hour Ozone Control Area" means the Counties of Adams, Arapahoe, Boulder (includes part of Rocky Mountain National Park), Douglas, and Jefferson; the Cities and Counties of Denver and Broomfield; and the following portions of the Counties of Larimer and Weld:
- VI.A.1. For Larimer County (includes part of Rocky Mountain National Park), that portion of the county that lies south of a line described as follows: Beginning at a point on Larimer County's eastern boundary and Weld County's western boundary intersected by 40 degrees, 42 minutes, and 47.1 seconds north latitude, proceed west to a point defined by the intersection of 40 degrees, 42 minutes, 47.1 seconds north latitude and 105 degrees, 29 minutes, and 40.0 seconds west longitude, thence proceed south on 105 degrees, 29 minutes, 40.0 seconds west longitude to the intersection with 40 degrees, 33 minutes and 17.4 seconds north latitude, thence proceed west on 40 degrees, 33 minutes, 17.4 seconds north latitude until this line intersects Larimer County's western boundary and Grand County's eastern boundary.
- VI.A.2. For Weld County, that portion of the county that lies south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.
- VI.B. "Adhesive" means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.
- VI.C. "Aerosol coating product" means a pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.
- VI.D. "Aluminum roof coating" means a coating labeled and formulated exclusively for application to roofs and containing at least 84 grams of elemental aluminum pigment per liter of coating (at least 0.7 pounds per gallon). Pigment content shall be determined in accordance with SCAQMD Method 318-95 "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction" (July 1996).
- VI.E. "Appurtenance" means any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways; fixed ladders; catwalks and fire escapes; and window screens.
- VI.F. "Architectural coating" means a coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Architectural coating does not include coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, as well as adhesives.

- VI.G. “Basement specialty coating” means a clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a hydrostatic seal for basements and other below-grade surfaces. Basement specialty coatings must be capable of withstanding at least 10 psi of hydrostatic pressure as determined in accordance with ASTM D7088-04 “Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry” (2017) and must be resistant to mold and mildew growth and must achieve a microbial growth rating of 8 or more as determined in accordance with ASTM D3273-00 “Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber” (2016) and ASTM D3274-95 “Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation” (2017).
- VI.H. “Bitumens” means black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.
- VI.I. “Bituminous roof coating” means a coating which incorporates bitumens that is labeled and formulated exclusively for roofing for the primary purpose of preventing water penetration.
- VI.J. “Bituminous roof primer” means a primer which incorporates bitumens that is labeled and formulated exclusively for roofing and intended for the purpose of preparing a weathered or aged surface or improving the adhesion of subsequent surfacing components.
- VI.K. “Bond breaker” means a coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.
- VI.L. “Calcimine recoaters” means a flat solvent borne coating formulated and recommended specifically for recoating calcimine-painted ceilings and other calcimine-painted substrates.
- VI.M. “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, sealers, and stains.
- VI.N. “Colorant” means a concentrated pigment dispersion in water, solvent, and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.
- VI.O. “Concrete curing compound” means a coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water or harden or dustproof the surface of freshly poured concrete.
- VI.P. “Concrete/masonry sealer” means a clear or opaque coating that is labeled and formulated primarily for application to concrete and masonry surfaces to prevent penetration of water; provide resistance against abrasion, alkalis, acids, mildew, staining, or ultraviolet light; or harden or dustproof the surface of aged or cured concrete.

- VI.Q. "Concrete surface retarders" means a mixture of retarding ingredients such as extender pigments, primary pigments, resin, and solvent that interact chemically with the cement to prevent hardening on the surface where the retarder is applied, allowing the retarded mix of cement and sand at the surface to be washed away to create an exposed aggregate finish.
- VI.R. "Conjugated oil varnish" means a clear or semi-transparent wood coating, labeled as such, excluding lacquers or shellacs, based on a natural occurring conjugated vegetable oil (Tung oil) and modified with other natural or synthetic resins; a minimum of fifty percent of the resin solids consisting of conjugated oil. Supplied as a single component product, conjugated oil varnishes penetrate and seal the wood. Film formation is due to polymerization of the oil. These varnishes may contain small amounts of pigment to control the final gloss or sheen.
- VI.S. "Conversion varnish" means a clear acid curing coating with an alkyd or other resin blended with amino resins and supplied as a single component or two component product. Conversion varnishes produce a hard, durable, clear finish designed for professional application to wood flooring. This film formation is the result of an acid-catalyzed condensation reaction, affecting transesterification at the reactive ethers of the amino resins.
- VI.T. "Driveway sealer" means a coating labeled and formulated for application to worn asphalt driveway surfaces to fill cracks, seal the surface to provide protection, or restore or preserve the appearance.
- VI.U. "Dry fog coating" means a coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.
- VI.V. "Faux finishing coating" means a coating labeled and formulated to create artistic effects including, but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain; a metallic, iridescent, or pearlescent appearance that contains at least 48 grams of pearlescent mica pigment or other iridescent pigment per liter of coating as applied (at least 0.4 pounds per gallon); a metallic appearance that contains greater than 48 grams of elemental metallic pigment (determined in accordance with SCAQMD Method 318-95 "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction" (July 1996)) per liter of coating as applied (0.4 pounds per gallon) and which requires a clear topcoat to prevent the degradation of the finish under normal use conditions; or a clear topcoat to seal and protect a faux finishing coating. These clear topcoats must be sold and used solely as part of a faux finishing coating system.
- VI.W. "Fire-resistive coating" means a coating labeled and formulated to protect the structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials and includes sprayed fire resistive materials and intumescent fire resistive coatings that are used to bring structural materials into compliance with federal, state, and local building code requirements. The fire-resistive coating must be tested in accordance with ASTM Designation E 119-08 "Standard Test Methods for Fire Tests of Building Construction and Materials" (2018).
- VI.X. "Flat coating" means a coating that is not defined under any other definition in this rule and that registers gloss less than 15 on an 85-degree meter or less than five on a 60-degree meter according to ASTM D 523-89 "Standard Test Method for Specular Gloss" (1999).

- VI.Y. "Floor coating" means an opaque coating that is labeled and designed for application to flooring, including, but not limited to, decks, porches, steps, and other horizontal surfaces which may be subject to foot traffic.
- VI.Z. "Form-release compound" means a coating labeled and formulated for application to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.
- VI.AA. "Graphic arts coating or sign paint" means a coating labeled and formulated for hand application by artists using brush, airbrush or roller techniques to indoor and outdoor signs (excluding structural components) and murals including letter enamels, poster colors, copy blockers, and bulletin enamels.
- VI.BB. "High-temperature coating" means a high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204 degrees C (400 degrees F).
- VI.CC. "Impacted immersion coating" means a high performance maintenance coating formulated and recommended for application to steel structures subject to immersion in turbulent, debris-laden water.
- VI.DD. "Industrial maintenance coating" means a high performance architectural coating, including primers, sealers, undercoaters, intermediate coats, and topcoats, formulated for application to substrates, including floors, and exposed to one or more of the following extreme environmental conditions: immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposures of interior surfaces to moisture condensation; acute or chronic exposure to corrosive, caustic, or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions; frequent exposure to temperatures above 121°C (250°F); frequent heavy abrasion, including mechanical wear and scrubbing with industrial solvents, cleansers, or scouring agents; or exterior exposure of metal structures and structural components. Industrial maintenance coatings must be labeled as specified in Part B, Section III. D.1.
- VI.EE. "Low-solids coating" means a coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material as recommended for application by the manufacturer.
- VI.FF. "Magnesite cement coating" means a coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.
- VI.GG. "Manufacturer's maximum thinning recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.
- VI.HH. "Mastic texture coating" means a coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and is applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.
- VI.II. "Medium density fiberboard (MDF)" means a composite wood product, panel, molding, or other building material composed of cellulosic fibers made by dry forming and pressing of resonated fiber mat.

- VI.JJ. "Metallic pigmented coating" means a coating that is labeled and formulated to provide a metallic appearance. Metallic pigmented coatings must contain containing at least 48 grams of elemental metallic pigment (excluding zinc) per liter of coating as applied (at least 0.4 pounds per gallon), when tested in accordance with SCAQMD Method 318-95 "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction" (July 1996). The Metallic pigmented coating category does not include coatings applied to roofs or zinc rich primers.
- VI.KK. "Multi-color coating" means a coating that is packaged in a single container and that is labeled and formulated to exhibits more than one color when applied in a single coat.
- VI.LL. "Non-flat coating" means a coating that is not defined under any other definition in this rule and that registers a gloss of 15 or greater on an 85-degree meter and 5 or greater on a 60-degree meter according to ASTM Designation D 523-89 "Standard Test Method for Specular Gloss" (1999).
- VI.MM. "Non-flat - high gloss coating" means a non-flat coating that registers a gloss of 70 or greater on a 60-degree meter according to ASTM Designation D 523-89 "Standard Test Method for Specular Gloss" (1999).
- VI.NN. "Nuclear coating" means a protective coating formulated and recommended to seal porous surfaces such as steel or concrete that otherwise would be subject to intrusion by radioactive materials. These coatings must be resistant to long term (service life) cumulative radiation exposure according to ASTM Method 4082-02 "Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants" (2017), relatively easy to decontaminate, and resistant to various chemicals to which the coatings are likely to be exposed according to ASTM Method D 3912-95 "Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants" (2001).
- VI.OO. "Particleboard" means a composite wood product panel, molding, or other building material composed of cellulosic material in the form of discrete particles, as distinguished from fibers, flakes, or strands, which are pressed together with resin.
- VI.PP. "Pearlescent" means exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pearl.
- VI.QQ. "Plywood" means a panel product consisting of layers of wood veneers or composite core pressed together with resin.
- VI.RR. "Post-consumer coating" means a finished coating that would have been disposed of in a landfill, having completed its usefulness to a consumer, and does not include manufacturing wastes.
- VI.SS. "Pre-treatment wash primer" means a primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM D 1613-06 "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and Related Products" (2017), that is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.

- VI.TT. "Primer, sealer, and undercoater" means a coating labeled and formulated to provide a firm bond between the substrate and the subsequent coatings; prevent subsequent coatings from being absorbed by the substrate; prevent harm to subsequent coatings by materials in the substrate; provide a smooth surface for the subsequent application of coatings; provide a clear finish coat to seal the substrate; or block materials from penetrating into or leaching out of a substrate.
- VI.UU. "Reactive penetrating sealer" means a clear or pigmented coating that is labeled and formulated for application to above-grade concrete and masonry substrates to provide protection from water and waterborne contaminants, including but not limited to, alkalis, acids, and salts. Reactive penetrating sealers must penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate. Reactive penetrating sealers line the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film. Reactive penetrating sealers must improve water repellency at least 80 percent after application on a concrete or masonry substrate, as verified on standardized test specimens in accordance with one or more of ASTM C67-07 "Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile" (2018), ASTM C97-02 "Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone" (2018), or ASTM C140-06 "Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units" (2018); must not reduce the water vapor transmission rate by more than 2 percent after application on a concrete or masonry substrate, as verified on standardized test specimens in accordance with ASTM E96/E96M-05 "Standard Test Method for Water Vapor Transmission of Materials" (2016); and products labeled and formulated for vehicular traffic surface chloride screening applications must meet the performance criteria listed in the National Cooperative Highway Research Report 244 "Concrete Sealers for the Protection of Bridge Structures" (1981).
- VI.VV. "Reactive penetrating carbonate stone sealer" means a clear or pigmented coating that is labeled and formulated for application to above-grade carbonate stone substrates to provide protection from water and waterborne contaminants, including, but not limited to, alkalis, acids, and salts. Reactive penetrating carbonate stone sealers must penetrate into carbonate stone substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrates. Reactive penetrating carbonate stone sealers line the pores of carbonate stone substrates with a hydrophobic coating but do not form a surface film. Reactive penetrating carbonate stone sealers must improve water repellency at least 80 percent after application on a carbonate stone substrate, as verified in accordance with ASTM C67-07 "Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile" (2018), ASTM C97-02 "Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone" (2018), or ASTM C140-06 "Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units" (2018), and must not reduce the water vapor transmission rate by more than 10 percent after application on a carbonate stone substrate, as verified in accordance with ASTM E96/E96M-05 "Standard Test Method for Water Vapor Transmission of Materials" (2016).
- VI.WW. "Recycled coating" means an architectural coating formulated such that it contains a minimum of 50% by volume post-consumer coating, with a maximum of 50% by volume secondary industrial materials or virgin materials.
- VI.XX. "Residential" means areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.

- VI.YY. "Roof coating" means a non-bituminous coating labeled and formulated for application to roofs for the primary purpose of preventing water penetration of the substrate by water, reflecting heat and ultraviolet light, or reflecting solar radiation. Metallic pigmented roof coatings, which qualify as metallic pigmented coatings, are considered to be in the metallic pigmented coatings category.
- VI.ZZ. "Rust preventive coating" means a coating formulated exclusively for nonindustrial use to prevent the corrosion of metal surfaces for direct-to-metal coating or application over rusty, previously coated surfaces. The rust preventative category does not include coatings that are required to be applied as a topcoat over a primer or coatings that are intended for use on wood or any other nonmetallic surface.
- VI.AAA. "Secondary industrial materials" means a finished coating or a finished coating from a manufacturing process that has converted resources into a commodity of real economic value including products or byproducts of the paint manufacturing process that are of known composition and have economic value but can no longer be used for their intended use, but does not include excess virgin resources of the manufacturing process.
- VI.BBB. "Semi-transparent coating" means a coating that contains binders and colored pigments and is formulated to change the color of the surface, but not conceal the grain pattern or texture.
- VI.CCC. "Shellac" means a clear or opaque coating formulated solely with the resinous secretions of the lac beetle (*Laccifer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.
- VI.DDD. "Shop application" means application of a coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production, or repairing process.
- VI.EEE. "Solicit" means to require for use or to specify, by written or oral contract.
- VI.FFF. "Specialty primer, sealer, and undercoater" means a coating that is formulated for application to a substrate to block water-soluble stains resulting from: fire damage, smoke damage, or water damage.
- VI.GGG. "Stain" means a semi-transparent or opaque coating labeled and formulated to change the color of a surface but not conceal the grain pattern or texture.
- VI.HHH. "Stone consolidant" means a coating that is labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weathering or other decay mechanisms. Stone consolidants must penetrate into stone substrates to create bonds between particles and consolidate deteriorated material and be specified and used in accordance with ASTM E2167-01 "Standard Guide for Selection and Use of Stone Consolidants" (2008).
- VI.III. "Swimming pool coating" means a coating labeled and formulated to coat the interior of swimming pools and to resist swimming pool chemicals and includes coatings used for swimming pool repair and maintenance.
- VI.JJJ. "Thermoplastic rubber coating and mastic" means a coating or mastic formulated and recommended for application to roofing or other structural surfaces and that incorporates no less than 40 percent by weight of thermoplastic rubbers in the total resin solids and may also contain other ingredients including, but not limited to, fillers, pigments, and modifying resins.

- VI.KKK. "Tint base" means an architectural coating to which colorant is added after packaging in sale units to produce a desired color.
- VI.LLL. "Traffic marking coating" means a coating labeled and formulated for marking and striping streets, highways, or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks, and airport runways.
- VI.MMM. "Tub and tile refinish coating" means a clear or opaque coating that is labeled and formulated exclusively for refinishing the surface of a bathtub, shower, sink, or countertop. Tub and tile refinish coatings must have a scratch hardness of 3H or harder and a gouge hardness of 4H or harder, as determined on bonderite 1000 in accordance with ASTM D3363-05 "Standard Test Method for Film Hardness by Pencil Test" (2011); a weight loss of 20 milligrams or less after 1000 cycles, as determined with CD-17 wheels on bonderite 1000 in accordance with ASTM D4060-07 "Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser" (2014); withstand 1000 hours or more of exposure with few or no #8 blisters, as determined on unscribed bonderite in accordance with ASTM D4585-99 "Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation" (2018) and ASTM D714-02e1 "Standard Test Method for Evaluating Degree of Blistering of Paints" (2017); and have an adhesion rating of 4B or better after 24 hours of recovery, as determined on inscribed bonderite in accordance with ASTM D4585-99 "Standard Test Methods for Abrasion Resistance of Coatings Using Controlled Condensation" (2018) and ASTM D3359-02 "Standard Test Methods for Measuring Adhesion by Tape Test" (2017).
- VI.NNN. "Veneer" means thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, or other products.
- VI.OOO. "Virgin materials" means materials that contain no post-consumer coatings or secondary industrial coatings.
- VI.PPP. "Waterproofing membrane" means a clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a seamless waterproofing membrane that prevents any penetration of liquid water into the substrate and does not include topcoats in the concrete/masonry sealer category. Waterproofing membranes are intended for below-grade surfaces, between concrete slabs, inside tunnels, inside concrete planters, and under flooring materials. Waterproofing membranes must be applied in a single coat of at least 25 mils (at least 0.025 inch) dry film thickness and meet or exceed the requirements contained in ASTM C836-06 "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course" (2018). Waterproofing membranes do not include topcoats that are included in the concrete/masonry sealer category (e.g., parking deck topcoats, pedestrian topcoats, etc.)
- VI.QQQ. "Wood coatings" means coatings labeled and formulated for application to wood substrates only. The wood coatings category includes the following clear and semitransparent coatings: lacquers; varnishes; sanding sealers; penetrating oils; clear stains; wood conditioners used as undercoats; and wood sealers used as topcoats. The wood coatings category includes the following opaque wood coatings; opaque lacquers; opaque sanding sealers; and opaque lacquer undercoaters. Wood coatings does not include clear sealers that are labeled and formulated for use on concrete/masonry surfaces or coatings intended for substrates other than wood.
- VI.RRR. "Wood preservative" means a coating labeled and formulated to protect exposed wood from decay or insect attack that is registered with the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. section 136, et. seq. (1996)).



VI.SSS. "Wood substrate" means a substrate made of wood, particleboard, plywood, medium density fiberboard, rattan, wicker, bamboo, or composite products with exposed wood grain. Wood Products do not include items comprised of simulated wood.

VI.TTT. "Zinc-rich primer" means a coating that contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids and is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of coatings. Zinc-rich primers must be labeled in accordance with Section III.D.10.