4-10-73

REGULATION V

CONTROL OF AIR POLLUTION FROM VOLATILE CARBON COMPOUNDS

Rule 501. Regulation V shall apply only in the following counties: Aransas, Bexar, Brazoria, Calhoun, Dallas, El Paso, Galveston, Harris, Jefferson, Matagorda, Montgomery, Nueces, Orange, San Patricio, Travis and Victoria.

Rule 502. Storage of Volatile Carbon Compounds.

502.1 No person shall place, store, or hold in any stationary tank, reservoir, or other container of more than 25,000 gallons capacity any volatile carbon compounds unless such tank, reservoir, or other container is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or is designed and equipped with one of the following vapor loss control devices:

502.11 A floating roof, consisting of a pontoon type, double deck type roof, or internal floating cover, which will rest on the surface of the liquid contents and be equipped with a closure seal or seals to close the space between the roof edge and tank wall. This control equipment shall not be permitted if the volatile carbon compounds have a vapor pressure of 11.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

502.12 A vapor recovery system which reduces the emissions such that the aggregate partial pressure of all volatile carbon compound vapors in vent gases or other material emitted to the atmosphere will not exceed a level of 1.5 psia.

502.2 No person shall place, store, or hold in any new stationary storage vessel of more than 1,000 gallons capacity, any volatile carbon compound unless such vessel is equipped with a permanent submerged fill pipe or is a pressure tank as described in 502.1 or is fitted with a vapor recovery system as described in 502.12.

502.3 Crude oil or condensate storage containers are exempt from Rule 502.

Rule 503. Volatile Carbon Compounds Loading and Unloading Facilities.

503.1 No person shall permit the loading or unloading of volatile carbon compounds from any loading facility having 20,000 gallons or more throughput per day, averaged over any 30-day period, unless such facility is equipped with a vapor recovery system which reduces the emissions such that the aggregate partial pressure of all volatile carbon compound vapors in vent gases or other material emitted to the atmosphere will not exceed a level of 1.5 psia.

When loading or unloading is effected through the hatches of a tank truck or trailer or railroad tank car with a loading arm equipped with a vapor collecting adaptor, then pneumatic, hydraulic, or other mechanical means shall be provided to force a vapor-tight seal between the adaptor and the hatch. A means shall be provided to prevent liquid drainage from the loading device when it is removed from the hatch of any tank truck, trailer or railroad tank car, to accomplish complete drainage before such removal. When loading or unloading is effected through means other than hatches, all loading and vapor lines shall be equipped with fittings which make vapor-tight connections and which close automatically when disconnected or equipped to permit residual volatile carbon compounds in the loading line to discharge into a recovery or disposal system after loading is complete.

503.2 All loading or unloading facilities for crude oil or condensate and for ships and barges are exempt from Rule 503.

Rule 504. Volatile Carbon Compound - Water Separation.

504.1 No person shall use any compartment of any single or multiple compartment volatile carbon compound water separator which compartment receives 200 gallons or more of volatile carbon compounds a day from any equipment which is processing, refining, treating, storing, or handling volatile carbon compounds unless such compartment is controlled in one of the following ways:

504.11 The compartment has all openings sealed and totally encloses the liquid contents. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

504.12 The compartment is equipped with a floating roof or internal floating cover which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and tank wall. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

504.13 The compartment is equipped with a vapor recovery system which reduces the emissions such that the aggregate partial pressure of the volatile carbon compound vapors in vent gases or other material emitted to the atmosphere will not exceed a level of 1.5 psia.

504.2 Volatile carbon compound water separators used exclusively in conjunction with the production of crude oil or condensate are exempt from Rule 504.

Rule 505. Waste Gas Disposal.

505.1 No person shall emit in any consecutive 24 hour period more than 100 lbs. of ethylene in a waste gas stream from an ethylene producing or consuming plant under normal operating conditions unless the waste gas stream is burned properly at a temperature equal to or greater than 1300°F in a smokeless flare or a direct-flame incinerator.

505.2 No person shall emit a waste gas stream from any process vent containing one or more of the specific carbon compounds listed in Rule 505.21 or one or more compounds which are members of one or more of the classes of carbon compounds listed in Rule 505.22 unless the waste gas stream is burned properly at a temperature equal to or greater than 1300°F in a smokeless flare or a direct-flame incinerator before it is allowed to enter the atmosphere; alternate means of control may be approved by the Executive Secretary in accordance with Rule 506.

505.21 Emission of the following specific carbon compounds shall be regulated under Rule 505.2:

Butadiene	Isoprene
Isobutylene	Propylene
Styrene	α-Methyl-Styrene

505.22 Emissions of the following classes of carbon compounds shall be regulated under Rule 505.2:

Aldehydes	Amines
Alcohols	Acids
Aromatics	Esters
Ethers	Ketones
Olefins	Sulfides
Peroxides	Branched chain hydrocarbons (C_8 and above)

505.23 The following waste gas streams are exempt from the requirements of Rule 505.2:

505.231 A waste gas stream having a combined weight of the carbon compounds or classes of compounds specified in 505.21 and 505.22 equal to or less than 100 lbs. in any consecutive 24 hour period.

505.232 A waste gas stream having a combined weight of the carbon compounds or classes of compounds specified in 505.21 and 505.22 greater than 100 lbs. in any consecutive 24 hour period but less than 250 lbs. per hour averaged over any consecutive 24 hour period and having an aggregate partial pressure of the carbon compounds specified in 505.21 and 505.22 less than .44 psia.

505.3 No person shall emit in any one calendar year more than five (5) tons of total carbon compounds excluding methane in a waste gas stream from any catalyst regeneration of a petroleum or petrochemical process system, basic oxygen furnace, or fluid-coking unit into the atmosphere unless the waste gas stream is properly burned at a temperature equal to or greater than 1300°F in a direct-flame incinerator or boiler.

505.4 No person shall emit a waste gas stream from any iron cupola into the atmosphere unless the waste gas stream is properly burned at a temperature equal to or greater than 1300°F in an afterburner having a retention time of at least one-fourth (1/4) of a second, and having a steady flame that is not affected by the cupola charge and relights automatically if extinguished.

505.5 Waste gas streams from blast furnaces shall be burned in a smokeless flare or be used in one or more of the following ways:

505.51 To preheat the blast air before injection into the furnace through the tuyeres;

505.52 For steam generation;

505.53 For the heating of soaking pits;

505.54 For the underfiring of coke ovens;

505.55 For other miscellaneous heating uses.

505.6 Rule 505 is not intended to require incineration as an exclusive method of control. In no event shall a waste gas stream be incinerated if the incineration will have no practical effect in reducing the emission of air contaminants or will result in an actual degradation of air quality. In all such cases, application shall be made to the Executive Secretary for approval of an alternate method of control. The Executive Secretary shall approve such alternate method if it represents the best available alternative having due regard for the intent of Rule 505 and the effect of the emissions on ambient air quality.

Rule 506. Any person affected by any section of this Regulation may request the Executive Secretary to approve alternate means of control. The Executive Secretary shall approve such alternate means of control if it can be demonstrated that such control will be substantially equivalent to the methods of control approved by this Regulation.

Rule 507. The Executive Secretary, after consultation with appropriate local governmental agencies, may exempt specific compounds or a specific waste gas stream from the application of this Regulation if it can be demonstrated that the emissions from the compound or specific waste gas stream will not make a significant contribution of air contaminants in the atmosphere.

Rule 508. Compliance.

508.1 Any person affected by Rule 502.1 hereof with regard to the storage of a volatile carbon compound in a container having a capacity in excess of 50,000 gallons; any person affected by Rule 502.2 hereof; any person affected by Rule 503 hereof; any person affected by Rule 504 hereof; any person affected by Rule 505.1 hereof with regard to a waste gas stream from an ethylene producing plant; any person affected by Rule 505.3 hereof with regard to catalyst regeneration of a petroleum

cracking system, and any person affected by Rule 505.4 or 505.5 shall be in compliance therewith as soon as practicable, but not later than December 31, 1973. Any person who has not previously submitted to the Texas Air Control Board a written report on his compliance status, including but not limited to, the minimum time required to design, procure, install, and test abatement equipment and procedures shall do so immediately. In addition, all persons affected by Rule 508.1 shall submit progress reports to the Board every four months commencing in May of 1973 until compliance is achieved.

508.2 All persons affected by this Regulation except as provided in Rule 508.1, shall be in compliance herewith as soon as practicable, but not later than May 31, 1975; and shall submit to the Texas Air Control Board not later than December 31, 1973 a final control plan for compliance detailing the method to be followed to achieve compliance and specifying the exact dates upon which the following steps shall be taken to achieve compliance:

508.21 Dates by which contracts for emission control systems or process modifications will be awarded; or dates by which orders will be issued for the purchase of component parts to accomplish emission control or process modification;

508.22 Date of initiation of on-site construction or installation of emission control equipment or process change;

508.23 Date by which on-site construction or installation of emission control equipment or process modification is to be completed;

508.24 Date by which final compliance is to be achieved.

508.3 All persons affected by Rule 508.2 shall not deviate from the terms of such final control plans including the date for final compliance and the dates for accomplishing the required steps in such plans. The Executive Secretary may, upon application of any person affected, change the date for accomplishing the required steps in a plan, provided such change is not likely to affect the achievement of

the final compliance date specified in such plan. Within five (5) days after completion of each of the required steps listed in 508.21 through 508.24, the person submitting the plan shall so notify the Executive Secretary in writing.

Rule 509. The rules contained in this Regulation shall be in force immediately and shall supersede Regulation V on Control of Air Pollution from Volatile Organic Compounds and Carbon Monoxide which became effective on March 5, 1972 and was amended on August 31, 1972.

Date Adopted: April 10, 1973

Date Filed with Secretary of State: April 12, 1973

Date Effective: May 12, 1973