Permit by Rule Chapter 106 - July 19, 2018

Subchapter A: General Requirements

Section 106.1, 106.2, 106.4, 106.6, 106.8, 106.13

Effective April 17, 2014

Section 106.1. Purpose.

This chapter identifies certain types of facilities or changes within facilities which the commission has determined will not make a significant contribution of air contaminants to the atmosphere pursuant to the Texas Health and Safety Code, the Texas Clean Air Act (TCAA), §382.057 and §382.05196. Adopted August 9, 2000 Effective September 4, 2000

Section 106.2. Applicability.

This chapter applies to certain types of facilities or changes within facilities listed in this chapter where construction is commenced on or after the effective date of the relevant permit by rule. This chapter does not apply to emissions of greenhouse gases (as defined in §101.1 of this title (relating to Definitions)). Adopted March 26, 2014 Effective April 17, 2014

Section 106.4. Requirements for Permitting by Rule.

(a) To qualify for a permit by rule, the following general requirements must be met.

(1) Total actual emissions authorized under permit by rule from the facility shall not exceed the following limits, as applicable:

(A) 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NO_x);

(B) 25 tpy of volatile organic compounds (VOC), sulfur dioxide (SO_2), or inhalable particulate matter (PM);

(C) 15 tpy of particulate matter with diameters of 10 microns or less (PM_{10});

(D) 10 tpy of particulate matter with diameters of 2.5 microns or less ($PM_{2.5}$); or

(E) 25 tpy of any other air contaminant except:

(i) water, nitrogen, ethane, hydrogen, and oxygen; and

(ii) notwithstanding any provision in any specific permit by rule to the contrary, greenhouse gases as defined in §101.1 of this title (relating to Definitions).

(2) Any facility or group of facilities, which constitutes a new major stationary source, as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions), or any modification which constitutes a major modification, as defined in §116.12 of this title, under the new source review requirements of the Federal Clean Air Act (FCAA), Part D (Nonattainment) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title (relating to New Source Review Permits) and cannot qualify for a permit by rule under this chapter. Persons claiming a permit by rule under this chapter should see the requirements of §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas) to ensure that any applicable netting requirements have been satisfied.

(3) Any facility or group of facilities, which constitutes a new major stationary source, as defined in 40 Code of Federal Regulations (CFR) §52.21, or any change which constitutes a major modification, as defined in 40 CFR §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder because of emissions of air contaminants other than greenhouse gases, must meet the permitting requirements of Chapter 116, Subchapter B of this title and cannot qualify for a permit by rule under this chapter. Notwithstanding any provision in any specific permit by rule to the contrary, a new major stationary source or major modification which is subject to Chapter 116, Subchapter B, Division 6 of this title due solely to emissions of greenhouse gases may use a permit by rule under this chapter for air contaminants that are not greenhouse gases. However, facilities or projects which require a prevention of significant deterioration permit

due to emissions of greenhouse gases may not commence construction or operation until the prevention of significant deterioration permit is issued.

(4) Unless at least one facility at an account has been subject to public notification and comment as required in Chapter 116, Subchapter B or Subchapter D of this title (relating to New Source Review Permits or Permit Renewals), total actual emissions from all facilities permitted by rule at an account shall not exceed 250 tpy of CO or NO_x; or 25 tpy of VOC or SO_2 or PM; or 15 tpy of PM_{10}; or 10 tpy of $PM_{2.5}$; or 25 tpy of any other air contaminant except water, nitrogen, ethane, hydrogen, oxygen, and GHGs (as specified in §106.2 of this title (relating to Applicability)).

(5) Construction or modification of a facility commenced on or after the effective date of a revision of this section or the effective date of a revision to a specific permit by rule in this chapter must meet the revised requirements to qualify for a permit by rule.

(6) A facility shall comply with all applicable provisions of the FCAA, §111 (Federal New Source Performance Standards) and §112 (Hazardous Air Pollutants), and the new source review requirements of the FCAA, Part C and Part D and regulations promulgated thereunder.

(7) There are no permits under the same commission account number that contain a condition or conditions precluding the use of a permit by rule under this chapter.

(8) The proposed facility or group of facilities shall obtain allowances for NOX if they are subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

(b) No person shall circumvent by artificial limitations the requirements of §116.110 of this title (relating to Applicability).

(c) The emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the Texas Clean Air Act (TCAA), including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility.

(d) Facilities permitted by rule under this chapter are not exempted from any permits or registrations required by local air pollution control agencies. Any such requirements must be in accordance with Texas Health and Safety Code, §382.113 and any other applicable law. Adopted March 26, 2014 Effective April 17, 2014

Section 106.6. Registration of Emissions.

(a) An owner or operator may certify and register the maximum emission rates from facilities permitted by rule under this chapter in order to establish federally-enforceable allowable emission rates which are below the emission limitations in §106.4 of this title (relating to Requirements for Permitting by Rule).

(b) All representations with regard to construction plans, operating procedures, and maximum emission rates in any certified registration under this section become conditions upon which the facility permitted by rule shall be constructed and operated.

(c) It shall be unlawful for any person to vary from such representation if the change will cause a change in the method of control of emissions, the character of the emissions, or will result in an increase in the discharge of the various emissions, unless the certified registration is first revised.

(d) The certified registration must include documentation of the basis of emission estimates and a written statement by the registrant certifying that the maximum emission rates listed on the registration reflect the reasonably anticipated maximums for operation of the facility.

(e) Certified registrations used to demonstrate that Chapter 122 of this title (relating to Federal Operating Permits) does not apply to a source shall be submitted on the required form to the executive director; to the appropriate commission regional office; and to all local air pollution control agencies having jurisdiction over the site.

(1) Certified registrations established prior to the effective date of this rule shall be submitted on or before February 3, 2003.

(2) Certified registrations established on or after the effective date of this rule shall be submitted no later than the date of operation.

(f) All certified registrations shall be maintained on-site and be provided immediately upon request by representatives of the commission or any local air pollution control agency having jurisdiction over the site. If however, the site normally operates unattended, certified registrations and records demonstrating compliance with the certified registration must be maintained at an office within Texas having day-to-day operational control of the site. Upon request, the commission shall make any such records of compliance available to the public in a timely manner.

(g) Copies of certified registrations shall be included in permit applications subject to review under Chapter 116, Subchapter B of this title (relating to New Source Review Permits). Adopted November 20, 2002 Effective December 11, 2002

Section 106.8. Recordkeeping

(a) Owners or operators of facilities and sources that are de minimis as designated in §116.119 of this title (relating to De Minimis Facilities or Sources) are not subject to this section.

(b) Owners or operators of facilities operating under a permit by rule (PBR) in Subchapter C of this chapter (relating to Domestic and Comfort Heating and Cooling) or under those PBRs that only name the type of facility and impose no other conditions in the PBR itself do not need to comply with specific recordkeeping requirements of subsection

(c) of this section. A list of these PBRs will be available through the commission's Austin central office, regional offices, and the commission's website. Upon request from the commission or any air pollution control program having jurisdiction, claimants must provide information that would demonstrate compliance with §106.4 of this title (relating to Requirements for Permitting by Rule), or the general requirements, if any, in effect at the time of the claim, and the PBR under which the facility is authorized.

(c) Owners or operators of all other facilities authorized to be constructed and operate under a PBR must retain records as follows:

(1) maintain a copy of each PBR and the applicable general conditions of §106.4 of this title or the general requirements, if any, in effect at the time of the claim under which the facility is operating. The PBR and general requirements claimed should be the version in effect at the time of construction or installation or changes to an existing facility, whichever is most recent. The PBR holder may elect to comply with a more recent version of the applicable PBR and general requirements;

(2) maintain records containing sufficient information to demonstrate compliance with the following:

(A) all applicable general requirements of §106.4 of this title or the general requirements, if any, in effect at the time of the claim; and

(B) all applicable PBR conditions;

(3) keep all required records at the facility site. If however, the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site;

(4) make the records available in a reviewable format at the request of personnel from the commission or any air pollution control program having jurisdiction;

(5) beginning April 1, 2002, keep records to support a compliance demonstration for any consecutive 12-month period. Unless specifically required by a PBR, records regarding the quantity of air contaminants emitted by a facility to demonstrate compliance with §106.4 of this title prior to April 1, 2002 are not required under this section; and

(6) for facilities located at sites designated as major in accordance with §122.10(13) of this title (relating to General Definitions) or subject to or potentially subject to any applicable federal requirement, retain all records demonstrating compliance for at least five years. For facilities located at all other sites, all records demonstrating compliance must be retained for at least two years. These record retention requirements supersede any retention conditions of an individual PBR. Adopted October 10, 2001 Effective November 1, 2001

Section 106.13. References to Standard Exemptions and Exemptions from Permitting.

The authorizations formerly known as standard exemptions and exemptions from permitting are referred to as permits by rule in this title. Types of facilities and changes within facilities authorized by those standard exemptions and exemptions from permitting continue to be authorized unless modifications or changes to those facilities has caused them to no longer meet the conditions of the former standard exemption or exemption from permitting and the general requirements of this subchapter. Adopted August 9, 2000 Effective September 4, 2000

Subchapter B: Registration Fees for New Permits By Rule

Section 106.50

Effective June 30, 2004

Section 106.50. Registration Fees for Permits by Rule.

(a) A registrant who submits a permit by rule (PBR) registration for review by the commission shall remit one of the following fees with the PI-7 registration form:

(1) $100 for:

(A) small businesses, as defined in Texas Government Code, §2006.001;

(B) non-profit organizations; and

(C) municipalities, counties, and independent school districts with populations or districts of 10,000 or fewer residents, according to the most recently published census; or

(2) $450 for all other entities.

(b) This fee does not apply to:

(1) a certification submitted solely for the purpose of establishing a federally enforceable emissions limit under §106.6 of this title (relating to Registration of Emissions);

(2) a remediation project conducted under §106.533 of this title (relating to

Remediation); or

(3) resubmittal of previously reviewed registrations, if received within six months of a written response on the original action.

(c) This fee is for PBR registrations that are received on or after November 1, 2002.

(d) All PBR fees will be remitted in the form of a check, certified check, electronic funds transfer, or money order made payable to the Texas Commission on Environmental Quality (TCEQ) and submitted concurrently with the registration to the TCEQ, P.O. Box 13088, MC 214, Austin, Texas 78711-3087. No fees will be refunded. Adopted June 9, 2004 Effective June 30, 2004

Subchapter C: Domestic and Comfort Heating and Cooling

Section 106.102

Effective September 3, 2009

Section 106.102. Comfort Heating.

This section permits by rule combustion units designed and used exclusively for comfort heating purposes employing liquid petroleum gas, natural gas, solid wood, or distillate fuel oil. Distillate fuel oil includes diesel fuel, kerosene, and heating oil Grades 4 and lighter. Distillate fuel oil does not include heavier residual oils such as Grades 5 and 6 fuel oil. Combustion of bark chips, sawdust, wood chips, treated wood, or wood contaminated with chemicals is not included. Used oil that has not been mixed with hazardous waste may be used as fuel in space heaters provided that:

(1) the space heater or combination of space heaters at the same account have a maximum capacity of 1.0 Million Btu per hour (MMBtu/hr) provided each individual heater is not greater than 0.5 MMBtu/hr;

(2) the combustion gases from the heater(s) are vented to the ambient air in accordance with the following requirements:

(A) through an unobstructed vertical vent; or

(B) for a stack with a cap;

(i) for a flat roof, through a minimum of a three-foot stack; or

(ii) for a sloped roof, through a stack that is three feet higher than a point extending ten feet horizontally from the roof; and

(3) the heater(s) burns only used oil that the owner or operator generates on-site or used oil received from household do-it-yourself used oil generators. Adopted August 9, 2000 Effective September 4, 2000

Subchapter D: Analysis and Testing

Section 106.122, Section 106.124

Effective September 3, 2009

Section 106.122. Bench Scale Laboratory Equipment.

Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analyses are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.124. Pilot Plants.

Any new or modified pilot plant is permitted by rule, provided the following conditions of this section are met.

(1) For purposes of this section, a pilot plant is defined as a facility that is constructed and operated only for one of the following purposes:

(A) testing the manufacturing or marketing potential of a proposed product; or

(B) defining the design of a larger plant; or

(C) studying the behavior of an existing plant through modeling in the pilot plant.

(2) The sum of product, co-product, and by-product production design capacity from the pilot plant shall not exceed five million pounds per year.

(3) Operation of the pilot plant for purposes of testing market potential of a product, co-product, or by-product may not occur beyond the end of the fifth calendar year from the year of initial production (year 1) of the specific product, co-product, or by-product, unless a permit is obtained under §116.110 of this title (relating to Applicability). This five-year limit on pilot plant activity applies to equipment devoted to development of one specific product or process; therefore, that equipment can be subsequently used for development of other process(es) or product(s), setting a new time limit for its use.

(4) The pilot plant shall be located at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located.

(5) New or increased emissions shall not exceed 6.0 pounds per hour (lb/hr) and ten tons per year in total (including fugitives) and shall not exceed 1.0 lb/hr at any single stack (excluding fugitives). In addition, total new or increased emissions of each specific chemical shall not exceed the most stringent applicable requirement of the following:

(A) the chemical-specific emission limits determined by §106.262(3) of this title (relating to Facilities (Emission and Distance Limitations));

(B) the chemical-specific emission limits determined by §106.261(4) of this title (relating to Facilities (Emission Limitations)); or

(C) 6.0 lb/hr for any simple asphyxiant as defined by the American Conference of Governmental Industrial Hygienists. Adopted August 9, 2000 Effective September 4, 2000

Subchapter E: Aggregate and Pavement

Section 106.141, 106.143-106.146, 106.148-106.150

Effective March 7, 2013

Section 106.141. Batch Mixers.

Batch mixers with rated capacity of 27 cubic feet or less for mixing cement, sand, aggregate, lime, gypsum, additives, and/or water to produce concrete, grout, stucco, mortar, or other similar products; and that comply with the following conditions; are permitted by rule.

(1) An internal combustion engine rated at 25 horsepower or less may be used to power the mixer.

(2) The owner or operator shall use best management practices for dust control by:

(A) cleaning up spilled raw materials, waste products, or finished products on a daily basis; and

(B) controlling dust in transfer systems, stockpiles, work areas, storage, and truck unloading areas. Adopted February 13, 2013 Effective March 7, 2013

Section 106.143. Wet Sand and Gravel Production.

Any wet sand and gravel production facility that obtains its material from subterranean and subaqueous beds where the deposits of sand and gravel are consolidated granular materials resulting from natural disintegration of rock and stone and whose production rate is 500 tons per hour or less is permitted by rule. All permanent in-plant roads shall be paved and cleaned as necessary or watered as necessary to achieve maximum control of dust emissions. Adopted August 9, 2000 Effective September 4, 2000

Section 106.144. Bulk Mineral Handling.

All bulk mineral product (except asbestos) handling facilities that operate in compliance with the following conditions of this section are permitted by rule.

(1) All material shall be transported in a closed conveying system and all exhaust air to the atmosphere shall be vented through a fabric filter having a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical cleaning or 7.0 ft/min with automatic air cleaning.

(2) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, oiled, or paved and cleaned as necessary to achieve maximum control of dust emissions.

(3) The facility (including associated stationary equipment and stockpiles) shall be located at least 300 feet from any recreational area, school, residence, or other structure not occupied or used solely by the owner of the property upon which the facility is located.

(4) Before construction begins, written site approval must be received from the executive director and the facility shall be registered with the commission’s Office of Permitting, Remediation, and Registration in Austin using Form PI-7. Adopted August 9, 2000 Effective September 4, 2000

Section 106.145. Bulk Sand Handling.

All oil well servicing bulk sand handling facilities that operate according to the following conditions of this section are permitted by rule.

(1) All sand shall be prewashed.

(2) All handling of sand shall be mechanical or, if conveyed pneumatically, the conveying air shall be vented to the atmosphere through a fabric filter(s) having a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical cleaning or 7.0 ft/min with air cleaning.

(3) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, oiled, or paved and cleaned as necessary to achieve maximum control of dust emissions.

(4) The facility (including associated stationary equipment and stockpiles) shall be located at least 300 feet from any recreational area, school, residence, or other structure not occupied or used solely by the owner of the property upon which the facility is located.

(5) Before construction begins, the owner or operator shall file with the commission's Office of Permitting, Remediation, and Registration in Austin a completed Form PI-7 and supporting documentation demonstrating that all of the requirements of the permit by rule will be met. Adopted August 9, 2000 Effective September 4, 2000

Section 106.146. Soil Stabilization Plants.

Any soil stabilization facility that operates according to the following conditions of this section is permitted by rule.

(1) All bulk storage silos shall be equipped with fabric filter(s) having a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical cleaning or 7.0 ft/min with automatic air cleaning.

(2) All conveyor belts transferring dry material to the pug mill shall be top covered.

(3) The pug mill used to mix the materials shall be covered.

(4) All permanent in-plant roads and vehicle work areas shall be watered, oiled, or paved and cleaned as necessary to achieve maximum control of dust emissions.

(5) An audible and/or visible mechanism shall be installed on the storage silo(s) to notify operators that the silo is full.

(6) All stockpiles shall be sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.

(7) When emulsified asphalt is used as the stabilizing admixture, the emulsified asphalt shall be stored in a container used exclusively for emulsified asphalt storage. Transfer of emulsified asphalt from the storage tank to the pug mill shall be accomplished by means of a pump and metering device.

(8) Before construction of the facility begins, written site approval shall be received from the executive director and the facility shall be registered with the commission's Office of Permitting, Remediating, and Registration in Austin using Form PI-7.

(9) The facility shall be located at least 300 feet from any recreational area, school, residence, or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located. This distance limitation does not apply to structures within the boundaries of the project for which the facility is to process stabilized soil when the facility is located on or contiguous to the project. Adopted August 9, 2000 Effective September 4, 2000

Section 106.148. Material Unloading.

Railcar or truck unloading of wet sand, gravel, aggregate, coal, lignite, and scrap iron or scrap steel (but not including metal ores, metal oxides, battery parts, or fine dry materials) into trucks or other railcars for transportation to other locations is permitted by rule, provided the following conditions of this section are met.

(1) Bulk materials shall not be stored on-site.

(2) Water sprays or the equivalent must be installed and used as necessary at material handling operations to achieve maximum control of dust emissions.

(3) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, oiled, or paved and cleaned as necessary to achieve maximum control of dust emissions. Adopted August 9, 2000 Effective September 4, 2000

Section 106.149. Sand and Gravel Processing.

Any sand and gravel production facility that obtains its material from deposits of sand and gravel consisting of natural disintegration of rock and stone is permitted by rule, provided that the following conditions of this section are satisfied:

(1) crushing or breaking operations are not used;

(2) no blasting is conducted to obtain the material;

(3) water sprays are installed on the plant at all screens and transfer points and used as necessary to achieve maximum control of dust emissions;

(4) the area where the sand and gravel is obtained shall be sprinkled with water as necessary to achieve maximum control of dust emissions before the material is removed and transported for processing;

(5) all in-plant roads shall be paved and cleaned or sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions;

(6) the plant is located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located;

(7) the production rate is 50 tons per hour or less. Adopted August 9, 2000 Effective September 4, 2000

Section 106.150. Asphalt Silos.

Any silo used to store hot mix asphalt or asphalt emulsion concrete mixtures which meets the following conditions of this section is permitted by rule:

(1) no cutback asphalt mixtures are stored;

(2) for silos on location for more than six months, all truck traffic areas are paved and cleaned as necessary to achieve maximum control of dust emissions and for those silos on location for six months or less, the truck traffic areas are sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions;

(3) fuel used for heating the silo is sweet natural gas as defined in Chapter 101 of this title (relating to General Air Quality Rules) or liquid petroleum gas or first run refinery grade diesel or Number 2 fuel oil that is not a blend containing waste oils or solvents and that contains less than 0.5% by weight sulfur;

(4) the silo(s) is located at least 300 feet from any recreational area, school, residence, or other structure not occupied or used solely by the owner of the property upon which the silo(s) is located;

(5) before construction begins, written site approval is received from the executive director and the facility is registered with the commission’s Office of Permitting, Remediation, and Registration in Austin using Form PI-7. Adopted August 9, 2000 Effective September 4, 2000

Subchapter F: Animal Confinement

Section 106.161 - 106.163

Effective September 4, 2000

Section 106.161. Animal Feeding Operations.

Animal feeding operations which confine animals in numbers specified in paragraph (1) of this section and any associated on-site feed handling and/or feed milling operations which satisfy the following conditions of this section are permitted by rule.

(1) Operations designed to feed no more than:

(A) 1,000 cattle;

(B) 1,000 horses and mules;

(C) 2,500 swine weighing more than 55 pounds;

(D) 10,000 sheep and goats; or

(E) 1,000 animal equivalents.

(2) Where a combination of cattle, swine weighing over 55 pounds, horses and mules, or sheep and goats are present, animal equivalents shall be calculated by adding the following numbers.

1.0 x (number of cattle)

+ 0.4 x (number of swine weighing over 55 pounds)

+ 2.0 x (number of horses and mules)

+ 0.1 x (number of sheep and goats)

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Total = animal equivalents.

(3) In determining the number of animals or animal equivalents, mothers with nursing young shall be counted as a single animal while the young are nursing. Once removed from the mother, the young animals shall be counted when determining the number of animals or animal equivalents. Swine weighing 55 pounds or less shall be allowed, but not counted in determining the number of animals or animal equivalents. Animals on pasture are not considered as part of the animal feeding operation.

(4) Operations designed to feed no more than 55,000 turkeys or other birds, excluding ducks, concentrated on open lots.

(5) Operations designed to feed no more than 5,000 ducks.

(6) All caged poultry operations designed to feed no more than 30,000 birds.

(7) All housed poultry operations when wood shavings or similar material is used as litter.

(8) All caged poultry operations designed to feed more than 30,000 birds when a dry manure storage and handling system is used and when located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner of the egg laying or caged pullet operation. Before construction of the caged laying and caged pullet operations begins, written site approval shall be received from the executive director and the facility shall be registered with the commission's Office of Permitting, Remediation, and Registration using Form PI-7.

(9) For the associated on-site feed handling and/or feed milling operations to be covered under this section, no products from the feed handling and or feed milling shall be shipped off-site. Adopted August 9, 2000 Effective September 4, 2000

Section 106.162. Livestock Auction Facilities.

Livestock auction sales facilities are permitted by rule provided the following conditions of this section are satisfied.

(1) All holding pens shall be covered by a roof.

(2) All traffic areas shall be paved and cleaned, oiled, or sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.

(3) Manure shall be cleaned from pens as necessary to prevent an odor nuisance and disposed of in a manner which will not create a nuisance.

(4) Dead animals shall be properly disposed of within 24 hours after death.

(5) The facility shall be located at least 600 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of this facility.

(6) Before construction of the facility begins, written site approval shall be received from the executive director and the facility shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7. Adopted August 9, 2000 Effective September 4, 2000

Section 106.163. Race Tracks, Zoos, and Animal Shelters.

All animal racing facilities, domestic animal shelters, zoos, and their associated confinement areas, stables, feeding areas, and waste collection and treatment facilities are permitted by rule. Incineration units are not authorized under this section. Adopted August 9, 2000 Effective September 4, 2000

Subchapter G: Combustion

Section 106.181 - 106.183

Effective November 1, 2001

Section 106.181. Used-Oil Combustion Units.

Small boilers and heaters burning used oil that has not been mixed with hazardous waste are permitted by rule provided that all of the following conditions are met:

(1) the combustion unit or combination of combustion units at the same account have a maximum capacity of 1.0 million Btu per hour (MMBtu/hr) and each individual combustion unit is not greater than 0.5 MMBtu/hr;

(2) the combustion gases from the combustion unit(s) are vented to the ambient air in accordance with the following requirements:

(A) through an unobstructed vent; or

(B) through a vertical vent with a cap; and

(i) a flat roof, through a minimum of a three-foot stack; or

(ii) a sloped roof, through a stack that is at least three feet higher than the highest point on the roof or three feet higher than a point extending ten feet horizontally from the roof; and

(3) the combustion unit(s) burns only used oil the owner or operator generates on-site or used oil received from household do-it-yourself used oil generators. Adopted October 10, 2001 Effective November 1, 2001

Section 106.182. Ceramic Kilns.

Kilns used for firing ceramic ware, heated exclusively by natural gas, liquid petroleum gas, electricity, or any combination thereof are permitted by rule where the conditions of this section are met:

(1) the total heat input is ten million British thermal units per hour or less; and

(2) there are no emissions of lead, beryllium, or fluorides, and emissions of sulfur dioxide and particulate matter from both the material being fired and fuel burned do not exceed 25 tons per year of either air contaminant. Adopted August 9, 2000 Effective September 4, 2000

Section 106.183. Boilers, Heaters, and Other Combustion Devices.

Boilers, heaters, drying or curing ovens, furnaces, or other combustion units, but not including stationary internal combustion engines or turbines are permitted by rule, provided that the following conditions are met.

(1) The only emissions shall be products of combustion of the fuel.

(2) The maximum heat input shall be 40 million British thermal unit (Btu) per hour with the fuel being:

(A) sweet natural gas;

(B) liquid petroleum gas;

(C) fuel gas containing no more than 0.1 grain of total sulfur compounds, calculated as sulfur, per dry standard cubic foot; or

(D) combinations of the fuels in subparagraphs (A) - (C) of this paragraph.

(3) Distillate fuel oil shall be fired as a backup fuel only. Firing shall be limited to 720 hours per year. The fuel oil shall contain less than 0.3% sulfur by weight and shall not be blended with waste oils or solvents.

(4) All gas fired heaters and boilers with a heat input greater than ten million Btu per hour (higher heating value) shall be designed such that the emissions of nitrogen oxides shall not exceed 0.1 pounds per million Btu heat input.

(5) Records of hours of fuel oil firing and fuel oil purchases shall be maintained on-site on a two-year rolling retention period and made available upon request to the commission or any local air pollution control agency having jurisdiction. Adopted August 9, 2000 Effective September 4, 2000

Subchapter I: Manufacturing

Section 106.221, 106.224 - 106.227, 106.229, 106.231

Effective September 3, 2009

Section 106.221. Extrusion Presses.

Presses used exclusively for extruding metals, minerals, plastics, rubber, or wood are permitted by rule except where halogenated carbon compounds or hydrocarbon solvents are used as foaming agents. Presses used for extruding scrap materials or reclaiming scrap materials are not permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.224. Aerospace Equipment and Parts Manufacturing.

Any new aerospace equipment and parts manufacturing plant, or physical and operational change to an existing aerospace equipment and parts manufacturing plant are permitted by rule, provided that the following conditions of this section are satisfied.

(1) For purposes of this section, aerospace equipment and parts manufacturing plant means the entire operation on the property which engages in the fabrication or assembly of parts, tools, or completed components of any aircraft, helicopter, dirigible, balloon, missile, drone, rocket, or space vehicle. This permit by rule will not include composite aerospace equipment and parts manufacturing plants. Composite plants are defined to be plants whose products are less than 50% metal, by weight, based on annual production figures. This definition excludes those operations specifically authorized by other permits by rule. For example, a boiler would not be considered a part of the aerospace manufacturing plant, but could be authorized under §106.181 of this title (relating to Small Boilers, Heaters, and Other Combustion Devices), if all pertinent requirements were met.

(2) Emission points associated with the aerospace equipment and parts manufacturing plant or changes to that plant shall be located at least 100 feet from any off-plant receptor. Off-plant receptor means any recreational area or residence or other structure not occupied or used solely by the owner or operator of the aerospace equipment and parts manufacturing plant or the owner of the property upon which the aerospace plant is located. Controlled access recreational areas owned by the property owner or the owner or operator of the aerospace plant are not off-plant receptors.

(3) The total annual emissions, in tons per year, of the following air contaminants authorized under this section, on a cumulative basis, from the entire aerospace manufacturing plant shall not exceed the values specified:

(A) inhalable particulate matter - five tons per year (tpy);

(B) volatile organic compounds (VOC) - 15 tpy;

(C) acid gases or vapors - five tpy;

(D) non-VOC carbon compound emissions - ten tpy;

(E) total of air contaminants in subparagraphs (A) - (D) of this paragraph - 25 tpy.

(4) Hourly emissions of total new or increased emissions, including fugitives, of particulate matter or chemicals listed or referenced in Table 262 of §106.262 of this title (relating to Facilities (Emission Distance Limitations)), shall not exceed the hourly emission rate, E, as determined using the equation, E = L/K lb/hr and Table 224A, where:

E = maximum allowable hourly emission, lb/hr,

L = limit value (see Table 262), milligrams per cubic meter,

K = value from Table 224A (interpolate intermediate values), and

D = distance to the nearest off-plant receptor from the closest affected emission point.

Table 224A

D, Feet	K
100	326
200	200
300	139
400	104
500	81
600	65
700	54
800	46
900	39
1,000	34
2,000	14
3,000 or more	1

(5) Before construction or change in operation begins, registration shall be submitted to the commission's Office of Permitting, Remediation, and Registration in Austin using a completed Form PI-7. The emission data provided in the PI-7 shall include all process emission sources at the plant, both existing and proposed, and shall be the maximum allowed emissions for permitted units, the actual emissions for existing grandfathered units or units permitted by rule, and the projected maximum allowable emissions for proposed units. Emissions shall be speciated by chemical compound and the stack parameters, as appropriate, for each emission source shall be provided. Registration shall include a description of the project, calculations, and data identifying specific chemical names, "L" values, "D" values, and a description of pollution control equipment, if any.

(6) An emissions inventory shall be compiled and/or updated on an annual basis for all process emission sources on the property, maintained on a two-year rolling retention cycle, and made available upon request by the executive director. The inventory records should include the basis for all emissions estimates, sample calculations, and material usage records. Material and solvent usage records shall be maintained in sufficient detail to document compliance with this section.

(7) There shall be no visible emissions from each existing and proposed stack, hood, vent, or opening to the atmosphere.

(8) Any facility in which any chemical listed in subparagraph (D) of this paragraph will be handled or stored as a liquid or a compressed gas in a compound mixture of a concentration greater than 10% by weight or an aqueous solution of any chemical listed in subparagraph (D) of this paragraph greater than 50% by weight shall comply with subparagraphs (A) - (C) of this paragraph.

(A) The facility shall be located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor.

(B) The cumulative amount of any one of the chemicals listed in subparagraph (D) of this paragraph, resulting from one or more authorizations under this section, shall not exceed 500 pounds on the plant property.

(C) Any chemical listed in subparagraph (D) of this paragraph shall be handled only in containers operated in compliance with United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178).

(D) Listed chemicals are: acrolein, ammonia, bromine, carbon disulfide, chlorine, ethyl mercaptan, hydrogen chloride, hydrogen bromide, hydrogen cyanide, hydrogen fluoride, hydrogen sulfide, phosphine, sulfur dioxide, methyl bromide, methyl isocyanate, methyl mercaptan, nickel carbonyl, phosgene. Adopted August 9, 2000 Effective September 4, 2000

Section 106.225. Semiconductor Manufacturing.

Modifications, additions, or relocations of equipment (excluding add-on controls) used for semiconductor manufacturing operations that result in the addition, increase, or substitution of an air contaminant are permitted by rule provided the following conditions of this section are satisfied.

(1) The following is a list of definitions for this section.

(A) **Permitted air contaminants** - The individual chemical compounds represented in the latest permit or permit amendment application approved by the executive director.

(B) **Ground Level Contaminant (GLC1) (max) new** - The maximum hourly off-property GLC resulting from the new emission rate of air contaminant 1.

(C) **GLC_1 (receptor) new** - The maximum hourly off-property GLC at the sensitive receptor with the highest possible impacts resulting from the new emission rate of air contaminant 1.

(D) **GLC_2 (max)** - The maximum hourly off-property GLC resulting from the emission rate of air contaminant 2.

(E) **GLC_2 (receptor)** - The maximum hourly off-property GLC at the sensitive receptor with the highest possible impacts resulting from the emission rate of air contaminant 2.

(F) **ESL_1** - The 30-minute Effects Screening Level (ESL) published in the commission's ESL list dated April 10, 1995, for air contaminant 1.

(G) **ESL_2** - The 30-minute ESL published in the commission's ESL list dated April 10, 1995, for air contaminant 2.

(2) New emissions or an emission increase of any air contaminant less than 0.04 pounds per hour (sitewide) are exempt from all conditions of this section except paragraphs (3), (11), and (12) of this section.

(3) A permit has been issued by the commission for at least one emission source owned by the person using this section on the same property for which this section is being claimed.

(4) The facility's baseline GLCs of the permitted air contaminants have been determined using air dispersion modeling or other methods.

(5) New emission points are not authorized by this section.

(6) There will be no change in method of control for any air contaminants as represented in the latest permit or permit amendment application approved by the executive director.

(7) Increases of a permitted air contaminant shall meet all of the following criteria:

(A) GLC_1 (max) new $\leq 2ESL_1$;

(B) GLC_1 (receptor) new $\leq ESL_1$.

(8) Additions of a non-permitted air contaminant, substitutions of a non-permitted air contaminant for a permitted air contaminant, and substitutions of one permitted air contaminant for another permitted air contaminant shall meet all of the following criteria:

(A) GLC_2 (max) new $\leq 2ESL_2$;

(B) GLC_2 (receptor) new $\leq ESL_2$.

(9) If the commission ESL list dated April 10, 1995, does not include the air contaminant to be added or substituted, the permittee must use an ESL derived by the commission's Toxicology and Risk Assessment Division. The ESL shall be obtained in writing prior to the use of the new substance.

(10) The cumulative net annual emission increases of the following categories of air contaminants from multiple uses of this section shall not exceed the following values:

(A) particulate matter - five tons per year (tpy);

(B) volatile organic compounds (VOCs) - 15 tpy;

(C) non-VOCs - five tpy;

(D) acids/bases - ten tpy;

(E) any other air contaminant - five tpy;

(F) total of all emission increases - 25 tpy.

(11) The applicable ground-level concentration limits in Chapters 111, 112, and 113 of this title (relating to Control of Air Pollution from Visible Emissions and Particulate Matter; Sulfur Compounds; and Toxic Materials) shall not be exceeded.

(12) Within 30 days of use of this section, the permittee shall maintain documentation that demonstrates all applicable conditions of this section were satisfied. The documentation shall be made available to the commission upon request. Adopted August 9, 2000 Effective September 4, 2000

Section 106.226. Paints, Varnishes, Ink, and Other Coating Manufacturing.

Coating manufacturing operations including raw material storage, weighing, mixing, milling, grinding, thinning, and packaging are permitted by rule, provided the conditions of this section are met. Coating manufacturing is defined as combining ingredients that are manufactured off-site to make paints, varnishes, sealants, stains, adhesives, inks, pigments, maskants, and paint strippers, etc. Resin manufacturing is not permitted by rule under this section.

(1) Materials usage shall not exceed the following rates:

(A) 345,000 gallons per year of solvent for all operations at a coating manufacturing site; and

(B) 200,000 pounds of dry powder per year for all operations at a coating manufacturing site.

(2) Operations involving powders which contain more than 0.1% by weight of chromium, cadmium, asbestos, lead, arsenic, cobalt, or strontium are not authorized by this section.

(3) The following conditions must be met to prevent and control emissions.

(A) There shall be no visible emissions from any emission point.

(B) Bags or sacks of dry powders shall be opened within an enclosed bag slitter or within an enclosed area.

(C) Material transfer, storage operations, or other similar operations shall be conducted in enclosed or covered containers which are opened only as necessary for transfer of ingredients.

(D) Mixing, milling, packaging, and filling operations shall be conducted under a hood or within an enclosure designed to capture emissions, which shall then be vented externally or through a carbon adsorption system.

(E) Operations which involve dry powders or pigments shall be vented through a filter.

(F) Any spills of dry powders or solvents shall be cleaned up promptly in a manner designed to control emissions.

(G) Waste materials shall be stored in covered containers and disposed of properly.

(4) Emissions from any operation which are vented externally shall be exhausted using forced air through a stack with an unobstructed vertical discharge. The stack must be, at a minimum, four feet above the peak of the roofline.

(5) The owner or operator of the facility shall keep records of all liquid and solid material usage rates on a monthly basis to demonstrate compliance with paragraph (1) of this section. The usage data shall be maintained for the most recent 24-month period. Adopted August 9, 2000 Effective September 4, 2000

Section 106.227. Soldering, Brazing, Welding.

Brazing, soldering, or welding equipment, except those which emit 0.6 ton per year or more of lead, are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.229. Textile Dyeing and Stripping Equipment.

Equipment used exclusively for the dyeing or stripping of textiles is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.231. Manufacturing, Refinishing, and Restoring Wood Products.

Facilities, including drying or curing ovens, and hand-held or manually operated equipment, used for manufacturing, refinishing, and/or restoring wood products that meet the following requirements are permitted by rule.

(1) If a pneumatic sawdust collection system is used, it must be followed by a filter with no visible emissions.

(2) Waste materials shall be stored and disposed of properly. There shall be no visible emissions leaving the property.

(3) If the total coatings, solvents, and stripping agents used exceeds six gallons per day (gpd) or one gpd of methylene chloride, the following requirements must be met:

(A) the application area must be exhausted using forced air through a stack with an unobstructed vertical discharge above the peak of the roof line; and

(B) in addition to the requirements of subparagraph (A) of this paragraph, if application is made by spraying, the application area must also be vented through a filter system with a minimum particulate removal efficiency of 95%.

(4) Purchase receipts for total coatings, solvents, and stripping agents for the most recent 24 months must be kept on site and be made immediately available upon request of personnel from the agency or any other air pollution control agency having jurisdiction. If the total materials purchased exceeds 550 gallons in any one month, records of the amount of materials used per month must be kept on-site to demonstrate that total emissions do not exceed 25 tons per year in any consecutive 12 months. Adopted August 9, 2000 Effective September 4, 2000

Subchapter J: Food Preparation and Processing

Section 106.241 - 106.245

Effective September 4, 2000

Section 106.241. Slaughterhouses.

Any facility where animals or poultry are slaughtered and prepared for human consumption provided that waste products such as blood, offal, and feathers are stored in such a manner as to prevent the creation of a nuisance condition and these waste products are removed from the premises daily or stored under refrigeration until removed are permitted by rule. In addition, areas used to hold animals or poultry for slaughter shall be kept dry and clean to control odors. Adopted August 9, 2000 Effective September 4, 2000

Section 106.242. Food Preparation.

Equipment used in eating establishments for the purpose of preparing food for human consumption is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.243. Smokehouses.

Smokehouses in which the maximum horizontal inside cross-sectional area does not exceed 100 square feet are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.244. Ovens, Barbecue Pits, and Cookers.

Ovens, mixers, blenders, barbecue pits, and cookers if the products are edible and intended for human consumption are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.245. Ethyl Alcohol Facilities.

Ethyl alcohol (ethanol) production facilities having a capacity of less than 200 gallons of ethanol per day when natural gas, liquid petroleum gas, or Number 2 fuel oil is used to supply heat for cooking and distillation are permitted by rule. Drying of spent (distillers) grain and water stillage is not authorized under this section. Adopted August 9, 2000 Effective September 4, 2000

Subchapter K: General

Section 106.261 - 106.266

Effective November 1, 2003

Section 106.261. Facilities (Emission Limitations).

(a) Except as specified under subsection (b) of this section, facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) The facilities or changes shall be located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

(2) Total new or increased emissions, including fugitives, shall not exceed 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials: acetylene, argon, butane, crude oil, refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene, carbon monoxide, cyclohexane, cyclohexene, cyclopentane, ethyl acetate, ethanol, ethyl ether, ethylene, fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116, helium, isohexane, isopropyl alcohol, methyl acetylene, methyl chloroform, methyl cyclohexane, neon, nonane, oxides of nitrogen, propane, propyl alcohol, propylene, propyl ether, sulfur dioxide, alumina, calcium carbonate, calcium silicate, cellulose fiber, cement dust, emery dust, glycerin mist, gypsum, iron oxide dust, kaolin, limestone, magnesite, marble, pentaerythritol, plaster of paris, silicon, silicon carbide, starch, sucrose, zinc stearate, or zinc oxide.

(3) Total new or increased emissions, including fugitives, shall not exceed 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m3) as listed and referenced in Table 262 of §106.262 of this title (relating to Facilities (Emission and Distance Limitations)) or of any other chemical not listed or referenced in Table 262. Emissions of a chemical with a limit value of less than 200 mg/m3 are not allowed under this section.

(4) For physical changes or modifications to existing facilities, there shall be no changes to or additions of any air pollution abatement equipment.

(5) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

(6) For emission increases of five tons per year or greater, notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

(7) For emission increases of less than five tons per year, notification must be provided using either:

(A) Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any; or

(B) Form PI-7 by March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year. This annual notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

(b) The following are not authorized under this section:

(1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and

(2) any change to any facility authorized under another section of this chapter or authorized under a standard permit. Adopted October 8, 2003 Effective November 1, 2003

Section 106.262. Facilities (Emission and Distance Limitations).

(a) Facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) Emission points associated with the facilities or changes shall be located at least 100 feet from any off-plant receptor. Off-plant receptor means any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

(2) New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K and the following table.

D, Feet	K
100	326
200	200
300	139
400	104
500	81
600	65
700	54
800	46
900	39
1,000	34
2,000	14
3,000 or more	8

E = maximum allowable hourly emission, and never to exceed 6 pounds per hour.
L = value as listed or referenced in Table 262
K = value from the table on this page. (interpolate intermediate values)
D = distance to the nearest off-plant receptor.

Table 262

Limit Values (L) For Use with Exemptions from Permitting §106.262

The values are not to be interpreted as acceptable health effects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Acetone	590.
Acetaldehyde	9.
Acetone Cyanohydrin	4.
Acetonitrile	34.
Acetylene	2662.

Compound	Limit (L) Milligrams Per Cubic Meter
N-Amyl Acetate	2.7
Sec-Amyl Acetate	1.1
Benzene	3.
Beryllium and Compounds	0.0005
Boron Trifluoride, as HF	0.5
Butyl Alcohol, -	76.
Butyl Acrylate	19.
Butyl Chromate	0.01
Butyl Glycidyl Ether	30.
Butyl Mercaptan	0.3
Butyraldehyde	1.4
Butyric Acid	1.8
Butyronitrile	22.
Carbon Tetrachloride	12.
Chloroform	10.
Chlorophenol	0.2
Chloroprene	3.6
Chromic Acid	0.01
Chromium Metal, Chromium II and III Compounds	0.1
Chromium VI Compounds	0.01
Coal Tar Pitch Volatiles	0.1
Creosote	0.1
Cresol	0.5
Cumene	50.
Dicyclopentadiene	3.1
Diethylaminoethanol	5.5
Diisobutyl Ketone	63.9
Dimethyl Aniline	6.4
Dioxane	3.6
Dipropylamine	8.4

Compound	Limit (L) Milligrams Per Cubic Meter
Ethyl Acrylate	0.5
Ethylene Dibromide	0.38
Ethylene Glycol	26.
Ethylene Glycol Dinitrate	0.1
Ethylidene-2-norbornene, 5-	7.
Ethyl Mercaptan	0.08
Ethyl Sulfide	1.6
Glycolonitrile	5.
Halothane	16.
Heptane	350.
Hexanediamine, 1,6-	0.32
Hydrogen Chloride	1.
Hydrogen Fluoride	0.5
Hydrogen Sulfide	1.1
Isoamyl Acetate	133.
Isoamyl Alcohol	15.
Isobutyronitrile	22.
Kepone	0.001
Kerosene	100.
Malononitrile	8
Mesityl Oxide	40.
Methyl Acrylate	5.8
Methyl Amyl Ketone	9.4
Methyl-t-butyl ether	45.
Methyl Butyl Ketone	4.
Methyl Disulfide	2.2
Methylenebis (2-chloroaniline) (MOCA)	0.003
Methylene Chloride	26.
Methyl Isoamyl Ketone	5.6
Methyl Mercaptan	0.2

Compound	Limit (L) Milligrams Per Cubic Meter
Methyl Methacrylate	34.
Methyl Propyl Ketone	530.
Methyl Sulfide	0.3
Mineral Spirits	350.
Naphtha	350.
Nickel, Inorganic Compounds	0.015
Nitroglycerine	0.1
Nitropropane	5.
Octane	350.
Parathion	0.05
Pentane	350.
Perchloroethylene	33.5
Petroleum Ether	350.
Phenyl Mercaptan	0.4
Propionitrile	14.
Propyl Acetate	62.6
Propylene Oxide	20.
Propyl Mercaptan	0.23
Silica-amorphous- precipitated, silica gel	4.
Silicon Carbide	4.
Stoddard Solvent	350.
Styrene	21.
Succinonitrile	20.
Tolidine	0.02
Trichloroethylene	135.
Trimethylamine	0.1
Valeric Acid	0.34
Vinyl Acetate	15.
Vinyl Chloride	2.

Note: The time weighted average (TWA) Threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a “C”) published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.

(3) Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, D values, and a description of pollution control equipment, if any.

(4) The facilities in which the following chemicals will be handled shall be located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor and the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171- 178): acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phosgene, phosphine, phosphorus trichloride, selenium hexafluoride, stibine, liquefied sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride. Containers of these chemicals may not be vented or opened directly to the atmosphere at any time.

(5) For physical changes or modifications to existing facilities, there shall be no changes or additions of air pollution abatement equipment.

(6) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

(b) The following are not authorized under this section except as noted in subsection (c) of this section:

(1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and

(2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.

(c) If a facility has been authorized under another section of this chapter or under a standard permit, subsection (a) (2) and (3) of this section may be used to qualify the use of other chemicals at the facility. Adopted October 8, 2003 Effective November 1, 2003

Section 106.263. Routine Maintenance, Start-up and Shutdown of Facilities, and Temporary Maintenance Facilities.

(a) This section authorizes routine maintenance, start-up and shutdown of facilities, and specific temporary maintenance facilities except as specified in subsection (b) of this section.

(b) The following are not authorized under this section:

(1) construction of any new or modified permanent facility;

(2) reconstruction under 40 Code of Federal Regulations, Part 60, New Source Performance Standards, Subpart A, §60.15 (relating to Reconstruction);

(3) physical or operational changes to a facility which increase capacity or production beyond previously existing performance levels or results in the emission of a new air contaminant;

(4) facilities and sources that are de minimis as allowed in §116.119 of this title (relating to De Minimis Facilities or Sources);

(5) piping fugitive emissions authorized under a permit or another permit by rule; and

(6) any emissions associated with operations claimed under the following sections of this chapter:

(A) §106.231 of this title (relating to Manufacturing, Refinishing, and Restoring Wood Products);

(B) §106.351 of this title (relating to Salt Water Disposal (Petroleum));

(C) §106.352 of this title (relating to Oil and Gas Production Facilities);

(D) §106.353 of this title (relating to Temporary Oil and Gas Facilities);

(E) §106.355 of this title (relating to Pipeline Metering, Purging, and Maintenance);

(F) §106.392 of this title (relating to Thermoset Resin Facilities);

(G) §106.418 of this title (relating to Printing Presses);

(H) §106.433 of this title (relating to Surface Coat Facility);

(I) §106.435 of this title (relating to Classic or Antique Automobile Restoration Facility);

(J) §106.436 of this title (relating to Auto Body Refinishing Facility); and

(K) §106.512 of this title (relating to Stationary Engines and Turbines).

(c) The following activities and facilities are authorized under this section:

(1) routine maintenance activities which are those that are planned and predictable and ensure the continuous normal operation of a facility or control device or return a facility or control device to normal operating conditions;

(2) routine start-ups and shutdowns which are those that are planned and predictable; and

(3) temporary maintenance facilities which are constructed in conjunction with maintenance activities. Temporary maintenance facilities include only the following:

(A) facilities used for abrasive blasting, surface preparation, and surface coating on immovable fixed structures;

(B) facilities used for testing and repair of engines and turbines;

(C) compressors, pumps, or engines and associated pipes, valves, flanges, and connections, not operating as a replacement for an existing authorized unit;

(D) flares, vapor combustors, catalytic oxidizers, thermal oxidizers, carbon adsorption units, and other control devices used to control vent gases released during the degassing of immovable, fixed process vessels, storage vessels, and associated piping to atmospheric pressure, plus cleaning apparatus that will have or cause emissions;

(E) temporary piping required to bypass a unit or pipeline section undergoing maintenance; and

(F) liquid or gas-fired vaporizers used for the purpose of vaporizing inert gas.

(d) Emissions from routine maintenance (excluding temporary maintenance facilities), startup, and shutdown are:

(1) limited to 24-hour emission totals which are less than the reportable quantities defined in §101.1(82) of this title (relating to Definitions) for individual occurrences;

(2) required to be authorized under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) or comply with §101.7 and §101.11 of this title (relating to Maintenance, Start-up and Shutdown Reporting, Recordkeeping, and Operational Requirements, and Demonstrations) if unable to comply with paragraph (1) of this subsection or subsection (f) of this section; and

(3) required to comply with subsection (f) of this section.

(e) In addition to the emission limits in subsection (f) of this section, specific temporary maintenance facilities as listed in subsection (c)(3) of this section must meet the following additional requirements:

(1) flares or vapor combustors must meet the requirements of §106.492(1) and (2)(C) of this title (relating to Flares);

(2) catalytic oxidizers must meet the requirements of §106.533(5)(C) of this title (relating to Water and Soil Remediation);

(3) thermal oxidizers must meet the requirements of §106.493(2) and (3) of this title (relating to Direct Flame Incinerators);

(4) carbon adsorption systems must meet the requirements of §106.533(5)(D) of this title;

(5) other control devices used to control vents caused by the degassing of process vessels, storage vessels, and associated piping must have an overall vapor collection and destruction or removal efficiency of at least 90%;

(6) any temporary maintenance facility that cannot meet all applicable limitations of this section must obtain authorization under Chapter 116 of this title; and

(7) temporary maintenance facilities may not operate at a given location for longer than 180 consecutive days or the completion of a single project unless the facility is registered. If a single project requires more than 180 consecutive days to complete, the facilities must be registered using a PI-7 Form, along with documentation on the project. Registration and supporting documentation shall be submitted upon determining the length of the project will exceed 180 days, but no later than 180 days after the project begins.

(f) All emissions covered by this section are limited to, collectively and cumulatively, less than any applicable emission limit under §106.4(a)(1) - (3) of this title (relating to Requirements for Permitting by Rule) in any rolling 12-month period.

(g) Facility owners or operators must retain records containing sufficient information to demonstrate compliance with this section and must include information listed in paragraphs (1) - (4) of this subsection. Documentation must be separate and distinct from records maintained for any other air authorization. Records must identify the following for all maintenance, start-up, or shutdown activities and temporary maintenance facilities:

(1) the type and reason for the activity or facility construction;

(2) the processes and equipment involved;

(3) the date, time, and duration of the activity or facility operation; and

(4) the air contaminants and amounts which are emitted as a result of the activity or facility operation. Adopted October 10, 2001 Effective November 1, 2001

Section 106.264. Replacements of Facilities.

A facility which replaces an existing facility is permitted by rule provided that the following conditions of this section are satisfied:

(1) the replacement facility functions in the same or similar manner as the facility to be replaced;

(2) the emissions from the replacement facility are not more than nor have different characteristics than those from the facility to be replaced;

(3) the emissions from the replacement facility will not exceed 25 tons per year of any air contaminant;

(4) the physical location of the replacement facility is the same or immediately adjacent to the facility being replaced;

(5) there will be no increase in capacity, production rate, or throughput as a result of the replacement;

(6) notwithstanding the provisions of paragraph (3) of this section, the emissions from the replacement facility will not contain any compounds (other than carbon monoxide, nitrogen oxide, or sulfur dioxide) listed or proposed to be listed as hazardous constituents in 40 Code of Federal Regulations 261, Appendix VIII;

(7) notification of the replacement is provided to the executive director within ten days following installation of the replacement facility. Adopted August 9, 2000 Effective September 4, 2000

Section 106.265. Hand-held and Manually Operated Machines.

Hand-held or manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning of ceramic art work, ceramic precision parts, leather,

metals, plastics, fiber board, masonry, carbon, glass, graphite, or wood is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.266. Vacuum Cleaning Systems.

Vacuum cleaning systems used exclusively for industrial, commercial, or residential housekeeping purposes are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Subchapter L: Feed, Fiber, and Fertilizer

Division 1: Feed

Section 106.281, Section 106.283

Effective October 7, 2010

Section 106.281. Feed Milling.

Modifications to feed milling operations which satisfy the following conditions of this section are permitted by rule.

(1) In conjunction with the installation of additional grain or feed storage silos, including bins used for loading out finished feed, all materials shall be transported in a closed conveying system when handled mechanically or pneumatically. Exhaust air to the atmosphere shall be vented through a fabric filter having a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical cleaning or 7.0 ft/min with automatic air cleaning.

(2) In conjunction with the installation of a pellet mill/pellet cooler system, the air from the pellet cooler shall be vented through a high efficiency cyclone collector which has a cone length at least twice the diameter of the cyclone. Adopted August 9, 2000 Effective September 4, 2000

Section 106.283. Grain Handling, Storage, and Drying.

Any grain handling, storage, and drying facility which meets paragraphs (1) or (2) of this section is permitted by rule.

(1) The facility is in noncommercial use only--that is, used only to handle, dry, and/or store grain produced by the owner(s) of the facility if the following conditions are satisfied:

(A) the total storage capacity does not exceed 750,000 bushels;

(B) the grain handling capacity does not exceed 4,000 bushels per hour;

(C) the facility is located at least 500 feet from any recreational area or residence or business not occupied or used solely by the owner of the facility.

(2) The installation of additional grain storage capacity which satisfies the following conditions:

(A) there shall be no increase in hourly grain handling capacity;

(B) existing grain receiving and loadout facilities are utilized;

(C) grain shall be conveyed by closed conveying systems and air suction shall not be pulled on any conveying unit;

(D) written site approval shall be received from the executive director before construction begins for facilities utilizing existing grain receiving facilities when new gravity or auger loadout systems are to be installed. Adopted September 15, 2010 Effective October 7, 2010

Subchapter L: Feed, Fiber, and Fertilizer

Division 3: Fertilizer

Section 106.301. Aqueous Fertilizer Storage.

All aqueous fertilizer storage tanks are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Subchapter M: Metallurgy

Section 106.311, 106.313 - 106.322

Effective September 3, 2009

Section 106.311. Crucible or Pot Furnace.

Crucible or pot furnaces with a brim full capacity of less than 450 cubic inches of any molten metal are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.313. Tumblers for Cleaning or Deburring Metal.

All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 pounds or less are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.314. Shell Core and Mold Machines.

Shell core and shell mold manufacturing machines are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.315. Sand or Investment Molds.

Sand or investment molds with a capacity of 100 pounds or less used for the casting of metals are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.316. Metal Inspection.

Equipment used for inspection of metal products is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.317. Miscellaneous Metal Equipment.

Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.318. Die Casting Machines.

Die casting machines are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.319. Foundry Sand Mold Forming Equipment.

Foundry sand mold forming equipment to which no heat is applied is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.320. Miscellaneous Metallic Treatment.

Electrically heated or sweet natural gas or liquid petroleum gas fueled equipment used exclusively for heat treating, soaking, case hardening, or surface conditioning of metal objects, such as carbonizing, cyaniding, nitriding, carbon nitriding, siliconizing, or diffusion treating is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.321. Metal Melting and Holding Furnaces.

Metal melting and holding furnaces as specified in this section are permitted by rule.

(1) crucible furnaces, pot furnaces, or induction furnaces with a holding capacity of 1,000 pounds or less, with the following limitations:

(A) no smelting, reduction, sweating, metal separation, or distilling is conducted;

(B) in ferrous melting furnaces where gray iron or steel is melted:

(i) ductile iron is produced only when emissions are captured by a vent hood and filtered or within a crucible with a lid which allows no visible emissions; and

(ii) the furnace charge is free of oil, grease, and paint;

(C) in nonferrous melting furnaces, only the following metals are melted, poured, or held in a molten state:

(i) aluminum or any alloy containing over 50% aluminum;

(ii) magnesium or any alloy containing over 50% magnesium;

(iii) tin or any alloy containing over 50% tin;

(iv) zinc or any alloy containing over 50% zinc;

(v) copper, brass, or bronze; or

(vi) precious metals;

(D) no lead, leaded brass, leaded bronze, or manganese bronze is melted, poured, or held in a molten state;

(2) aluminum melting or holding furnaces with a holding capacity of 2,000 pounds or less that melt only clean aluminum ingots or pigs and in which no refining, smelting, metal separation, sweating, distilling, or fluxing with chlorine bearing gases is performed. Adopted August 9, 2000 Effective September 4, 2000

Section 106.322. Furnaces to Reclaim Aluminum or Copper.

Dry hearth reverberatory type holding chamber aluminum or copper metal reclamation/sweat furnaces in which no fluxing, degassing, or refining is conducted, which operate according to the following conditions and limitations of this section are permitted by rule.

(1) Scrap metal charges shall consist primarily of copper or aluminum metal. Operation of the furnace for reclamation or lead, tin, zinc, or magnesium metals is prohibited.

(2) The maximum furnace charging rate shall be 2,000 pounds per hour or less.

(3) The furnace charge door shall remain closed except during charging and furnace cleaning operations.

(4) The furnace shall be equipped with an afterburner which will provide a minimum retention time of 0.1 second at a minimum temperature of 1,300 degrees Fahrenheit for all furnace exhaust gases.

(5) The incineration of any insulated wire or cable containing chlorine compounds in the insulation, such as polyvinyl chloride insulation, is expressly prohibite(6) The owner or operator of the furnace shall initiate and maintain a program of furnace operator training in the recognition of chlorine-bearing wire or cable insulation and shall demonstrate, upon request by the executive director, acceptable proficiency in the recognition of chlorine-bearing wire or cable insulation such as polyvinyl chloride insulation.

(7) Fuel for the furnace shall be sweet natural gas as defined in Chapter 101 of this title (relating to General Air Quality Rules) or liquid petroleum gas, diesel, or Number 2 fuel oil.

(8) Before construction begins, the facility shall be registered with the commission’s Office of Permitting, Remediation, and Registration in Austin using Form PI-7. Adopted August 9, 2000 Effective September 4, 2000

Subchapter N: Mixers, Blenders, and Packaging

Section 106.331 - 106.333

Effective September 4, 2000

Section 106.331. Cosmetics Packaging and Pharmaceutical Packaging and Coating.

Equipment used exclusively to package pharmaceuticals and cosmetics or to coat pharmaceutical tablets is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.332. Chlorine Repackaging.

Facilities that repackage chlorine are permitted by rule, provided all the following conditions of this section are satisfied:

(1) the repackaging shall be in United States Department of Transportation approved chlorine cylinders not exceeding one ton in capacity;

(2) there shall be no more than two tons of chlorine on the property at any time;

(3) all handling of chlorine shall be in accordance with applicable Chlorine Institute Guidelines;

(4) the facilities shall be located no closer than 300 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located;

(5) the repackaging system shall be operated under vacuum at all times and all venting of lines and cylinders shall be routed to a caustic scrubbing system that prevents release of chlorine to the atmosphere during all operating and maintenance activities. When the scrubbing system is not operating properly, no chlorine shall be repackaged;

(6) chlorine gas shall not be vented directly to the atmosphere under any circumstances.

Adopted August 9, 2000 Effective September 4, 2000

Section 106.333. Water-based Adhesive Mixers.

Equipment used exclusively for the mixing and blending of materials at ambient temperature to make water-based adhesives is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Subchapter O: Oil and Gas

Section 106.351 - 106.355, 106.359

Effective September 10, 2013

Section 106.351. Salt Water Disposal (Petroleum).

Salt water disposal facilities used to handle aqueous liquid wastes from petroleum production operations and water injection facilities are permitted by rule, provided that the following conditions of this section are met.

(1) Any facility processing salt water which emits a sour gas shall be located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located.

(2) Any open storage of salt water shall be operated in such a manner as to prevent the occurrence of a nuisance condition off-property.

(3) All plant roads and truck loading and unloading areas must be operated and/or maintained as necessary to prevent dust emissions from the property which would cause or contribute to a nuisance condition. Appropriate operating activities may include reduction of speed of vehicles, use of alternate routes, and covering of dust-producing loads being hauled. Appropriate maintenance activities may include watering, treatment with dust suppressant chemicals, oiling, paving, and cleaning dust-producing surfaces.

(4) Before construction of the facility begins under this section, registration of the permit by rule shall be submitted to the commission’s Office of Permitting, Remediation, and Registration in Austin using Form PI-7, unless one of the following exceptions applies:

(A) all delivery of salt water to the site takes place through enclosed hoses or lines, and all storage and handling of salt water takes place in enclosed conduits, vessels, and storage, so that the salt water is not exposed to the atmosphere; or

(B) delivery of salt water from outside a site to all facilities at a site in any calendar day does not exceed 540,000 gallons. Adopted August 9, 2000 Effective September 4, 2000

Section 106.352. Oil and Gas Handling and Production Facilities.

(a) Applicability. This section applies to all stationary facilities, or groups of facilities, at a site which handle gases and liquids associated with the production, conditioning, processing, and pipeline transfer of fluids or gases found in geologic formations on or beneath the earth's surface including, but not limited to, crude oil, natural gas, condensate, and produced water with the following conditions:

(1) The requirements in subsections (a) - (k) of this section are applicable only for new projects and related facilities located in the Barnett Shale (Cooke, Dallas, Denton, Ellis, Erath, Hill, Hood, Jack, Johnson, Montague, Palo Pinto, Parker, Somervell, Tarrant, and Wise Counties) on or after April 1, 2011. For all other new projects and related facilities in all other counties of the state, subsection (l) of this section is applicable.

(2) Only one Oil and Gas Handling and Production Facilities permit by rule (PBR) for an oil and gas site (OGS) may be claimed or registered for each combination of dependent facilities and authorizes all facilities in sweet or sour service. This section may not be used if operationally dependent facilities are authorized by the Air Quality Standard Permit for Oil and Gas Sites, or a permit under §116.111 of this title (relating to General Application). Existing authorized facilities, or groups of facilities, at an OGS under this section which are not changing certified character or quantity of emissions must only meet subsections (i) and (k) of this section (protectiveness review and planned maintenance, startup, and shutdown (MSS) requirements) and otherwise retain their existing authorization. Except for planned MSS activities which must meet the requirements of subsection (i) of this section, any combination of dependent facilities with a permit under §116.111 of this title cannot also claim this section for any new facility, or changes to an existing facility, which handles (or is related to the processing of) crude oil, condensate, natural gas, or any other petroleum raw material, product, or by-product.

(3) This section does not relieve the owner or operator from complying with any other applicable provision of the Texas Health and Safety Code, Texas Water Code, rules of the Texas Commission on Environmental Quality (TCEQ), or any additional local, state, or federal laws or regulations. Emissions that exceed the limits in this section are not authorized and are violations.

(4) Emissions from upsets, emergencies, or malfunctions are not authorized by this section. This section does not regulate methane, ethane, or carbon dioxide.

(b) Definitions and Scope.

(1) Facility is a discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source. Stationary sources associated with a mine, quarry, drilling, or a well test lasting less than 72 hours are not considered facilities.

(2) Receptor includes any building which is in use as a single or multi-family residence, school, day-care, hospital, business, or place of worship at the time this section is registered. A residence is a structure primarily used as a permanent dwelling. A business is a structure that is occupied for at least eight hours a day, five days a week, and does not include businesses who are handling or processing materials as described in subsection (a) of this section. This term does not include structures occupied or used solely by the owner or operator of the OGS facility, or the mineral rights owner of the property upon which the OGS facility is located. All measurements of distance to receptors shall be taken from the emission release point at the OGS facility that is nearest to the point on the building that is nearest to the OGS facility.

(3) An OGS is defined as all facilities which meet each of the following:

(A) Located on contiguous or adjacent properties;

(B) Under common control of the same person (or persons under common control); and

(C) Designated under same two digit standard industrial classification (SIC) codes.

(4) For purposes of determining applicability of Chapter 122 of this title (relating to Federal Operating Permits Program), the definitions of §122.10 of this title (relating to General Definitions), apply.

(5) A project under this section is defined as the following and must meet all requirements of this section prior to construction or implementation of changes:

(A) Any new facility or new group of operationally dependent facilities at an OGS;

(B) Physical changes to existing authorized facilities or group of facilities at an OGS which increase the potential to emit over previously certified emission limits; or

(C) Operational changes to existing authorized facilities or group of facilities at an OGS which increase the potential to emit over previously certified emission limits.

(6) For purposes of registration under this section, the following facilities shall be included:

(A) All facilities or groups of facilities at an OGS which are operationally dependent on each other;

(B) Facilities must be located within a 1/4 mile of a project emission point, vent, or fugitive component, except for those components excluded in subparagraph (C) of this paragraph;

(C) If piping or fugitive components are the only connection between facilities and the distance between facilities exceeds 1/4 mile, then the facilities are considered separate for purposes of this registration;

(D) The boundaries of the registration become fixed at the time this section is claimed and registered. No individual facility may be authorized under more than one registration;

(E) Any facility or group of facilities authorized under an existing PBR registration which is operationally dependent on a project must be revised to incorporate the project. Existing authorized facilities, or group of facilities, at an OGS under this section which are not changing certified character or quantity of emissions must only meet subsections (i) and (k) of this section (the protectiveness review and planned MSS requirements) and otherwise retain their existing authorization; and

(F) All facilities at an OGS registered under this section must collectively emit less than or equal to 250 tons per year (tpy) of nitrogen oxides (NO_X) or carbon monoxide (CO); 15 tpy of particulate matter with less than 10 microns (PM_{10}); 10 tpy of particulate matter less than 2.5 microns ($PM_{2.5}$); and 25 tpy of volatile organic compounds (VOC), sulfur dioxide (SO_2), hydrogen sulfide (H_2S), or any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen.

(7) For purposes of all previous claims of this section (or any previous version of this section) where no project is occurring:

(A) existing authorized facilities, or group of facilities, at an OGS must meet only subsection (i) of this section no later than January 5, 2012; and

(B) submit a notification in accordance with subsection (f) of this section no later than January 5, 2015.

(8) For purposes of ensuring protection of public health and welfare and demonstrating compliance with applicable ambient air standards and effects screening levels (ESLs), the impacts analysis as specified in subsection (k) of this section must be completed.

(A) All impacts analysis must be done on a contaminant-by-contaminant basis for any net project increases. If a claim under this section is only for planned MSS under subsection (i) of this section, the analysis shall evaluate planned MSS scenarios only.

(B) Hourly and annual emissions shall be limited based on the most stringent of subsections (g), (h), or (k) of this section.

(c) Authorized Facilities, Changes, and Activities.

(1) For existing OGS which are authorized by previous versions of this section.

(A) A project requires registration unless otherwise specified.

(B) The following projects do not require registration, but must comply with best management practices (BMP) in subsection (e) of this section, compliance demonstrations in subsections (i) and (j) of this section, and must be incorporated into the registration at the next revision or certification:

(i) Addition of any piping, fugitive components, any other new facilities, that increase actual emissions less than or equal to 1.0 tpy VOC, 5.0 tpy NO_X, 0.01 tpy benzene, and 0.05 tpy H_2S over a rolling 12-month period;

(ii) Changes to any existing facilities that increase certified emissions less than or equal to 1.0 tpy VOC, 5.0 tpy NO_X, 0.01 tpy benzene, and 0.05 tpy H2S over a rolling 12-month period;

(iii) Total increases over a rolling 60-month period of time that are less than or equal to 5.0 tpy VOC or NO_X, 0.05 tpy benzene, or 0.1 tpy H_2S;

(iv) Addition of any new engine rated less than 100 horsepower (hp); or

(v) Replacement of any facility if the new facility does not increase the previous actual or certified emissions.

(C) For facilities authorized under §116.111 of this title, only records of MSS as specified in this section must be kept and this section may only be used for planned MSS for the facility types specified in this section.

(2) All authorizations under this section shall meet the following:

(A) new, changed, or replacement facilities shall not exceed the thresholds for major source or major modification as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions), and in Federal Clean Air Act, §112(g) or §112(j);

(B) all facilities shall comply with all applicable 40 Code of Federal Regulations (CFR), Parts 60, 61, and 63 requirements for New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Maximum Achievable Control Technology (MACT); and

(C) all facilities shall comply with all applicable requirements of Chapters 111, of this title (relating to Control of Air Pollution from Visible Emissions and Particulate Matter), 112 of this title (relating to Control of Air Pollution from Sulfur Compounds), 113 of this title (relating to Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants), 115 of this title (relating to Control of Air Pollution from Volatile Organic Compounds), and 117 of this title (relating to Control of Air Pollution from Nitrogen Compounds).

(3) To be eligible for this PBR, in addition to the requirements found in §106.4 of this title (relating to Requirements for Permitting by Rule), an applicant:

(A) shall meet all applicable requirements as set forth in this section;

(B) shall not misrepresent or fail to fully disclose all relevant facts in obtaining the permit; and

(C) shall not be indebted to the state for failure to make payment of penalties or taxes imposed by the statutes or rules within the commission's jurisdiction.

(D) Notwithstanding any limitations in §50.131(c) of this title (relating to Purpose and Applicability), a person may file a Motion to Overturn under the procedures set forth in §50.139 of this title (relating to Motion to Overturn Executive Director's Decision) in order to seek commission review of any denial of a PBR for failing to meet the conditions set forth in this paragraph.

(4) This paragraph covers groups of facilities typically associated with wellheads, pump-jacks, Christmas trees, metering stations, and other similar facilities handling or containing crude oil, condensate, natural gas, or a mixture of these materials (examples include, but are not limited to, stripper/marginal wells producing up to 10 barrels of oil equivalent per day, natural gas up to 60,000 cubic feet per day, or high pressure gas wells). The following projects and facilities are authorized and must only comply with subsection (e)(1) and (2) of this section, and applicable portions of subsection (j) of this section:

(A) Claims under this paragraph must include all facilities or groups of facilities at an OGS which are operationally dependent on each other and located within a 1/4 mile of a project emission point, vent, or fugitive component. If piping or fugitive components are the only connection between facilities and the distance between facilities exceeds 1/4 mile, then the facilities are considered separate for purposes of this paragraph.

(B) A site-wide combination of engines which meet the following:

(i) up to 450 hp if fueled by sweet gas;

(ii) up to 100 hp if fueled by sour gas containing not more than 10,000 parts per million by weight (ppmw) H_2S; or

(iii) up to 20 hp fueled by sour gas containing more than 10,000 ppmw but not more than 50,000 ppmw H_2S.

(C) For any one of the following combinations of facilities:

(i) only piping and fugitive components handling natural gas up to a maximum of 135 valves, 135 open-ended lines, any combination of connectors and flanges up to 2,000 components, and 135 component types otherwise not specified; or

(ii) only piping and fugitive components handling liquids or gas up to a maximum of 25 valves, 25 open-ended lines, any combination of connectors and flanges up to 2,000 components, and 25 component types otherwise not specified;

(iii) only piping and fugitive components handling liquids or gas up to a maximum of four pump seals; four open-ended lines; and any combination of valves, flanges, and connectors up to 225 components; or

(iv) separators used solely to separate crude oil, condensate, and natural gas (which are routed directly to a sales pipeline) from produced water. Tanks used and handling only produced water up to 1,205 barrels per day. All associated piping and fugitive components up to a maximum of five pump seals; five open-ended lines; and any combination of valves, flanges, and connectors totaling 150 components in VOC service and 500 components in water service; or

(v) separators used solely to separate crude oil, condensate, and natural gas (which are routed directly to a sales pipeline) from produced water. Tanks used and handling only produced water up to 580 barrels per day. All associated piping and fugitive components up to a maximum of two pump seals; two open-ended lines; and any combination of valves, flanges, and connectors totaling 230 components in VOC service and 500 components in water service.

(d) Facilities and Exclusions.

(1) Only the following specific facilities and groups of facilities have been evaluated for this PBR, along with supporting infrastructure equipment and facilities, and may be included in a registration for this section:

(A) fugitive components, including valves, pressure relief valves, pipe flanges and connectors, pumps, compressors, stuffing boxes, instrumentation and meters, natural gas driven pneumatic pumps, and other similar devices with seals that separate process and waste material from the atmosphere and the associated piping;

(B) separators, including all gas, oil, and water physical separation units;

(C) treatment and processing equipment, including heater-treaters, methanol injection, glycol dehydrators, molecular or mole sieves, amine sweeteners, H2S scavenger chemical reaction vessels for sulfur removal, and iron sponge units;

(D) cooling towers and associated heat exchangers;

(E) gas recovery units, including cryogenic expansion, absorption, adsorption, heat exchangers and refrigeration units;

(F) combustion units, including engines, turbines, boilers, reboilers, and heaters;

(G) storage tanks for crude oil, condensate, produced water, fuels, treatment chemicals, slop and sump oils, and pressure tanks with liquefied petroleum gases;

(H) surface support facilities associated with underground storage of gas or liquids;

(I) truck loading equipment;

(J) control equipment, including vapor recovery systems, glycol and amine reboilers, condensers, flares, vapor combustors, and thermal oxidizers; and

(K) temporary facilities used for planned maintenance, and temporary control devices for planned startups and shutdowns.

(2) Exclusions. The following are not authorized under this section:

(A) sour water strippers or sulfur recovery units;

(B) carbon dioxide hot carbonate processing units;

(C) water injection facilities. These facilities may otherwise be authorized by §106.351 of this title (relating to Salt Water Disposal (Petroleum));

(D) liquefied petroleum gases, crude oil, or condensate transfer or loading into or from railcars, ships, or barges. These facilities may otherwise be authorized by §106.261 of this title (relating to Facilities (Emission Limitations)) and §106.262 of this title (relating to Facilities (Emission and Distance Limitations));

(E) incinerators for solid waste destruction;

(F) remediation of petroleum contaminated water and soil. These facilities may otherwise be authorized by §106.533 of this title (relating to Remediation); and

(G) cooling towers and heat exchangers with direct contact with gaseous or liquid process streams containing VOC, H_2S, halogens or halogen compounds, cyanide compounds, inorganic acids, or acid gases.

(e) BMP and Minimum Requirements. For any new project, and any associated emission control equipment registered under this section, paragraphs (1) - (5) of this subsection shall be met as applicable. These requirements are not applicable to existing, unchanging facilities. Equipment design and control device requirements listed in paragraphs (6) - (12) of this subsection only apply to those that are chosen by the operator to meet the limitations of this section.

(1) All facilities which have the potential to emit air contaminants must be maintained in good working order and operated properly during facility operations. Each operator shall establish and maintain a program to replace, repair, and/or maintain facilities to keep them in good working order. The minimum requirements of this program shall include:

(A) Compliance with manufacturer's specifications and recommended programs applicable to equipment performance and effect on emissions, or alternatively, an owner or operator developed maintenance plan for such equipment that is consistent with good air pollution control practices;

(B) cleaning and routine inspection of all equipment; and

(C) replacement and repair of equipment on schedules which prevent equipment failures and maintain performance.

(2) Any facility shall be operated at least 50 feet from any property line or receptor (whichever is closer to the facility). This distance limitation does not apply to the following:

(A) any fugitive components that are used for isolation and/or safety purposes may be located at 1/2 of the width of any applicable easement;

(B) any facility at a location for which the distance requirements were satisfied at the time this section is claimed, registered, or certified (provided that the authorization was maintained) regardless of whether a receptor is subsequently built or put to use less than 50 feet from any OGS facility; or

(C) existing facilities which are located less than 50 feet from a property line or receptor when constructed and previously authorized. If modified or replaced the operator shall consider, to the extent that good engineering practice will permit, moving these facilities to meet the 50-foot requirement. Replacement facilities must meet all other requirements of this section.

(3) Engines and turbines shall meet the emission and performance standards listed in Table 6 in subsection (m) of this section and the following requirements:

(A) liquid fueled engines used for back-up power generation and periodic power needs at the OGS are authorized if the fuel has no more than 0.05% sulfur and the engine is operated less than 876 hours per rolling 12-month period;

(B) engines and turbines used for electric generation more than 876 hours per rolling 12-month period are authorized if no reliable electric service is readily available and Table 6 in subsection (m) of this section is met. In all other circumstances, electric generators must meet the technical requirements of the Air Quality Standard

Permit for Electric Generating Unit (EGU) (not including the EGU standard permit registration requirements) and the emissions shall be included in the registration under this section;

(C) all applicable requirements of Chapter 117 of this title (relating to Control of Air Pollution from Nitrogen Compounds);

(D) all applicable requirements of 40 CFR Parts 60 and 63; and

(E) compression ignition engines that are rated less than 225 kilowatts (300 hp) and emit less than or equal to the emission tier for an equivalent-sized model year 2008 non-road compression ignition engine located at 40 CFR §89.112, Table 1 are authorized.

(4) Open-topped tanks or ponds containing VOCs or H_2S are allowed up to a potential to emit equal to 1.0 tpy of VOC and 0.1 tpy of H_2S.

(5) The following shall apply to all fugitive components at the site associated with the project:

(A) All components shall be physically inspected quarterly for leaks.

(B) All components found to be leaking shall be repaired. Every reasonable effort shall be made to repair a leaking component. All leaks not repaired immediately shall be tagged or noted in a log. At manned sites, leaks shall be repaired no later than 30 days after the leak is found. At unmanned sites, leaks shall be repaired no later than 60 days after the leak is found. If the repair of a component would require a unit shutdown, which would create more emissions than the repair would eliminate, the repair may be delayed until the next shutdown.

(C) Tank hatches, not designed to be completely sealed, shall remain closed (but not completely sealed in order to maintain safe design functionality) except for sampling, gauging, loading, unloading, or planned maintenance activities.

(D) To the extent that good engineering practices will permit, new and reworked valves and piping connections shall be located in a place that is reasonably accessible for leak checking during plant operation. Underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.

(6) When leak detection and repair (LDAR) fugitive monitoring is chosen by the operator, Table 9, in subsection (m) of this section, shall apply. In addition, all components shall be physically inspected at least weekly by operating personnel walk-through.

(7) Tanks and vessels that utilize a paint color to minimize the effects of solar heating (including, but not limited to, white or aluminum):

(A) to meet this requirement the solar absorptance should be 0.43 or less, as referenced in Table 7.1 - 6 in Compilation of Air Pollutant Emission Factors (AP-42);

(B) paint shall be applied according to paint producers recommended application requirements if provided and in sufficient quantity as to be considered solar resistant;

(C) paint coatings shall be maintained in good condition and will not compromise tank integrity. Minimal amounts of rust may be present not to exceed 10% of the external surface area of the roof or walls of the tank and in no way may compromise tank integrity. Additionally, up to 10% of the external surface area of the roof or walls of the tank or vessel may be painted with other colors to allow for identification and/or aesthetics;

(D) for tanks and vessels purposefully darkened to create the process reaction and help condense liquids from being entrained in the vapor or are in an area whereby a local, state, federal law, ordinance, or private contract predating this section's effective date establishes in writing tank and vessel colors other than white, these requirements do not apply.

(8) All emission estimation methods including but not limited to computer programs such as GRI-GLYCalc, AmineCalc, E&P Tanks, and Tanks 4.0, must be used with monitoring data generated in accordance with Table 8 in subsection (m) of this section where monitoring is required. All emission estimation methods must also be used in a way that is consistent with protocols established by the commission or promulgated in federal regulations (NSPS, NESHAPS). Where control is relied upon to meet subsection (k) of this section, control monitoring is required.

(9) Process reboilers, heaters, and furnaces that are also used for control of waste gas streams:

(A) may claim 50% to 99% destruction efficiency for VOCs and H2S depending on the design and level of monitoring applied. The 90% destruction may be claimed where the waste gas is delivered to the flame zone or combustion fire box with basic monitoring as specified in subsection (j) of this section. Any value greater than 90% and up to 99% destruction efficiency may be claimed where enhanced monitoring and/or testing are applied as specified in subsection (j) of this section;

(B) if the waste gas is premixed with the primary fuel gas and used as the primary fuel in the device through the primary fuel burners, 99% destruction may be claimed with basic monitoring as specified in subsection (j) of this section;

(C) in systems where the combustion device is designed to cycle on and off to maintain the designed heating parameters, and may not fully utilize the waste gas stream, records of run time and enhanced monitoring are required to claim any run time beyond 50%.

(10) Vapor recovery Units (VRUs) may claim up to 100% control. The control efficiency is based on whether it is a mechanical VRU (mVRU) or a liquid VRU (lVRU). The VRUs must meet the appropriate design, monitoring, and recordkeeping in Table 7 and Table 8 in subsection (m) of this section.

(11) Flares used for control of emissions from production, planned MSS, emergency, or upset events may claim design destruction efficiency of 98%. 99% may be claimed for destruction of compounds containing only carbon, hydrogen, and oxygen with no more than three carbon atoms. All flares must be designed and operated in accordance with the following:

(A) meet specifications for minimum heating values of waste gas, maximum tip velocity, and pilot flame monitoring found in 40 CFR §60.18;

(B) if necessary to ensure adequate combustion, sufficient gas shall be added to make the gases combustible;

(C) an infrared monitor is considered equivalent to a thermocouple for flame monitoring purposes;

(D) an automatic ignition system may be used in lieu of a continuous pilot;

(E) flares must be lit at all times when gas streams are present;

(F) fuel for all flares shall be sweet gas or liquid petroleum gas except where only field gas is available and it is not sweetened at the site; and

(G) flares shall be designed for and operated with no visible emissions, except for periods not to exceed at total of five minutes during any two consecutive hours. Acid gas flares which must comply with opacity limits and records in accordance with §111.111(a)(4) of this title (relating to Requirements for Specified Sources), regarding gas flares, are exempt from this visible emission limitation.

(12) Thermal oxidation and vapor combustion control devices:

(A) may claim design destruction efficiency from 90% to 99.9% for VOCs and H2S depending on the design and the level of monitoring and testing applied;

(B) a device designed for the variability of the waste gas streams it controls with basic monitoring to indicate oxidation or combustion is occurring when waste gas is directed to the device may claim 90% destruction efficiency;

(C) devices with intermediate monitoring, designed for the variability of the waste gas streams they control, with a fire box or fire tube designed to maintain a temperature above 1,400 degrees Fahrenheit (F) for 0.5 seconds, residence time; or designed to meet the parameters of a flare with minimum heating values of waste gas, maximum tip velocity, and pilot flame monitoring as found in 40 CFR §60.18, but within a full or partial enclosure may claim a design destruction efficiency of 90% to 98%;

(D) devices with enhanced monitoring and ports and platforms to allow stack testing may claim a 99% efficiency where the devices are designed for the variability of the waste gas streams they control, with a fire box or fire tube designed to maintain a temperature above 1,400 degrees F for 0.5 seconds, residence time;

(E) devices that can claim 99% destruction efficiency may claim 99.9% destruction efficiency if stack testing is conducted and confirms the efficiency and the enhanced monitoring is adjusted to ensure the continued efficiency. Temperature and residence time requirements may be modified if stack testing is conducted to confirm efficiencies.

(f) Notification, Certification, and Registration Requirements.

(1) For all previous claims of this section (or any previous version of this section) existing authorized facilities, or group of facilities, identified in subsection (b)(7) of this section must submit a notification no later than January 5, 2015. Facilities or groups of facilities which meet subsection (c)(4) of this section do not have to meet the following notification requirements:

(A) For actively operating facilities which have never been registered with the commission, submit updated Core Data and basic identifying information (previously claimed historical versions of this section and lease name or well numbers as provided to the Texas Railroad Commission) through ePermits using the "APD OGS Historical Notification."

(B) For those facilities which have previously registered with the commission and updates are needed to the commission's Central Registry (CR), submit a hard copy of a Core Data Form with an attachment listing identifying information (previously claimed historical versions of this section and lease name or well numbers as provided to the Texas Railroad Commission). If no updates to CR are required, no further action is needed.

(C) No fee is required for this notification.

(2) If no other changes, except for authorizing planned MSS, occur at an existing site under this section, or any previous version of this section, the following apply no later than January 5, 2012:

(A) Records demonstrating compliance with subsection (i) of this section must be kept;

(B) If the existing OGS is certified, an addendum to the OGS certification may be filed using Form APD-CERT. No fee is required for this updated certification; and

(C) Planned MSS does not require registration if no other project is occurring, and shall be incorporated at the next revision or update to a registration under this section after January 5, 2012.

(3) For facilities authorized under §116.111 of this title, only records of MSS as specified in this section must be kept. Planned MSS shall be incorporated into the permit at the next permit renewal or amendment after January 5, 2012.

(4) Prior to construction or implementation of changes for any project which meets this section, a notification shall be submitted through the ePermits system. This notification shall include the following:

(A) Identifying information (Core Data) and a general description of the project must be submitted through ePermits (or if not available, hard-copy) using the "APD OGS New Project Notification."

(B) A fee of $25 for small businesses (as defined in §106.50 of this title (relating to Registration Fees for Permits by Rule)), or $50 for all others must be submitted through the commission's ePay system.

(5) For any registration which meets the emission limitations of Level 1 as required in subsection (g) of this section:

(A) Within 180 days after start of operation or implemented changes (whichever occurs first), the facilities must be registered through ePermits form "APD OGS PBR Level 1 and 2 Registration" (or if not available, submittal of hard-copy).

(B) This registration shall include a detailed summary of maximum emissions estimates based on:

(i) site-specific or defined representative gas and liquid analysis;

(ii) equipment design specifications and operations;

(iii) material type and throughput;

(iv) other actual parameters essential for accuracy for determining emissions; and

(v) documentation demonstrating compliance with all applicable requirements of this section.

(C) The fee for this registration shall be $25 for small businesses, as defined in §106.50 of this title, or $175 for all others.

(6) For any registration which meets the emission limitations of Level 2 as required in subsection (h) of this section:

(A) Within 90 days after start of operation or implemented changes (whichever occurs first), the facilities must be registered through ePermits form "APD OGS PBR Level 1 and 2 Registration" (or if not available, submittal of hard-copy).

(B) This registration shall include a detailed summary of maximum emissions estimates based on:

(i) site-specific or defined representative gas and liquid analysis;

(ii) equipment design specifications and operations;

(iii) material type and throughput; and

(iv) other actual parameters essential for accuracy for determining emissions and compliance with all applicable requirements of this section.

(C) The fee for this registration shall be $75 for small businesses (as defined in §106.50 of this title) or $400 for all others.

(7) Certified registrations or certifications are required in the following circumstances:

(A) For projects at existing major sites, establish emission increases less than any applicable threshold or contemporaneous emission increases for major sources or major modifications under prevention of significant deterioration (PSD), nonattainment new source review (NNSR) as specified in §116.12 of this title and in Federal Clean Air Act §112(g), §112(j), or the definition of major source in §122.10 of this title.

(B) If a project or registration includes control for reductions, limited hours, throughput, and materials or other operational limitations which are less than the potential to emit, and if modeling is used to demonstrate compliance with subsection (k) of this section.

(C) If a project is located at a site subject to NOX cap and trade requirements in Chapter 101, Subchapter H of this title (relating to Emissions Banking and Trading) or relies on controls to comply with any state or federal regulation.

(D) For projects which resolve compliance issues and are the result of a commission or United States Environmental Protection Agency order.

(8) If the ePermits system is not available for more than 24 hours or not otherwise accessible, hard copies of notifications, registrations, or certifications may be submitted by first-class mail.

(9) If emissions increase at an OGS to a level where it exceeds its current authorization, either through a change in production or addition of facilities, the site may claim and register its facilities under the applicable authorization (Level 1 or Level 2 PBR or Standard Permit) as follows:

(A) Within 90 days from the initial notification of construction of an oil and gas facility, a registration can update the authorization mechanism by submitting a revision to the PBR or an application for a standard permit; and

(B) Within 90 days of the change of production or installation of additional equipment, a revision to the PBR or an application for a standard permit has been submitted.

(g) Level 1 Requirements. Total maximum estimated emissions shall meet the most stringent of the following. All emissions estimates must be based on representative worst-case operations and planned MSS activities.

(1) Emissions of any criteria air contaminant shall not exceed the applicable limits for a major stationary source or major modification for PSD, NNSR and in Federal Clean Air Act, §112(g), §112(j), or the definition of major source in §122.10 of this title.

(2) Emissions must meet the limitations established in subsection (k) of this section.

(3) Maximum emissions are limited to less than the following after any operator limitations or controls:

Figure: 30 TAC §106.352(g)(3)

Maximum Emission Rates

Air Contaminant	Steady-state lb/hr	< 30 psig periodic lb/hr up to 150 hr/yr	≥ 30 psig periodic lb/hr up to 150 hr/yr	Total tpy
Total VOC	N/A	N/A	N/A	15
Total crude oil or condensate VOC*	100	145	318	N/A
Total natural gas VOC*	204	750	1500	N/A
Benzene	1.95	7	15.4	2.8
Hydrogen sulfide	4.7	5.1	9.8	20.6
Sulfur dioxide	47	93.2	N/A	25
Nitrogen oxides	43.2	N/A	N/A	100
Carbon monoxide	45	N/A	N/A	100
PM_{10} and $PM_{2.5}$	10	N/A	N/A	5

*VOC is defined in §101.1 of this title (relating to General Definitions) and does not include methane and ethane

(h) Level 2 Requirements. If the requirements of Level 1 cannot be met, then the conditions of this subsection must be followed. Total maximum estimated registered or certified emissions shall meet the most stringent of the following. All emissions estimates must be based on representative worst-case operations and planned MSS activities.

(1) Total maximum estimated annual emissions of any air contaminant shall not exceed the applicable limits for a major stationary source or major modification for PSD and NNSR as specified in §116.12 of this title.

(2) Emissions must meet the limitations established in subsection (k) of this section.

(3) Maximum emissions are limited to less than the following after any operator limitations or controls:

Figure: 30 TAC §106.352(h)(3)

Maximum Emission Rates

Air Contaminant	Steady-state lb/hr	< 30 psig periodic lb/hr up to 300 hr/yr	≥ 30 psig periodic lb/hr up to 300 hr/yr	Total tpy
Total VOC	N/A	N/A	N/A	25
Total crude oil or condensate VOC*	100	145	318	N/A
Total natural gas VOC*	356	750	1500	N/A
Benzene	3.35	7	15.4	4.8
Hydrogen sulfide	6	6	9.8	25
Sulfur dioxide	63	93.2	N/A	25
Nitrogen oxides	54.4	N/A	N/A	250
Carbon monoxide	57	N/A	N/A	250
$PM_{2.5}$	12.7	N/A	N/A	10
PM_{10}	12.7	N/A	N/A	15

*VOC is defined in §§101.1 of this title (relating to General Definitions) and does not include methane and ethane

(i) Planned Maintenance, Startups and Shutdowns. For any facility, group of facilities or site using this section or previous versions of this section, the following shall apply.

(1) Prior to January 5, 2012, representations and registration of planned MSS is voluntary, but if represented must meet the applicable limits of this section. After January 5, 2012, all emissions from planned MSS activities and facilities must be considered for compliance with applicable limits of this section. This section may not be used at a site or for facilities authorized under §116.111 of this title if planned MSS has already been authorized under that permit.

(2) As specified, releases of air contaminants during, or as result of, planned MSS must be quantified and meet the emission limits in this section, as applicable. This analysis must include:

(A) alternate operational scenarios or redirection of vent streams;

(B) pigging, purging, and blowdowns;

(C) temporary facilities if used for degassing or purging of tanks, vessels, or other facilities;

(D) degassing or purging of tanks, vessels, or other facilities; and

(E) management of sludge from pits, ponds, sumps, and water conveyances.

(3) Other planned MSS activities authorized by this section are limited to the following. These planned MSS activities require only recordkeeping of the activity.

(A) Routine engine component maintenance including filter changes, oxygen sensor replacements, compression checks, overhauls, lubricant changes, spark plug changes, and emission control system maintenance.

(B) Boiler refractory replacements and cleanings.

(C) Heater and heat exchanger cleanings.

(D) Turbine hot section swaps.

(E) Pressure relief valve testing, calibration of analytical equipment; instrumentation/analyzer maintenance; replacement of analyzer filters and screens.

(4) Engine/compressor startups associated with preventative system shutdown activities have the option to be authorized as part of typical operations if:

(A) prior to operation, alternative operating scenarios to divert gas or liquid streams are registered and certified with all supporting documentation;

(B) engine/compressor shutdowns shall result in no greater than 4 lb/hr of natural gas emissions; and

(C) emissions which result from the subsequent compressor startup activities are controlled to a minimum of 98% efficiency for VOC and H2S.

(j) Records, sampling, and monitoring. The following records shall be maintained at a site in written or electronic form and be readily available to the agency or local air pollution control program with jurisdiction upon request. All required records must be kept at the facility site. If the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site. Other requirements, including but not limited to, federal recordkeeping or testing requirements, can be used to demonstrate compliance if the other requirements are at least as stringent as the associated requirements in the Tables 7 and 8 in subsection (m) of this section. Any documentation that is already being kept for other purposes will suffice for demonstrating requirements. If a control or method is not relied upon for emission reductions, then the associated sampling, monitoring, and records are not applicable.

(1) Sampling and demonstrations of compliance shall include the requirements listed in Table 7 in subsection (m) of this section.

(2) Monitoring and records for demonstrations of compliance shall include the requirements listed in Table 8 in subsection (m) of this section.

(k) Emission limits based on impacts evaluation.

(1) All impacts evaluations must be completed on a contaminant-by-contaminant basis for any net emissions increases resulting from a project and must meet the following as appropriate:

(A) Compliance with state or federal ambient air standards shall be demonstrated for nitrogen dioxide (NO2), SO2, and H2S at any property-line within 1/4 mile or 1/2 mile of a project under subsection (g) (Level 1) or subsection (h) (Level 2) of this section, respectively.

(B) Compliance with hourly ESLs for benzene and annual ESL for benzene, shall be demonstrated at the nearest receptor within 1/4 mile or 1/2 mile of a project under subsection (g) (Level 1) or subsection (h) (Level 2) of this section, respectively.

(2) Distance measurements shall be determined using the following.

(A) For each facility or group of facilities, the shortest corresponding distance from any emission point, vent, or fugitive component to the nearest receptor must be used with the appropriate compliance determination method with the published ESLs as found through the TCEQ internet Web page.

(B) For each facility or group of facilities, the shortest corresponding distance from any emission point, vent, or fugitive component to the nearest property line must be used with the appropriate compliance determination method with any applicable state or federal ambient air quality standard.

(3) Impacts evaluations are not required under the following cases:

(A) If there is no receptor within 1/4 mile of a Level 1 registration, or 1/2 mile of a Level 2 registration, no further ESL review is required.

(B) If there is no property line within 1/4 mile of a Level 1 registration, or 1/2 mile of a Level 2 registration, no further ambient air quality standard review is required.

(C) If the project total emissions are less than any of the following rates, no additional analysis or demonstration of the specified air contaminant is required:

Figure: 30 TAC §106.352(k)(3)(C)

Project Total Air Contaminant

Emission Rates for Which No Impacts Review Required

Air contaminant	**lb/hr**
Benzene	0.039
Hydrogen sulfide	0.025
Sulfur dioxide	2
Nitrogen oxides	4

(4) Evaluation of emissions shall meet the following.

(A) For all evaluations of NOX to NO2, a conversion factor of 0.20 for 4-stroke rich and lean-burn engines and 0.50 for 2-stroke lean-burn engines may be used.

(B) The maximum predicted concentration or rate at the property boundary or receptor, whichever is appropriate, must not exceed a state or federal ambient air standard or ESL.

(5) The impacts analysis shall be based on the following facility emissions.

(A) The following shall be met for ESL reviews:

(i) If a project's air contaminant maximum predicted concentrations are equal to or less than 10% of the appropriate ESL, no further review is required.

(ii) If a project's air contaminant maximum predicted concentrations combined with project increases for that contaminant over a 60-month period after the effective date of this revised section are equal to or less than 25% of the appropriate ESL, no further review is required.

(iii) In all other cases, all facility emissions at an OGS, regardless of authorization type, located within 1/4 mile of a project requiring registration under this section shall be evaluated.

(B) The following shall be met for state and federal ambient air quality standard reviews:

(i) If a project's air contaminant maximum predicted concentrations are equal to or less than the significant impact level (also known as de minimis impact in Chapter 101 of this title (relating to General Air Quality Rules)), no further review is required;

(ii) In all other cases, all facility emissions at an OGS, regardless of authorization type, located within 1/4 mile of a project requiring registration under this section shall be evaluated.

(6) Evaluation must comply with one of the methods listed with no changes or exceptions.

(A) Tables.

(i) Emission impact Tables 2 - 5F in subsection (m) of this section, may be used in accordance with the limits and descriptions in Table 1 in subsection (m) of this section.

(ii) Values in Tables 2 - 5F in subsection (m) of this section may be used with linear interpolation between height and distance points. A distance of less than 50 feet or greater than 5,500 feet may not be used. Release heights may not be extrapolated beyond the limits of any table and instead the minimum or maximum height will be used. If distances and release heights are not interpolated, the next lowest height and lesser distances shall be used for determination of maximum acceptable emissions. All facilities exempted from the distance to the property line restriction in subsection (e)(2) of this section must use 50 feet as the distance to the property line for those ambient standards based on property line.

(B) Screening Modeling. A screening model may be used to demonstrate acceptable emissions from an OGS under this section if all of the parameters in the screening modeling protocol provided by the commission are met.

(C) Dispersion Modeling. A refined dispersion model may be used to demonstrate acceptable emissions from an OGS under this section if all of the parameters in the refined dispersion modeling protocol provided by the commission are met.

(l) The requirements in this subsection are applicable to new and modified facilities except those specified in subsection (a)(1) of this section. Any oil or gas production facility, carbon dioxide separation facility, or oil or gas pipeline facility consisting of one or more tanks, separators, dehydration units, free water knockouts, gunbarrels, heater treaters, natural gas liquids recovery units, or gas sweetening and other gas conditioning facilities, including sulfur recovery units at facilities conditioning produced gas containing less than two long tons per day of sulfur compounds as sulfur are permitted by rule, provided that the following conditions of this subsection are met. This subsection applies only to those facilities named which handle gases and liquids associated with the production, conditioning, processing, and pipeline transfer of fluids found in geologic formations beneath the earth's surface.

(1) Compressors and flares shall meet the requirements of §106.492 and §106.512 of this title (relating to Flares; and Stationary Engines and Turbines, respectively). Oil and gas facilities which are authorized under historical standard exemptions and remain unchanged maintain that authorization and the remainder of this subsection does not apply.

(2) Total emissions, including process fugitives, combustion unit stacks, separator, or other process vents, tank vents, and loading emissions from all such facilities constructed at a site under this subsection shall not exceed 25 tpy each of SO2, all other sulfur compounds combined, or all VOCs combined; and 250 tpy each of NOX and CO. Emissions of VOC and sulfur compounds other than SO2 must include gas lost by equilibrium flash as well as gas lost by conventional evaporation.

(3) Any facility handling sour gas shall be located at least one-quarter mile from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located.
(4) Total emissions of sulfur compounds, excluding sulfur oxides, from all vents shall not exceed 4.0 pounds per hour (lb/hr) and the height of each vent emitting sulfur compounds shall meet the following requirements, except in no case shall the height be less than 20 feet, where the total emission rate as H2S, lb/hr, and minimum vent height (feet), and other values may be interpolated:

(A) 0.27 lb/hr at 20 feet;

(B) 0.60 lb/hr at 30 feet;

(C) 1.94 lb/hr at 50 feet;

(D) 3.00 lb/hr at 60 feet; and

(E) 4.00 lb/hr at 68 feet.

(5) Before operation begins, facilities handling sour gas shall be registered with the executive director in Austin using Form PI-7 along with supporting documentation that all requirements of this subsection will be met. For facilities constructed under §106.353 of this title (relating to Temporary Oil and Gas Facilities), the registration is required before operation under this subsection can begin. If the facilities cannot meet this subsection, a permit under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) is required prior to continuing operation of the facilities.

(m) The following tables shall be used as required in this section.

Figure: 30 TAC §106.352(m)

Table 1 Emission Impact Tables Limits and Descriptions

Topic	Description	Details
Variables	$E_{MAX\ HOURLY}$	the maximum acceptable hourly (lb/hr) emissions for a specific air contaminant
	$E_{MAX\ ANNUAL}$	the maximum acceptable annual (tpy) emissions for a specific air contaminant
	P	ambient air standard for a specific air contaminant (µg/m3)
	ESL	current published effects screening level for a specific air contaminant (µg/m3)
	G	the most stringent of any applicable generic value from the Generic Modeling Results Tables at the emission point's release height and distance to property line (µg/m3/lb/hr)
	WR_{EPNX}=	weighted ratio of emissions of a specific air contaminant for each EPN divided by the sum of total emissions for all EPNs that emit that contaminant or (E_{EPNx}/E_{total})
Single releases or co-located groups of similar releases	hourly ambient air standard	emissions are determined by: $\boldsymbol{E_{MAX\ HOURLY} = P/G}$
	hourly health effects review	emissions are determined by: $\boldsymbol{E_{MAX\ HOURLY} = ESL/G}$
	annual ambient air standard	emissions are determined by: $\boldsymbol{E_{MAX\ ANNUAL} = (8760/2000)\ P/(0.08*G)}$
	annual health effects review	emissions are determined by: $\boldsymbol{E_{MAX\ ANNUAL} = (8760/2000)\ ESL/(0.08*G)}$

Figure: 30 TAC §106.352(m)

Table 1 Emission Impact Tables Limits and Descriptions*(continued)*

Topic	Description	Details
Multiple release points	Limits	If weighted ratios are not used, the total quantity of emissions shall be assumed to be released from the most conservative applicable G value at the site.
	hourly ambient air standard	emissions are determined by: $E_{MAX\ HOURLY} = (WR_{EPN1})\ (P / G_{EPN1}) + (WR_{EPN2})\ (P / G_{EPN2}) + WR_{EPNx})\ (P / G_{EPNx})$
	Hourly health effects review	emissions are determined by: $E_{MAX\ HOURLY} = (WR_{EPN1})\ (ESL / G_{EPN1}) + (WR_{EPN2})\ (ESL / G_{EPN2}) + (WR_{EPNx})\ (ESL / G_{EPNx})$
	annual ambient air standard	emissions are determined by: $E_{MAX\ ANNUAL} = (8760/2000)\ ((WR_{EPN1})\ (P / 0.08 * G_{EPN1}) + (WR_{EPN2})\ (P / 0.08 * G_{EPN2}) + (WR_{EPNx})\ (P / 0.08 * G_{EPNx}))$
	annual health effects review	emissions are determined by: $E_{MAX\ ANNUAL} = (8760/2000)\ ((WR_{EPN1})\ (ESL / 0.08 * G_{EPN1}) + (WR_{EPN2})\ (ESL / 0.08 * G_{EPN2}) + WR_{EPNx})\ (ESL / 0.08 * G_{EPNx}))$

Table 2. Generic Modeling Results for Fugitives and Process Vents

Distance (feet)	Fugitive – 3 ft (µg/m³)/(lb/hr)	Loading – 10 ft (µg/m³)/(lb/hr)	Tank Hatch – 20 ft (µg/m³)/(lb/hr)	Process Vessel 10 ft Vent (µg/m³)/(lb/hr)	Process Vessel 20 ft Vent (µg/m³)/(lb/hr)	Process Vessel 30 ft Vent (µg/m³)/(lb/hr)	Process Vessel 40 ft Vent (µg/m³)/(lb/hr)	Process Vessel 50 ft Vent (µg/m³)/(lb/hr)	Process Vessel 60 ft Vent (µg/m³)/(lb/hr)
50	4375	1232	305	469	168	90	70	65	28
100	4375	1232	305	469	168	90	70	65	28
150	3907	1232	305	469	168	90	70	65	28
200	3089	1232	305	400	168	90	70	65	28
300	1911	1193	294	412	168	90	70	65	28
400	1269	1048	291	319	168	90	70	65	28
500	901	858	274	243	157	90	70	65	28
600	674	698	267	189	138	89	70	65	28
700	525	574	271	150	120	88	70	65	28
800	423	479	261	124	105	85	70	65	28
900	349	406	244	105	93	81	70	65	28
1000	293	348	226	91	84	77	69	65	26
1100	250	302	208	90	77	72	67	63	25
1200	217	264	191	89	70	68	64	61	24
1300	189	233	176	88	65	64	61	58	24
1400	167	208	464	87	61	60	58	55	24
1500	149	186	149	84	57	57	55	53	24
1600	134	168	137	82	54	53	52	50	23
1700	121	153	127	79	51	51	49	47	23
1800	110	139	117	76	50	48	47	45	22
1900	100	128	109	73	49	46	44	43	22
2000	92	117	102	70	49	44	42	41	21
2100	85	108	95	67	48	42	41	39	21

Table 2. Generic Modeling Results for Fugitives and Process Vents

Distance (feet)	Fugitive – 3 ft (µg/m³)/(lb/hr)	Loading – 10 ft (µg/m³)/(lb/hr)	Tank Hatch – 20 ft (µg/m³)/(lb/hr)	Process Vessel 10 ft Vent (µg/m³)/(lb/hr)	Process Vessel 20 ft Vent (µg/m³)/(lb/hr)	Process Vessel 30 ft Vent (µg/m³)/(lb/hr)	Process Vessel 40 ft Vent (µg/m³)/(lb/hr)	Process Vessel 50 ft Vent (µg/m³)/(lb/hr)	Process Vessel 60 ft Vent (µg/m³)/(lb/hr)
2200	78	101	89	64	47	40	39	38	20
2300	73	94	83	61	46	39	37	36	19
2400	68	88	78	59	45	37	36	35	19
2500	64	82	74	56	43	36	35	34	18
2600	60	77	70	54	42	34	33	32	18
2700	56	73	66	52	41	33	32	31	17
2800	53	69	63	50	40	32	31	30	17
2900	50	65	60	48	39	31	30	29	16
3000	48	62	57	46	37	30	29	28	16
3500	37	49	46	38	32	26	25	25	14
4000	30	40	38	32	28	24	23	22	12
4500	25	33	32	28	25	21	20	20	11
5000	22	28	27	24	22	19	18	18	10
5500	19	25	24	21	19	17	17	16	9

Table 3: Flares and Thermal Destruction Devices
Generic Modeling Results

Distance (ft)	20 ft height G_{hourly} (µg/m³)/(lb/hr)	30 ft height G_{hourly} (µg/m³)/(lb/hr)	40 ft height G_{hourly} (µg/m³)/(lb/hr)	50 ft height G_{hourly} (µg/m³)/(lb/hr)	60 ft height G_{hourly} (µg/m³)/(lb/hr)
50	58	43	26	25	23
100	58	43	26	25	23
150	58	43	26	25	23
200	58	43	26	25	23
300	58	43	26	25	23
400	58	43	26	25	23
500	58	43	26	25	23
600	56	43	26	25	23
700	52	43	26	25	23
800	47	43	26	25	23
900	45	43	26	25	23
1000	44	43	26	25	23
1100	42	41	25	24	23
1200	40	40	24	24	22
1300	38	38	23	23	21
1400	36	36	23	21	21
1500	34	34	23	21	20
1600	32	32	22	21	20
1700	31	31	22	21	20
1800	29	29	22	20	20
1900	28	28	22	20	20
2000	26	26	21	20	19
2100	25	25	21	20	19

Table 3: Flares and Thermal Destruction Devices
Generic Modeling Results

Distance (ft)	20 ft height G_{hourly} (µg/m³)/(lb/hr)	30 ft height G_{hourly} (µg/m³)/(lb/hr)	40 ft height G_{hourly} (µg/m³)/(lb/hr)	50 ft height G_{hourly} (µg/m³)/(lb/hr)	60 ft height G_{hourly} (µg/m³)/(lb/hr)
2200	24	24	20	20	19
2300	23	23	20	19	19
2400	22	22	20	19	18
2500	22	22	19	18	18
2600	21	21	19	18	17
2700	20	20	18	17	17
2800	19	19	18	17	16
2900	19	19	17	16	16
3000	18	18	17	16	16
3500	16	16	15	14	14
4000	14	14	13	12	12
4500	13	13	12	11	11
5000	11	11	11	10	10
5500	11	11	10	9	9

Table 4: Generic Modeling Results for Blowdowns, Purging, and Pigging
Generic Modeling Results

Distance (ft)	< 30 psig; 3 ft height G_{hourly} (µg/m³)/(lb/hr)	< 30 psig; 10 ft height G_{hourly} (µg/m³)/(lb/hr)	< 30 psig; 20 ft height G_{hourly} (µg/m³)/(lb/hr)	≥ 30 psig; 6 ft height G_{hourly} (µg/m³)/(lb/hr)	≥ 30 psig; 10 ft height G_{hourly} (µg/m³)/(lb/hr)
50	4304	791	244	51	25
100	4304	791	244	51	25
150	4250	777	244	51	25
200	3621	763	244	51	25
300	2367	750	225	51	25
400	1607	737	225	51	25
500	1156	671	224	51	25
600	871	581	218	48	25
700	682	498	212	44	25
800	551	427	210	40	24
900	456	368	204	36	23
1000	384	320	194	33	21
1100	328	281	182	30	20
1200	284	248	170	28	18
1300	249	221	159	27	17
1400	220	198	147	27	16
1500	196	178	137	27	15
1600	176	162	127	27	14
1700	159	147	118	27	13
1800	145	135	110	27	13
1900	132	124	103	27	13
2000	121	114	96	27	13
2100	112	106	90	27	13

Table 4: Generic Modeling Results for Blowdowns, Purging, and Pigging
Generic Modeling Results

Distance (ft)	< 30 psig; 3 ft height G_{hourly} (µg/m³)/(lb/hr)	< 30 psig; 10 ft height G_{hourly} (µg/m³)/(lb/hr)	< 30 psig; 20 ft height G_{hourly} (µg/m³)/(lb/hr)	≥ 30 psig; 6 ft height G_{hourly} (µg/m³)/(lb/hr)	≥ 30 psig; 10 ft height G_{hourly} (µg/m³)/(lb/hr)
2200	103	98	85	27	13
2300	96	91	80	27	13
2400	90	86	75	27	13
2500	84	81	71	27	13
2600	79	76	68	27	13
2700	74	72	64	26	13
2800	70	68	61	26	13
2900	67	64	58	26	13
3000	63	61	55	25	13
3500	50	48	45	23	13
4000	40	39	37	21	13
4500	34	33	31	19	13
5000	29	28	27	17	12
5500	25	24	23	16	11

Table 5A Engines Less Than or Equal to 250 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
50	97	85	83	81	81	71	58	44	43	36	26
100	97	85	83	81	81	71	58	44	43	36	26
150	97	85	83	81	81	71	58	44	43	36	26
200	93	85	83	81	81	71	58	44	43	36	26
300	92	85	83	81	81	71	58	44	43	36	26
400	91	85	83	81	81	71	58	44	43	36	26
500	88	85	83	81	81	71	58	44	43	36	26
600	80	79	78	78	78	70	56	44	43	36	26
700	78	77	76	76	71	68	52	44	43	36	26
800	76	75	74	74	64	63	47	44	43	36	26
900	74	73	72	72	58	58	45	44	43	36	26
1000	72	71	71	71	53	53	44	43	43	36	26
1100	69	69	69	69	49	49	42	42	41	35	25
1200	66	66	66	65	45	45	40	40	40	35	24
1300	62	62	62	62	42	42	38	38	38	33	23
1400	59	59	59	59	39	39	36	36	36	32	23
1500	56	56	56	56	37	37	34	34	34	30	23
1600	53	53	53	53	35	35	32	32	32	29	22
1700	50	50	50	50	33	33	31	31	31	28	22
1800	48	48	48	48	31	31	29	29	29	26	22
1900	46	46	46	46	30	30	28	28	28	25	22
2000	44	44	44	44	28	28	26	26	26	24	21
2100	42	42	42	42	27	27	25	25	25	23	21

Table 5A Engines Less Than or Equal to 250 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
2200	40	40	40	40	26	26	24	24	24	22	20
2300	38	38	38	38	25	25	23	23	23	21	20
2400	37	37	37	37	24	24	22	22	22	20	20
2500	36	36	36	36	23	23	22	22	22	20	19
2600	34	34	34	34	22	22	21	21	21	19	19
2700	33	33	33	33	21	21	20	20	20	18	18
2800	32	32	32	32	21	21	19	19	19	18	18
2900	31	31	31	31	20	20	19	19	19	17	17
3000	30	30	30	30	19	19	18	18	18	17	17
3500	26	26	26	26	17	17	16	16	16	15	15
4000	23	23	23	23	15	15	14	14	14	13	13
4500	21	21	21	21	13	13	13	13	13	12	12
5000	19	19	19	19	12	12	11	11	11	11	11
5500	17	17	17	17	11	11	11	11	11	10	10

Table 5B: Engines Greater Than 250 and Less Than or Equal to 500 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
50	60	59	54	43	43	34	34	24	21	20	17
100	60	59	54	43	43	34	34	24	21	20	17
150	60	59	54	43	43	34	34	24	21	20	17
200	60	59	54	43	43	34	34	24	21	20	17
300	60	59	54	43	43	34	34	24	21	20	17
400	60	59	54	43	43	34	34	24	21	20	17
500	60	59	54	43	43	34	34	24	21	20	17
600	57	57	52	41	41	34	34	24	21	20	17
700	52	52	47	38	38	31	31	24	21	20	17
800	47	47	43	34	34	28	28	24	21	20	17
900	42	42	39	31	31	26	26	23	20	20	17
1000	39	39	35	28	28	23	23	21	20	20	17
1100	37	36	32	26	26	23	23	20	20	19	17
1200	35	35	30	25	24	23	23	20	20	18	17
1300	34	34	28	24	23	23	23	20	20	18	16
1400	32	32	26	24	23	23	23	20	20	17	16
1500	31	31	24	23	23	23	23	20	20	16	16
1600	29	29	23	23	23	23	23	19	19	16	16
1700	28	28	23	23	23	23	22	19	19	16	15
1800	27	27	22	22	22	22	22	19	19	16	15
1900	25	25	22	22	22	21	21	18	18	16	15
2000	24	24	22	22	22	21	21	17	17	16	15

Table 5B: Engines Greater Than 250 and Less Than or Equal to 500 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
2100	23	23	21	21	21	20	20	17	17	16	15
2200	22	22	21	21	21	19	19	17	17	15	15
2300	21	21	20	20	20	19	19	17	16	15	14
2400	21	21	20	20	20	19	18	16	16	15	14
2500	20	20	19	19	19	18	18	16	16	14	14
2600	19	19	19	19	19	18	17	16	16	14	13
2700	18	18	18	18	18	17	17	15	15	14	13
2800	18	18	18	18	18	17	16	15	15	13	13
2900	17	17	17	17	17	16	16	15	15	13	13
3000	17	17	17	17	17	16	15	15	15	13	13
3500	15	15	15	15	15	14	14	13	13	12	11
4000	13	13	13	13	13	13	12	12	12	11	10
4500	12	12	12	12	12	11	11	10	10	10	9
5000	11	11	11	11	11	10	10	10	10	9	9
5500	10	10	10	10	10	9	9	9	9	8	8

Table 5C: Engines Greater Than 500 and Less Than or Equal to 1,000 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
50	26	25	25	25	18	18	17	13	11	11	10
100	26	25	25	25	18	18	17	13	11	11	10
150	26	25	25	25	18	18	17	13	11	11	10
200	26	25	25	25	18	18	17	13	11	11	10
300	26	25	25	25	18	18	17	13	11	11	10
400	26	25	25	25	18	18	17	13	11	11	10
500	26	25	25	25	18	18	17	13	11	11	10
600	26	25	25	25	18	18	17	13	11	11	10
700	26	25	25	25	18	18	17	13	11	11	10
800	24	24	24	24	18	18	17	13	11	11	10
900	23	23	23	23	18	18	17	13	11	11	10
1000	21	21	21	21	17	17	17	13	11	11	10
1100	20	20	20	20	17	17	16	13	11	11	10
1200	18	18	18	18	16	16	16	12	11	11	10
1300	17	17	17	17	15	15	15	12	11	10	10
1400	17	17	17	17	14	14	14	11	11	10	10
1500	17	17	16	16	13	13	13	11	11	10	9
1600	17	17	16	16	13	13	13	11	11	10	9
1700	16	16	15	15	13	12	12	11	11	9	9
1800	16	16	15	15	13	12	12	11	11	9	9
1900	15	15	14	14	13	12	12	11	10	9	9
2000	15	15	14	14	13	12	12	11	10	9	9

Table 5C: Engines Greater Than 500 and Less Than or Equal to 1,000 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
2100	14	14	13	13	12	12	12	11	10	9	9
2200	14	14	13	13	12	12	12	10	10	9	9
2300	13	13	12	12	12	11	11	10	10	9	8
2400	13	13	12	12	12	11	11	10	9	9	8
2500	12	12	12	12	11	11	11	10	9	9	8
2600	12	12	11	11	11	11	11	10	9	9	8
2700	12	12	11	11	11	10	10	10	9	8	8
2800	11	11	11	11	11	10	10	9	9	8	8
2900	11	11	10	10	10	10	10	9	9	8	8
3000	11	11	10	10	10	10	10	9	9	8	8
3500	9	9	9	9	9	9	9	8	8	7	7
4000	8	8	8	8	8	8	8	7	7	7	6
4500	7	7	7	7	7	7	7	7	6	6	6
5000	7	7	7	7	6	6	6	6	6	6	5
5500	6	6	6	6	6	6	6	6	5	5	5

Table 5D: Engines Greater Than 1,000 and Less Than or Equal to 1,500 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
50	17	13	12	10	10	10	10	9	8	8	7
100	17	13	12	10	10	10	10	9	8	8	7
150	17	13	12	10	10	10	10	9	8	8	7
200	17	13	12	10	10	10	10	9	8	8	7
300	17	13	12	10	10	10	10	9	8	8	7
400	17	13	11	10	10	10	10	9	8	8	7
500	17	13	11	10	10	10	10	9	8	8	7
600	17	12	11	10	10	10	10	9	8	8	7
700	17	11	11	10	10	10	10	9	8	8	7
800	17	11	11	10	10	10	10	9	8	8	7
900	17	11	11	10	10	10	10	9	8	8	7
1000	17	11	11	10	10	10	10	9	8	8	7
1100	16	11	11	10	10	10	10	9	8	8	7
1200	15	10	10	10	9	9	9	9	8	7	7
1300	15	10	10	10	9	9	9	8	8	7	7
1400	14	10	10	10	9	9	8	8	8	7	7
1500	13	10	10	10	8	8	8	8	8	7	6
1600	12	10	10	10	8	8	8	8	8	7	6
1700	12	10	10	10	8	8	8	8	8	7	6
1800	11	10	10	10	8	8	8	8	8	7	6
1900	11	10	9	9	8	8	8	7	7	7	6
2000	10	9	9	9	8	8	8	7	7	7	6

Table 5D: Engines Greater Than 1,000 and Less Than or Equal to 1,500 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
2100	10	9	9	9	8	8	8	7	7	6	6
2200	10	9	9	9	8	8	8	7	7	6	6
2300	9	9	8	8	8	8	8	7	7	6	6
2400	9	9	8	8	7	7	7	7	7	6	6
2500	9	8	8	8	7	7	7	7	6	6	5
2600	8	8	8	8	7	7	7	7	6	6	5
2700	8	8	8	8	7	7	7	7	6	6	5
2800	8	8	7	7	7	7	7	6	6	6	5
2900	8	7	7	7	7	7	7	6	6	6	5
3000	7	7	7	7	7	7	6	6	6	5	5
3500	7	6	6	6	6	6	6	6	5	5	5
4000	6	6	6	6	5	5	5	5	5	4	4
4500	5	5	5	5	5	5	5	5	4	4	4
5000	5	5	5	5	5	5	4	4	4	4	4
5500	5	4	4	4	4	4	4	4	4	4	3

Table 5E: Engines Greater Than 1,500 and Less Than or Equal to 2,000 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
50	10	9	8	8	8	7	7	7	6	5	5
100	10	9	8	8	8	7	7	7	6	5	5
150	10	9	8	8	8	7	7	7	6	5	5
200	10	9	8	8	8	7	7	7	6	5	5
300	10	9	8	8	8	7	7	7	6	5	5
400	10	9	8	8	8	7	7	7	6	5	5
500	10	9	8	8	8	7	7	7	6	5	5
600	10	9	8	8	8	7	7	7	6	5	5
700	9	8	8	8	8	7	7	7	6	5	5
800	9	8	8	8	8	7	7	7	6	5	5
900	9	8	8	8	8	7	7	7	6	5	5
1000	9	8	8	8	8	7	7	7	6	5	5
1100	9	8	8	8	8	7	7	7	6	5	5
1200	8	8	7	7	7	7	7	7	6	5	5
1300	8	8	7	7	7	7	7	6	6	5	5
1400	8	8	7	7	7	7	7	6	6	5	5
1500	8	8	7	7	7	7	7	6	5	5	5
1600	8	8	7	7	7	7	7	6	5	5	5
1700	8	8	7	7	7	7	7	6	5	5	5
1800	8	8	7	7	7	7	7	6	5	5	5
1900	7	7	7	7	7	7	6	6	5	5	5
2000	7	7	7	7	7	7	6	6	5	5	5

Table 5E: Engines Greater Than 1,500 and Less Than or Equal to 2,000 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
2100	7	7	6	6	6	6	6	6	5	5	5
2200	7	7	6	6	6	6	6	6	5	5	4
2300	7	7	6	6	6	6	6	6	5	5	4
2400	7	7	6	6	6	6	6	5	5	5	4
2500	6	6	6	6	6	6	6	5	5	4	4
2600	6	6	6	6	6	6	5	5	5	4	4
2700	6	6	6	6	6	5	5	5	5	4	4
2800	6	6	6	6	5	5	5	5	4	4	4
2900	6	6	5	5	5	5	5	5	4	4	4
3000	6	5	5	5	5	5	5	5	4	4	4
3500	5	5	5	5	5	4	4	4	4	4	3
4000	4	4	4	4	4	4	4	4	4	3	3
4500	4	4	4	4	4	4	4	3	3	3	3
5000	4	4	4	3	3	3	3	3	3	3	3
5500	3	3	3	3	3	3	3	3	3	3	3

Table 5F: Engines Greater Than 2,000 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
50	7	6	6	6	5	5	5	5	4	4	4
100	7	6	6	6	5	5	5	5	4	4	4
150	7	6	6	6	5	5	5	5	4	4	4
200	7	6	6	6	5	5	5	5	4	4	4
300	7	6	6	6	5	5	5	5	4	4	4
400	7	6	6	6	5	5	5	5	4	4	4
500	7	6	6	6	5	5	5	5	4	4	4
600	7	6	6	6	5	5	5	5	4	4	4
700	7	6	6	6	5	5	5	5	4	4	4
800	6	6	6	6	5	5	5	5	4	4	4
900	6	6	6	6	5	5	5	5	4	4	4
1000	6	6	6	6	5	5	5	5	4	4	4
1100	6	6	6	6	5	5	5	5	4	4	4
1200	6	6	6	6	5	5	5	5	4	4	4
1300	6	6	6	6	5	5	5	5	4	4	4
1400	6	6	6	6	5	5	5	5	4	4	4
1500	6	6	6	6	5	5	5	5	4	4	4
1600	6	6	6	6	5	5	5	5	4	4	4
1700	6	6	6	6	5	5	5	5	4	4	4
1800	6	6	6	6	5	5	5	5	4	4	4
1900	6	6	6	5	5	5	5	5	4	4	4

Table 5F: Engines Greater Than 2,000 hp
Generic Modeling Results

Distance (ft)	8 ft height G_{hourly} (µg/m³)/ (lb/hr)	10 ft height G_{hourly} (µg/m³) /(lb/hr)	12 ft height G_{hourly} (µg/m³) /(lb/hr)	14 ft height G_{hourly} (µg/m³) /(lb/hr)	16 ft height G_{hourly} (µg/m³) /(lb/hr)	18 ft height G_{hourly} (µg/m³) /(lb/hr)	20 ft height G_{hourly} (µg/m³) /(lb/hr)	25 ft height G_{hourly} (µg/m³) /(lb/hr)	30 ft height G_{hourly} (µg/m³) /(lb/hr)	35 ft height G_{hourly} (µg/m³) /(lb/hr)	40 ft height G_{hourly} (µg/m³) /(lb/hr)
2000	6	6	6	5	5	5	5	5	4	4	3
2100	5	5	5	5	5	5	5	5	4	4	3
2200	5	5	5	5	5	5	5	4	4	4	3
2300	5	5	5	5	5	5	4	4	4	4	3
2400	5	5	5	5	5	5	4	4	4	4	3
2500	5	5	5	5	4	4	4	4	4	4	3
2600	5	5	5	5	4	4	4	4	4	3	3
2700	5	5	5	5	4	4	4	4	4	3	3
2800	5	5	5	4	4	4	4	4	4	3	3
2900	4	4	4	4	4	4	4	4	4	3	3
3000	4	4	4	4	4	4	4	4	3	3	3
3500	4	4	4	4	4	4	3	3	3	3	3
4000	3	3	3	3	3	3	3	3	3	3	3
4500	3	3	3	3	3	3	3	3	3	2	2
5000	3	3	3	3	3	3	3	2	2	2	2
5500	3	3	3	3	3	2	2	2	2	2	2

Table 6: Engine and Turbine Emission and Operational Standards

Engine Type	Engine Size	Manufacture Date	NOx (g/bhp-hr)	CO (g/bhp-hr)	VOC (g/bhp-hr)
Rich-burn, Non-emergency, Spark-ignited	less than 500 hp	All dates	no standard	no standard	no standard
	greater than or equal to 500 hp	Before January 1, 2011	2	3	no standard
	greater than or equal to 500 hp	On or after January 1, 2011	1	3	1
	After January 1, 2020 and regardless of manufacture date, no rich-burn engine greater than or equal to 500 hp authorized by this rule shall emit NOX in excess of 1.0 g/bhp-hr. The commission reserves the right to re-evaluate the upgrade requirement if EPA promulgates any standards for existing engines.				
Lean-burn, 2SLB, Non-emergency, Spark-ignited	less than 500 hp	All dates	no standard	no standard	no standard
	greater than or equal to 500 hp	Before September 23, 1982	8	3	no standard
		Before June 18, 1992 and rated less than 825 hp	8	3	no standard
		On or after September 23, 1982, but prior to June 18, 1992 and rated 825 hp or greater	5	3	no standard
		On or after June 18, 1992 but prior to July 1, 2010	2.0 except under reduced speed, 80-100% of full torque conditions may be 5.0	3	no standard
		On or after July 1, 2010	1	3	1

Table 6: Engine and Turbine Emission and Operational Standards

Engine Type	Engine Size	Manufacture Date	NOx (g/bhp-hr)	CO (g/bhp-hr)	VOC (g/bhp-hr)
Lean-burn, 4SLB, Non-emergency, Spark-ignited, and Dual-fuel	less than 500 hp	Before July 1, 2008	no standard	no standard	no standard
		On or after July 1, 2008	2	3	1
	greater than or equal to 500 hp	Before September 23, 1982	5.0 except under reduced speed, 80-100% of full torque conditions may be 8.0	3	no standard
		Before June 18, 1992 and rated less than 825 hp	5.0 except under reduced speed, 80-100% of full torque conditions may be 8.0	3	no standard
		On or after September 23, 1982, but prior to June 18, 1992 and rated 825 hp or greater	5	3	no standard
		On or after June 18, 1992 but prior to July 1, 2010	2.0 except under reduced speed, 80-100% of full torque conditions, may be 5.0	3	no standard
		On or after July 1, 2010	1	3	1
	After January 1, 2030 and regardless of manufacture, no 4-stroke lean-burn engines authorized by this rule shall emit NO_x in excess of 2.0 grams per brake horsepower per hour (g/bhp-hr). The commission reserves the right to re-evaluate the upgrade requirement if EPA promulgates any standards for existing engines.				
Turbines	Turbines shall not emit greater than 25 ppmvd @15% NOx and 50 ppmvd @15% O2 for CO.				

Table 7: Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Exclusions	Control Systems	Control device monitoring and records are required only where the device is necessary for the site to meet emission rate limits
Sampling General	When Applicable Ports and Platforms, Methods, Notifications and Timing	(A) If necessary, sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in “Chapter 2, Stack Sampling Facilities.” Engines and other facilities which are physically incapable of having platforms are excluded from this requirement. For control devices with effectiveness requirements only, appropriate sampling ports shall also be installed upstream of the inlet to control devices or controlled recovery systems with control efficiency requirements. Alternate sampling facility designs may be submitted for written approval by the Texas Commission on Environmental Quality (TCEQ) Regional Director or his designee. (B) Where stack testing is required, Sampling shall be conducted within 180 days of the change that required the registration, in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods. Unless otherwise specified, each performance test shall consist of 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. Where appropriate, sampling shall occur as three one-hour test runs and then averaged to demonstrate compliance with the limits of this authorization. Any deviations from those procedures must be approved in writing by the TCEQ Regional Director or his designee prior to sampling. (C) The Regional Office shall be afforded the opportunity to observe all such sampling. (D) The holder of this authorization is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. (E) The TCEQ Regional Office that has jurisdiction over the site shall be contacted as soon as any testing is scheduled, but not less than 30 days prior to sampling. The region shall have discretion to amend the 30 day prior notification. Except for engine testing and liquid/gas analysis sampling, all other sampling shall include an opportunity for the appropriate regional office to schedule a pretest meeting. The notice shall include: (i) Date for pretest meeting, if required; (ii) Date sampling will occur; (iii) Name of firm conducting sampling; (iv)Type of sampling equipment to be used; (v) Method or procedure to be used in sampling; (vi) Procedure used to determine operating rates or other relevant parameters during the sampling period; (vii) parameters to be documented during the sampling event; (viii) any proposed deviations to the prescribed sampling methods. If held, the purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. (F) Within 60 days after the completion of the testing and sampling required herein, one original and one copy of the sampling reports shall be sent to the Regional Office.

Table 7: Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Sampling General (cont'd)	When Applicable Ports and Platforms, Methods, Notifications and Timing (cont'd)	(G) When sampling is required, all Quality Assurance/Quality Control shall follow 30 TAC Chapter 25 National Environmental Laboratory Accreditation Conference accreditation requirements.
Fugitive monitoring and LDAR (cont'd)	Analyzers	An approved gas analyzer or other approved detection monitoring device used for the volatile organic compound fugitive inspection and repair requirement is a device that conforms to the requirements listed in Title 40 CFR §60.485(a) and (b), or is otherwise approved by the Environmental Protection Agency as a device to monitor for VOC fugitive emission leaks. Approved gas analyzers shall conform to requirements listed in Method 21 of 40 CFR Part 60, Appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured. In lieu of using a hydrocarbon gas analyzer and EPA Method 21, the owner or operator may use the Alternative Work Practice in 40 CFR Part 60, §60.18(g) - (i). The optical gas imaging instrument must meet all requirements specified in 40 CFR §60.18(g) - (i), except the annual Test Method 21 requirement in 40 CFR §60.18(h)(7) and the reporting requirement in 40 CFR §60.18(i)(5) do not apply.

Table 7: Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Verify composition of materials	All site-specific gas or liquid analyses	Reports necessary to verify composition (including hydrogen sulfide (H_2S) at any point in the process. All analyses shall be site specific or a representative sample may be used to estimate emissions if all of the parameters in the gas and liquid analysis protocol provided by the commission are met. An analysis shall be performed within 90 or 180 days of initial start of operation or implementation of a change which requires registration. When new streams are added to the site and the character or composition of the streams change and cause an increase in authorized emissions, or upon request of the appropriate Regional office or local air pollution control program with jurisdiction, a new analysis will need to be performed. Analysis techniques may include, but are not limited to, Gas Chromatography (GC), Tutweiler, stain tube analysis, and sales oil/condensate reports. These records will document the following: (A) H_2S content (B) flow rate; (C) heat content; or (D) other characteristic including, but not limited to: (i) American Petroleum Institute gravity and Reid vapor pressure (RVP);(ii) sales oil throughput; or (iii) condensate throughput. Laboratory extended VOC GC analysis at a minimum to C10+ and H_2S analysis for gas and liquids for the following shall be performed and used for emission compliance demonstrations: (A) Separator at the inlet; (B) Dehydration Unit / Glycol Contactor prior to dehydrator; (C) Amine Unit prior to sweetening unit; (D) Separator dumping to gunbarrel or storage tank; (E) Tanks for liquids and vapors; or (F) Produced Water or Brine/Salt Water at the inlet prior to storage.

Table 7: Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Engines and Turbines	Initial Sampling of (i)Any engine greater than 500 horsepower; (ii) Any turbine	Perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere (including but not limited to nitrogen oxide (NO_x), carbon monoxide (CO), and oxygen (O_2). Each combustion facility shall be tested at a minimum of 50% of the design maximum firing rate of the facility. Each tested firing rate shall be identified in the sampling report. Sampling shall occur within 180 days after initial startup of each unit. Additional sampling shall occur as requested by the TCEQ Regional Director. If there are multiple engines at an oil and gas sites (OGS) of identical model, year, and control system, sampling may be performed on 50% of the units and used for compliance demonstration of all identical units at the OGS. The remaining 50% if the units not initially tested must be tested during the next biennial testing period. This sampling is not required upon initial installation at any location if the engine or turbine was previously installed and tested at any location in the United States and the test performed conformed with EPA Reference Methods. Regardless of engine location, records of performance testing, or relied upon sampling reports, must remain with each specific engine for a minimum of five years unless records are unavailable and the permit holder performs the initial sampling on-site. No one may claim records are unavailable for the time period in which an engine is at the site which is authorized by this section. This testing is not required for emergency engines unless requested by the TCEQ Regional Director. Idle engines do not need to be re-started only for the purpose of completing required testing. If biennial testing is required for an engine that is re-started for production purposes, the biennial testing is required within 30 days after re-starting the engine.
Engines	Periodic Evaluation	The following is applicable to sites with federal operating permits only: (A) For any engine with a NO_x standard under Table 6 of this subsection, conduct evaluations of each engine performance semiannually after initial compliance testing by measuring the NO_x and CO content of the exhaust. Tests shall occur more than 90 days apart. Individual engines shall be subject to the semiannual performance evaluation if they were in operation for 2,000 hours or more during the six-month (semiannual) period. If an engine is not operating, the permit holder may delay the test until such time as the engine is expected to run for more than 14 days. Idled engines do not need to be re-started only for the purpose of completing required testing. (B) The use of portable analyzers specifically designed for measuring the concentration of each contaminant in parts per million by volume is acceptable for these evaluations. The portable analyzer shall be operated at minimum in accordance with the manufacturer's instructions. The operator may modify the procedure if it does not negatively alter the accuracy of the analyzer. Also, colorimetric testing (stain tubes) maybe used in these periodic evaluations. The NO_x and CO emissions then shall be converted into units of grams per horsepower-hour and pounds per hour. (C) Emissions shall be measured and recorded in the as-found operating condition, except no compliance determination shall be established during startup, shutdown, or under breakdown conditions

Table 7: Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Engines (cont'd)	Periodic Evaluation (cont'd)	(D) In lieu of the above mentioned periodic monitoring for engines and biennial testing, the holder of this permit may install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the concentrations of NO_X and CO from any engine, turbine, or other external combustion facility. Diluents to be measured include O_2 or CO_2. Except for system breakdowns, repairs, calibration checks, zero and span adjustments, and other quality assurance tests, the Continuous Emission Monitoring Systems (CEMS) shall be in continuous operation and shall record a minimum of four, and normally 60, approximately equally spaced data points for each full hour. The NO_X and diluents CEMS shall be operated according to the methods and procedures as set out in 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3. The CO CEMS shall be operated according to the methods and procedures as set out in 40 CFR Part 60, Appendix B, Performance Specifications 4, 4A, or 4B. CEMS shall follow the quality assurance requirements of Appendix F except that Cylinder Gas Audits may be conducted in all four calendar quarters in lieu of the annual Relative Accuracy Test Audit. A CEMS with downtime due to breakdown or repair of more than 10% of the facility operating time for any calendar shall be considered as a defective CEMS and the CEMS shall be replaced within 2 weeks. volatile organic compound fugitive inspection
Engines and Turbines	Biennial Testing Any engine greater than 500 horsepower or any turbine	Every two years starting from the completion date of the Initial Compliance Testing, any engine greater than 500 horsepower or any turbine shall be retested according to the procedures of the Initial Compliance Testing. Retesting shall occur within 90 days of the two-year anniversary date. If a facility has been operated for less than 2000 hours during the two-year period, it may skip the retesting requirement for that period. After biennial testing, any engine retested under the above requirements shall resume periodic evaluations within the next six calendar months (January to June or July to December). If biennial testing is required for an engine that is re-started for production purposes, the biennial testing shall be performed within 45 days after re-starting the engine.
Oxidation or Combustion Control Device	Initial Sampling and Monitoring for performance for VOC, Benzene, and H_2S	Stack testing when a company wants to establish efficiencies of 99% or greater, must be coordinated and approved. Sampling is required for VOC, benzene and H_2S at Region's discretion. The thermal oxidizer (TO) must have proper monitoring and sampling ports installed in the vent stream and the exit to the combustion chamber, to monitor and test the unit simultaneously. The temperature and oxygen measurement devices shall reduce the temperature and oxygen concentration readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ±0.75% of the temperature being measured expressed in degrees Celsius or ±2.5ºC.

Table 7: Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Oxidation or Combustion Control Device (cont'd)	Initial Sampling and Monitoring for performance for VOC, Benzene, and H_2S (cont'd)	The oxygen or carbon monoxide analyzer shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified Performance Specification No. 3 or 4A, 40 CFR Part 60, Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days. The oxygen or carbon monoxide analyzer shall be quality-assured at least semiannually using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, §5.1.2, with the following exception: a relative accuracy test audit is not required once every four quarters (i.e., two successive semiannual CGAs may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive semiannual audits shall occur no closer than four months. Necessary corrective action shall be taken for all CGA exceedances of ±15 percent accuracy and any continuous emissions monitoring system downtime in excess of 5% of the incinerator operating time. These occurrences and corrective actions shall be reported to the appropriate TCEQ Regional Director on a quarterly basis. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director. Quality assured or valid data of oxygen or carbon monoxide analyzer must be generated when the TO is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, inaccurate data, repair, maintenance, or calibration may be exempted provided it does not exceed 5% of the time (in minutes) that the oxidizer operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

Table 7: Sampling and Demonstrations of Compliance

Category	Description	Specifications and Expectations
Vapor Recovery Systems	Sampling to determine effectiveness	IVRU. The testing requires that a sample is analyzed using a PID and Method 21 or modified Method 21. Both the inlet and the outlet streams would need to be tested, and the difference would determine the efficiency. The equation is as follows: based on PID results, the mathematical equation to determine efficiency is *1-(inlet-outlet)/inlet*. This testing needs to be performed and results recorded to receive 95% control efficiency no longer than: vacuum truck emissions: after 20 loads have been pulled through the IVRU, for tanks: Produced Water – Monthly, Crude – Bi-Monthly, Condensate – Weekly. This testing needs to be performed and results recorded to receive 98% control efficiency no longer than: vacuum truck emissions: after 15 loads have been pulled through the IVRU, for tanks: Produced Water – 3 weeks, Crude – 10 days, Condensate – 5 days.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Site Production or Collection	natural gas, oil, condensate, and water production records	Site inlet and outlet gas volume and sulfur concentration, daily gas/liquid production and load-out from tanks
Equipment and facility summary	Current process description	Accurate and detailed plot plan with property line, off-site receptors, and all equipment on-site or drawings with sufficient detail to confirm all authorized facilities meet the requirements including, but not limited to, emission estimates, impact review, and registration scope.
Equipment specifications	Process units, tanks, vapor recovery systems; flares; thermal oxidizers; and reboiler control devices	A copy of the registration and emission calculations including the stationary equipment sizes and/or capacities and manufacturer's specifications and programs to maintain performance, with the plan and records for routine inspection, cleaning, repair and replacement.
Physical Inspection	Fugitive Component Check	A record of the component count shall be maintained. A record of the date each quarterly inspection was made and the date that components were found leaking and when repaired or the date of the next planned shutdown.
Voluntary LDAR Program	Details of fugitive component monitoring plan, and LDAR results, including QA, QC	The following records are required where a company uses an LDAR program to reduce the potential fugitive emissions from the site to meet emission limitations or certify fugitive emissions. (A) A monitoring program plan must be maintained that contains, at a minimum, the following information: (i) an accounting of all the fugitive components by type and service at the site with the total uncontrolled fugitive potential to emit estimate; (ii) identification of the components at the site that are required to be monitored with an instrument or are exempt with the justification, note the following can be used for this purpose: (a) piping and instrumentation diagram (PID); or (b) a written or electronic database.; (iii) the monitoring schedule for each component at the site with difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), identified and justified, note if an unsafe-to-monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe-to-monitor times and a record of the plan to monitor shall be maintained; and (iv) the monitoring method that will be used (audio, visual, or olfactory (AVO) means; Method 21; the Alternative Work Practice in 40 CFR §60.18(g) - (i)); (v) for components where instrument monitoring is used, information clarifying the adequacy of the instrument response; (vi) the plan for hydraulic or pressure testing or instrument monitoring new and reworked components.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Voluntary LDAR Program (cont'd)	Details of fugitive component monitoring plan, and LDAR results, including QA, QC (cont'd)	(B) Records must be maintained of all monitoring instrument calibrations. (C) Records must be maintained for all monitoring and inspection data collected for each component required to be monitored with a Method 21 portable analyzer that include the type of component and the monitoring results in ppmv regardless if the screening value is above or below the leak definition. (D) Leaking components must be tagged and a leaking-components monitoring log must be maintained for all leaks greater than the applicable leak definition (i.e.10,000 ppmv, 2000 ppmv, or 500 ppmv) of VOC detected using Method 21, all leaks detected by AVO inspection, and all leaks found using Alternative Work Practice specified in 40 CFR §60.18(g)-(i). The log must contain, at a minimum, the following: (i) the method used to monitor the leaking component (audio, visual, or olfactory inspection; Method 21; or the Alternative Work Practice in 40 CFR §60.18(g) - (i)); (ii) the name of the process unit or other appropriate identifier where the component is located; (iii) the type (e.g., valve or seal) and tag identification of component; (iv) the results of the monitoring (in ppmv if a Method 21 portable analyzer was used); (v) the date the leaking component was discovered;(vi) the date that a first attempt at repair was made to a leaking component; (vii) the date that a leaking component is repaired; (viii) the date and instrument reading of the recheck procedure after a leaking component is repaired; and (ix) the leaks that cannot be repaired until turnaround and the date that the leaking component is placed on the shutdown list. (E) If the owner or operator is using the Alternative Work Practice specified in 40 CFR §60.18(g) - (i), the records required by 40 CFR §60.18(i)(4). (F) A record of the monitored value any open-ended line or valve for which a repair or replacement is not completed within 72 hours and monitoring in lieu of covering is chosen. (G) Audio, visual and olfactory inspections shall occur quarterly for BMP and at least weekly in concert with required instrument monitoring programs by operating personnel walk-through and be recorded. (H) A check of the reading for any pressure-sensing device to verify rupture disc integrity shall be performed weekly.
Minor Changes	Additions, changes or replacement of components or facilities	Records showing all replacements and additions, including summary of emission type and quantities for a rolling 60-month period.
Equipment Replacement	Like-Kind replacement	Records on equipment specifications and operations, including summary of emissions type and quantity.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Process Units	Glycol Dehydration Units	For emission estimates, the worst-case combination of parameters resulting in the greatest emission rates must be used. If worst-case parameters are not used, then glycol dehydrator unit monitoring records include dry gas flow rate, absorber pressure and temperature, glycol type, and circulation rate recorded weekly. If worst-case parameters are not used, then in addition to weekly unit monitoring where control of flash tank or reboiler emissions are required to meet the emission limitations of the section and emissions are certified, the following control monitoring requirements apply weekly: flash tank temperature and pressure, any reboiler stripping gas flow rate, and condenser outlet temperature. VRU, flare, or thermal oxidizer control or reboiler fire box used for control must comply with the monitoring and recordkeeping for those devices. Where all emissions from the flash tank and the reboiler or reboiler condenser vent are directed to a VRU, flare, or thermal oxidizer designed to be on-line at all times the glycol dehydrator is in operation, the control system monitoring for the glycol dehydrator is not required.
	Amine units	Amine units may simply retain site production or inlet gas records if all sulfur compounds in the inlet are assumed to be emitted. Where only partial removal of the inlet sulfur is assumed, for emission estimates, the worst-case combination of parameters resulting in the greatest emission rates must be used. If worst-case parameters are not used, then records of the amine solution contactor pressure, temperature and pump rate. Where the waste gas is vented to combustion control, the requirements of the control device utilized should be noted.
Boilers, Reboilers, Heater-Treaters, and Process Heaters	Combustion	Records of Operational Monitoring and Testing Records Records of the hours of operation of every combustion device of any size by the use of a process monitor such as a run time meter, fuel flow meter, or other process variable that indicates a unit is running unless, in the registration for the facility, the emissions from the facility were calculated using full-year operation at maximum design capacity in which case no hours of operation records must be kept.
Internal Combustion Engines	Combustion	Records of Appropriate Operational Monitoring and Testing Records. Records of the hours of operation of every combustion device and engine of any size by the use of a process monitor such as a run time meter run time meter, fuel flow meter, or other process variable that indicates a unit is running. The owner or operator may choose to undergo testing and re-testing at the most frequent intervals identified in Table 7 in lieu of installing a process monitor and recording the hours of operation. If an engine has no testing requirements in Table 7 of this subsection, no records of the hours of operation must be kept. See fuel records below
Gas Fired Turbines	Combustion	Records of Appropriate Operational Monitoring and Testing Records Records of the hours of operation of every turbine greater than 500 hp by the use of a process monitor such as a run time meter, fuel flow meter, or other process variable that indicates a unit is running unless the permit holder determined emissions from the facility assuming full year operation at maximum design capacity in which case no hours of operation records must be kept.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Fuel Records	VOC and Sulfur Content	A fuel flow meter is not required if emissions are based on maximum fuel usage for 8,760 hr/yr. There are no specific requirements for allowable VOC content of fuel. If field gas contains more than 1.5 grains (24 ppmv) of H_2S or 30 grains total sulfur compounds per 100 dry standard cubic feet, the operator shall maintain records, including at least quarterly measurements of fuel H_2S and total sulfur content, which demonstrate that the annual SO_2 emissions do not exceed limitations
Tanks/Vessels	Color/Exterior	Records demonstrating design, inspection, and maintenance of paint color and vessel integrity.
Tanks/Vessels	Emission and emission potential	Maintain a record of the material stored in each tank/vessel that vents to the atmosphere and the maximum vapor pressure used to establish the maximum potential short-term emission rate. Where pressurized liquids can flash in the tank/vessel monitor and record weekly the maximum fluid pressure that can enter the tank/vessel. Records that tank/vessel hatches and relief valves are properly sealed when tank/vessel is directed to control and after loading events (as needed).
Truck Loading	All Types	Records indicating type of material loaded, amount transferred, method of transfer, condition of tank truck before loading.
	Vacuum Trucks	Note loading with an air mover or vacuum. No additional record is needed where a vacuum truck uses only an on-board or portable pump to push material into the truck.
	Controlled Loading	Where control is required note the control that is utilized.
	Tank Truck Certification	Records of tank truck certifications and testing. Records are only required if connection to control is used and credit is claimed for certified truck use.
Cooling Tower	Design data	Records shall be kept of maximum cooling water circulation rate and basis, maximum total dissolved solids allowed as maintained through blowdown, and towers design drift rate. These records are only required if the cooling system is used to cool process VOC streams or control from drift eliminators or minimizing solids content is needed to meet particulate matter emission limits.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Cooling Tower cont'd	VOC Leak Monitoring, Maintenance and Repair	Cooling tower heat exchanger systems cooling process VOC streams are assumed to have potential uncontrolled leaks repaired when obviated by process problems. If controlled emissions (systems monitored for leaks) are required to meet emission rate limits then the cooling tower water shall be monitored monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Commission. Cooling water VOC concentrations above 0.08 parts per million by volume (ppmv) indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs. Records must be maintained of all monitoring data and equipment repairs.
	Particulate Monitoring, Maintenance and Repair.	Inspect and record integrity of drift eliminators annually, repairing as necessary. If a maximum solids content must be maintained through blowdowns to meet particulate emission rate limits, cooling water shall be sampled for total dissolved solids (TDS) once a month prior to any periodic blowdowns and maintain records of the monitoring results and all corrective actions.
Planned Maintenance, Startup, and Shutdown (MSS)	Alternate Operational Scenarios and Redirection of Vent Streams	Records of redirection of vent streams during primary operational unit or control downtime, including associated alternate controls, releases and compliance with emission limitations.
Planned MSS	Pigging, Purging and Blowdowns	Pigging records, including catcher design, date, emission estimate to atmosphere and to control, and when controlled, the control device. Note: where a control device is necessary to meet emission limitations, the device is subject to the requirements of section (e) of this section and record requirements of this table. Purging and blowdown records, including the volume and pressure and a description of the piping and equipment involved, the date, emission estimate to atmosphere and to control, and when controlled, the control device. Where purging to control to meet a lower concentration before purging to atmosphere is conducted the concentrations of VOC, BTEX or H_2S, as appropriate, must be measured and recorded prior to purging to atmosphere. Note where a control device is necessary to meet emission limitations the device is subject to the requirements of section (e) of this section and record requirements of this table.
Planned MSS	Temporary Facilities for Bypass, and Degassing and Purging	Temporary facility records, including a description and estimate of potential fugitive emissions from temporary piping, size and design of facilities (e.g. tanks or pan volume, fill method, and throughput; engine horse power, fuel and usage time, flare tip area, ignition method, and heating value assurance method; etc.) and the date and emission estimate to atmosphere and to control for their use

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Planned MSS	Management of Sludge from Pits, Ponds, Sumps and Water Conveyances	Records including the source and stream identification, removal plan, emission estimate that are direct to atmosphere and through a control. Note: where a control device is necessary to meet emission limitations, the device is subject to the requirements of section (e) of this section and record requirements of this table.
Planned MSS	Degassing or Purging of Tanks, Vessels, or Other Facilities	Records including: (a) th EPN and description of vessels and equipment degassed or purged, with; (b) the material, volume and pressure (if applicable); (c) the volume of purge gas used; (d) a description of the piping and equipment involved; (e) clarifying estimates for a coated surface or heel; (f) the date; (g) emission estimate to atmosphere and to control; (h) when controlled, the control device; and (i) where purging to a control device to reduce concentrations before purging to atmosphere, the concentrations of VOC, BTEX or H_2S as appropriate must be measured and recorded prior to purging to atmosphere. (j) the permit holder shall maintain a record of the estimated calculation demonstrating the benefit of a delay in repair and provide upon request to a regulatory agency with jurisdiction.
Planned MSS	Records	Records or copies of work orders, contracts, or billing by contractors for the following activities shall be kept at the site, or nearest manned site, and made available upon request: • Routine engine component maintenance including filter changes, oxygen sensor replacements, compression checks, overhauls, lubricant changes, spark plug changes, and emission control system maintenance; • Boiler refractory replacements and cleanings; • Heater and heat exchanger cleanings; • Turbine hot section swaps; • Pressure relief valve testing, calibration of analytical equipment; instrumentation/analyzer maintenance; replacement of analyzer filters and screens.
Control Devices	Flare Monitoring	Basic monitoring requires the flare and pilot flame to be continuously monitored by a thermocouple or an infrared monitor. Where an automatic ignition system is employed, the system shall ensure ignition when waste gas is present. The time, date, and duration of any loss of flare, pilot flame, or auto-ignition shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications. A temporary, portable or backup flare used less than 480 hours per year is not required to be monitored. Records of hours of use are required for all units and on-line time must be considered when emission estimates and actual emissions inventories are calculated.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Control Devices	Thermal Oxidation and Vapor Combustion Performance Monitoring Basic	Control device monitoring and records are required only where the device is necessary for the site to meet emission rate limits. Basic monitoring is a thermocouple or infrared monitor that indicates the device is working. Records of hours of use are required for all units and on-line time must be considered when emission estimates and actual emissions inventories are calculated.
	Intermediate	Intermediate monitoring and records include continuously monitoring and recording temperature to insure the control device is working when waste gas can be directed to the device and showing compliance with the 1400 degrees Fahrenheit if applicable.
	Enhanced	Enhanced monitoring requires continuous temperature and oxygen or carbon monoxide monitoring on the exhaust with six minute averages recorded to show compliance with the temperature requirement and the design oxygen range or a CO limit of 100 ppmv. Some indication of waste gas flow to the control device, like a differential pressure, flow monitoring or valve position indicator, must also be continuously recorded, if the flow to the control device can be intermittent.
	Alternate Monitoring	Records of stack testing and the monitored parameters during the testing shall be maintained to allow alternate monitoring parameters and limits.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Control Devices	Vapor Capture and Recovery	Records of hours of use are required for all units and on-line time must be considered when emission estimates and actual emissions inventories are calculated. mVRU Basic Design Function Record: Record demonstrating the unit captures vapor and includes a sensing device set to capture this vapor at peak intervals. Additional Design Parameter Record: Record demonstrating additional design parameters are utilized such as additional sensing equipment, a properly designed bypass system, an appropriate gas blanket, an adequate compressor selection, and the ability to vary the drive speed for units utilizing electric driven compressors mVRUs that are used at oil and gas sites to control emissions may claim up to 100% control efficiency provided records of basic and additional design functions and parameters of a VRU along with appropriate records listed in Table 8 are satisfied. mVRUs may claim up to 99% control efficiency for units where records of basic and additional design functions are satisfied and parameters listed in Table 8 are not satisfied. mVRUs may claim up to 95% control efficiency for units where records listed in Table 8 are not satisfied. lVRU The record of proper design must be kept to demonstrate how the unit was designed and for what capacity. The record of liquid replacement must be kept, along with the calculations for demonstrating that the VOC to liquid ratio has been maintained. Additionally, the system must be tested to demonstrate the efficiency. This testing needs to be performed and results recorded to receive 95% control efficiency no longer than: vacuum truck emissions: after 20 loads have been pulled through the lVRU, for tanks: Produced Water – Monthly, Crude – Bi-Monthly, Condensate –Weekly. This testing needs to be performed and results recorded to receive 98% control efficiency no longer than: vacuum truck emissions: after 15 loads have been pulled through the lVRU, for tanks: Produced Water – 3 weeks, Crude – 10 days, Condensate – 5 days. All valves must be designed and maintained to prevent leaks. All hatches and openings must be properly gasketed and sealed with the unit properly connected. Downtime is limited to a rolling 12 month average of 5% or 432 hr/per rolling 12 months and waste vents shall be redirected to an appropriate control device if possible during down time unless otherwise certified for alternate operating hours.

Table 8: Monitoring and Records Demonstrations

Category	Description	Record Information
Control Devices	Control with process combustion or heating devices (e.g. reboilers, heaters & furnaces)	Basic monitoring is any continuous monitor that indicates when the flame in the device is on or off (other than partial operational use). The following are effective basic options: a fire box temperature monitor, rising or steady process temperature monitor, CO monitor, primary fuel flow monitor, fire box pressure monitor or equivalent. Enhanced monitoring for 91 to 99% control, where waste gas is not introduced as the primary fuel, must include the following monitors: continuous fire box or fire box exhaust temperature, and CO and O_2 monitoring, with at least 6 minute averages recorded. Additionally, enhanced monitoring where the waste gas may be flowing when the control device is not firing must show continuous disposition of the waste gas streams, including continuous monitoring of flow or valve position through any potential by-pass to the control where more than 50% run time of control is claimed.

Table 9: Fugitive Component Leak Detection and Repair (LDAR) Control Program Table

Category	Description
General: All fugitive components at an OGS registered with this rule need to be evaluated for potential emissions with the Oil and Gas factors for impact analysis. The requirements of this table and requirements regarding fugitive component monitoring in Tables 7 and 8 of this subsection must be met to apply LDAR control program reductions in this table. Compliance with these requirements does not assure compliance with requirements of NSPS, NESHAPS or MACT or State Regulations, and does not constitute approval of alternate standards for those regulations.	**Note:** where the estimated emissions from an OGS registered with this rule can meet emission limitations of the rule without reductions of an LDAR control program, then any LDAR control program may be implemented without being subject to these requirements.
Exceptions *If implemented by the permit holder and relied upon for emission reductions, fugitive components must meet the minimum design, monitoring, control, and other emissions techniques listed in this Table unless the component's service meets one of the following exceptions:*	**Additional Details**
Nitrogen lines	No expectation to estimate emissions. Note this exemption does not include lines with nitrogen that has been used as a sweep gas.
Steam lines (non-contact)	No expectation to estimate emissions.
Flexible plastic tubing ≤ 0.5 inches in diameter, unless it is subject to monitoring by other state or federal regulations.	No expectation to estimate emissions, unless it is subject to monitoring by other state or federal regulations.
The operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure	No expectation to estimate emissions.
Mixtures in streams where the VOC has an aggregate partial pressure of less than 0.002 psia at 68 ^{o}F.	No expectation to estimate emissions.
Components containing only noble gases, inerts such as CO_2 and water or air contaminants not typically listed on a MAERT such as methane, ethane, and Freon.	No expectation to estimate emissions.
Instrument monitoring is not required for pipeline quality sweet natural gas	Uncontrolled Emissions should be estimated. Must meet pipeline quality specifications
Instrument monitoring is not required when the aggregate partial pressure or vapor pressure is less than 0.044 psia at 68 1F or at maximum process operating temperature.	Uncontrolled Emissions should be estimated. This applies at all times, unless a control efficiency is being claimed for instrument monitoring, in which case there must be a record supporting that the instrument could detect a leak.
Instrument monitoring is not required for waste water lines containing less than 1% VOC by weight and operated at ≤ 1 psig	Uncontrolled Emissions should be estimated.
Instrument monitoring is not required for cooling water line components	Emissions are estimated and associated with the cooling tower

Table 9: Fugitive Component Leak Detection and Repair (LDAR) Control Program Table

Category	Description
Instrument monitoring is not required for CO_2 lines after VOC is removed. This is referred to as Dry Gas lines in 40 CFR Part 60 Subpart KKK, and defined as a stream having a VOC weight percentage less than 4 %; a weighted average Effects Screening Level (ESL) of the combined VOC stream is > 3,500 Φg/m^3; and total uncontrolled emissions for all such sources is < 1 ton per year at any OGS.	Uncontrolled Emissions should be estimated as follows: The weighted average ESL_x for process stream, X, with multiple VOC species will be determined by: $ESL_x = fa/ESL_a + f_b/ESL_b + f_c/ESL_c +. + fn/ESL_n$ Where: n =total number of VOC species in process stream; ESL_n = the effects screening level in µg/m^3 for the contaminant being evaluated (published in the most recent edition of the TCEQ ESL list); f_n =the weight fraction of the appropriate VOC species in relation to all other VOC in process stream.
Requirements	**Additional Details and Reduction Credit**
Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.	
New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter.	
Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Where technically feasible new and reworked components may be screened for leaks with a soap bubble test within 8 hours of being returned to service in lieu of instrument testing. Adjustments shall be made as necessary to obtain leak-free performance.	
Components shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.	The weekly physical inspection applies a 30 % reduction credit to all fugitive components not subject to an instrument monitoring check.

Table 9: Fugitive Component Leak Detection and Repair (LDAR) Control Program Table

Category	Description
Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line so that no leakage occurs. Except during sampling, both valves shall be closed. If the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period; i. a cap, blind flange, plug, or second valve must be installed on the line or valve; or ii. the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once at the end of the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings 20 ppmv above background and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.	Application of this requirement eliminates the expectation to estimate emissions from open ended lines and valves.
Accessible valve shall be monitored by leak-checking for fugitive emissions quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If an unsafe-to-monitor valve is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe-to-monitor times. A difficult-to-monitor component for which quarterly monitoring is specified may instead be monitored annually. For relief valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity and checked weekly. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.	Sealless/leakless valves and relief valves equipped with rupture disc or venting to a control device and exempted from instrument monitoring are not counted in the fugitive emissions estimates. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements. See Table 8, Monitoring and Records Demonstrations to identify Difficult-to-monitor and unsafe-to-monitor valves.

Table 9: Fugitive Component Leak Detection and Repair (LDAR) Control Program Table

Category	Description
All pump, compressor and agitator seals shall be monitored quarterly with an approved gas analyzer or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be instrument monitored. Seal systems that prevent emissions may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure or seals degassing to vent control systems kept in good working order. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.	Pumps compressor and agitator seals that prevent leaks or direct emissions from the seals to control and are exempt from instrument monitoring are not counted in the fugitive emissions estimates. Equipment equipped with alarms would still be counted. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements.
Components found to be emitting VOC in excess of a 10,000 parts per million by volume (ppmv) leak definition using EPA Method 21, found by visual inspection to be leaking (e.g. whistling, dripping or blowing process fluids or emitting hydrocarbon or H_2S odors) or found leaking using the Alternative Work Practice in 40 CFR §60.18(g) - (i) shall be considered to be leaking and shall be repaired, replaced, or tagged as specified.	Components subject to routine instrument monitoring with an approved gas analyzer or the alternative work practice under this leak definition my claim a 75% emission reduction credit when evaluating controlled fugitive emission estimates. This reduction credit does not apply when evaluating uncontrolled emission or to any component not measured with an instrument quarterly. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements
Components found to be emitting VOC in excess of a 10,000 parts per million by volume (ppmv) leak definition using EPA Method 21, found by visual inspection to be leaking (e.g. whistling, dripping or blowing process fluids or emitting hydrocarbon or H_2S odors) or found leaking using the Alternative Work Practice in 40 CFR §60.18(g) - (i) shall be considered to be leaking and shall be repaired, replaced, or tagged as specified.	Components subject to routine instrument monitoring with an approved gas analyzer or the alternative work practice under this leak definition my claim a 75% emission reduction credit when evaluating controlled fugitive emission estimates. This reduction credit does not apply when evaluating uncontrolled emission or to any component not measured with an instrument quarterly. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements
Components **not** subject to an instrument monitoring program but found to be emitting VOC in excess of 10,000 ppmv leak definition using EPA Method 21, found by audio, visual or olfactory inspection to be leaking (e.g. whistling, dripping or blowing process fluids or emitting hydrocarbon or H_2S odors) shall be considered to be leaking and shall be repaired, replaced, or tagged as specified. All components are subject to monitoring when using the Alternative Work Practice in 40 CFR §60.18(g) - (i).	
Components shall be repaired in accordance with subsection (e)(6)(D) of this section.	Every reasonable effort shall be made to repair a leaking component. At manned sites, leaks shall be repaired within 30 days after the leak is found. At unmanned sites, leaks shall be repaired within 60 days after the leak is found. If the site has a planned shutdown schedule and the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate, the repair may be delayed until the next planned shutdown.

Table 9: Fugitive Component Leak Detection and Repair (LDAR) Control Program Table

Category	Description
Instrument monitoring and the reduction credit associated may not be applied to components where the gas saturation concentration of the fluid contained would be below the leak definition.	Where components fluids contain sufficient methane and ethane to allow detection by the instrument monitoring the components can be monitored and take the emission reduction credit.
Enhanced LDAR Monitoring Options	Any site may reduce the controlled fugitive emission estimates by including components not required to be monitored in the quarterly instrument monitoring program or applying the lower leak definition of the more stringent program as appropriate.
Component groups (e.g. flanges and connectors) may implement quarterly instrument monitoring using EPA Method 21 with a leak definition of 10,000 ppmv.	Quarterly monitoring at a leak definition of 10,000 ppmv would equate to a 75% emission reduction credit when evaluating controlled fugitive emission estimates for the instrument monitored component group.
A lower leak definition of 2000 ppmv may be applied to pump, compressor, and agitator seals when instrument monitoring using EPA Method 21 quarterly.	OGS using this lower leak definition for pump, compressor, and agitator seals may apply an 85% emission reduction credit for quarterly monitoring of those components. This reduction credit does not apply when evaluating uncontrolled emissions or to any component not measured with an instrument quarterly. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements.
A lower leak definition of 500 ppmv may be applied to any fugitive component group when instrument monitoring using EPA Method 21 quarterly.	OGS using this lower leak definition for valves, flanges or connectors may apply a 97% emission reduction credit; pumps may apply a 93% emission reduction credit; and compressor, agitator seals and other component groups may apply a 95% emission reduction credit for quarterly monitoring of those components. This reduction credit does not apply when evaluating uncontrolled emission or to any component not measured with an instrument quarterly. See Table 7 Sampling and Demonstrations of Compliance for Fugitive and LDAR Analyzer requirements.
Instrument Monitoring Frequency Adjustments	
After completion of the required quarterly inspections for a period of at least two years, the operator of the OGS facility may change the monitoring schedule as follows: (i) After two consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor and light liquid service; (ii) After five consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip three of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. If the owner or operator is using the Alternative Work Practice in 40 CFR §60.18(g) - (i), the alternative frequencies specified in this standard permit are not allowed.	At the discretion of the TCEQ Commission or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.

Adopted October 31, 2012 Effective November 22, 2012

Section 106.353. Temporary Oil and Gas Facilities.

Temporary separators, tanks, meters, and fluid-handling equipment used for a period not to exceed 90 operating days are permitted by rule, provided that all the following conditions of this section are satisfied.

(1) The purpose of the 90-day period is to test the content of a subsurface stratum believed to contain oil or gas and/or to establish the proper design of a permanent fluid-handling facility.

(2) Any sour gas produced during this test period shall be burned in a smokeless flare which meets the requirements of conditions of §106.492(1)(C) and (2)(A) and (C) of this title (relating to Flares).

(3) Total emissions of reduced sulfur compounds, excluding sulfur oxides, but including hydrogen sulfide, shall not exceed 4.0 pounds per hour and the emission point height of any vent of reduced sulfur compounds shall meet the requirements of §106.352(4) of this title (relating to Oil and Gas Production Facilities).

(4) Operation of a facility authorized by this section beyond the 90-day period shall not be allowed unless such operation is authorized under exemption from permitting or is permitted under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification). Adopted August 9, 2000 Effective September 4, 2000

Section 106.354. Iron Sponge Gas Treating Unit.

Iron sponge gas treating units processing streams containing less than 60 pounds per hour of hydrogen sulfide are permitted by rule provided that the following conditions of this section are satisfied:

(1) the plant is located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located;

(2) during replacement of the iron oxide impregnated chips, the unit is:

(A) isolated from the main system and the pressure is reduced to 0.5 psia or less through a gas-fired flare; or

(B) sulfur compound emissions to the atmosphere do not exceed one ton per replacement;

(3) the spent iron oxide chips being replaced are properly handled to avoid spontaneous ignition and avoid an odor nuisance. Adopted August 9, 2000 Effective September 4, 2000

Section 106.355. Pipeline Metering, Purging, and Maintenance.

Metering, purging, and maintenance operations for gaseous and liquid petroleum pipelines (including ethylene, propylene, butylene, and butadiene pipelines), between separate sites as defined in §122.10(29) of this title (relating to General Definitions), are permitted by rule provided that operations are conducted according to the following conditions of this section:

(1) emissions of volatile organic compounds, except equipment leak fugitive emissions, are burned in a smokeless flare; or

(2) total uncontrolled emissions of any air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen may not exceed one ton during any metering, purging, or maintenance operation. Uncontrolled butadiene emissions may not exceed 0.04 pounds per hour.

(3) venting of sweet, natural gas from pipelines is exempt from paragraphs (1), (2), and (5) of this section. Operators may not vent gas in areas of known or suspected ignition sources.

(4) if any maintenance activity cannot meet all of the requirements of this section, or the emissions are not authorized under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification), then activities must comply with §101.7 and §101.11 of this title (relating to Maintenance, Start-up and Shutdown Reporting, Recordkeeping, and Operational Requirements; and Demonstrations).

(5) records of all maintenance and purging emissions must be kept by the owner or operator of the facility or group of facilities at the nearest office within Texas having day-to-day operational control. These records must include all information required in this paragraph and in paragraphs (1) - (4) of this section. Resetting flow meters (changing orifice plates, etc.) and calibration of meters are considered routine operations under this

rule, not maintenance or purging. Records must identify the following for all maintenance and purging activities covered by this section:

(A) the type and reason for the activity;

(B) the processes and equipment involved;

(C) the date, time, and duration of the activity; and

(D) the air contaminants and amounts which are emitted as a result of the activity. Adopted October 10, 2001 Effective November 1, 2001

Section 106.359. Planned Maintenance, Startup, and Shutdown (MSS) at Oil and Gas Handling and Production Facilities.

(a) Applicability. This section applies to certain authorized oil and gas handling or production facilities or sites, and authorizes emissions from planned maintenance, startup, and shutdown (MSS) facilities and activities, and any associated emission capture and control facilities, if all of the applicable requirements of this section are met.

(1) This section does not apply to oil and gas handling or production facilities or sites authorized under §106.352(a) - (k) of this title (relating to Oil and Gas Handling and Production Facilities), subsections (a) - (k) of the non-rule Air Quality Standard Permit for Oil and Gas Handling and Production Facilities, §106.355 of this title (relating to Pipeline Metering, Purging, and Maintenance), or Subchapter U of this chapter (relating to Tanks, Storage, and Loading).

(2) This section may not be used to supersede an existing authorization for planned MSS under Chapter 106 of this title (relating to Permits by Rule) or §116.620 under this chapter (relating to Installation and/or Modification of Oil and Gas Facilities) unless any previously represented emission control methods, techniques, and devices remain in use and there is no resulting increase in hourly emissions.

(b) Activities. Planned MSS activities and facilities authorized by this section include the following:

(1) engine, compressor, turbine, and other combustion facilities maintenance;

(2) repair, adjustment, calibration, lubrication, and cleaning of site process equipment;

(3) replacement of piping components, pneumatic controllers, boiler refractories, wet and dry seals, meters, instruments, analyzers, screens, and filters;

(4) turbine or engine component swaps;

(5) piping used to bypass a facility during maintenance;

(6) planned MSS activities with the same character and quantity of emissions as those listed in paragraphs (1) - (5) of this subsection;

(7) pigging and purging of piping;

(8) blowdowns;

(9) emptying, purging, degassing, or refilling of process equipment, storage tanks and vessels (except landing floating roof tanks for convenience purposes), if subparagraphs (A) - (C) of this paragraph are met.

(A) all contents from process equipment or tanks must be removed to the maximum extent practicable prior to opening facilities to commence degassing and maintenance.

(B) facilities must be degassed using best management practices to ensure air contaminants are removed from the system to the extent allowed by facility design.

(C) tanks may be emptied or degassed by forced ventilation if:

(i) only one vacuum truck is in use at any time;

(ii) emissions are directed out the top of the tank; or

(iii) emissions are routed through a closed system to a control device.

(10) abrasive blasting, surface preparation, and surface coating of facilities and structures used at the site in oil and gas handling and production.

(c) Best Management Practices.

(1) All facilities with the potential to emit air contaminants must be maintained in good condition and operated properly.

(2) Each permit holder shall establish, implement, and update, as appropriate, a program to maintain and repair facilities as required by paragraph (1) of this subsection. The minimum requirements of this program must include:

(A) a maintenance program developed by the permit holder for all facilities that is consistent with good air pollution control practices, or alternatively, manufacturer's specifications and recommended programs applicable to facility performance and the effect on emissions;

(B) cleaning and routine inspection of all facilities;

(C) repair of facilities on timeframes that minimize failures and maintain performance;

(D) training of personnel who implement the maintenance program; and

(E) records of conducted planned MSS activities. Adopted July 26, 2013 Effective September 10, 201

Subchapter P: Plant Operations

Section 106.371 - 106.376

Effective September 4, 2000

Section 106.371. Cooling Water Units.

Water cooling towers, water treating systems for process cooling water or boiler feedwater, and water tanks, reservoirs, or other water containers designed to cool, store, or otherwise handle water (including rainwater) that have not been used in direct contact with gaseous or liquid process streams containing carbon compounds, sulfur compounds, halogens or halogen compounds, cyanide compounds, inorganic acids, or acid gases are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.372. Industrial Gases.

Any air separation, or other industrial gas production, storage, or packaging facility is permitted by rule. Industrial gases, for purposes of this section, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon. Adopted August 9, 2000 Effective September 4, 2000

Setion 106.373. Refrigeration Systems.

Refrigeration systems, including storage tanks used in refrigeration systems, that use one of the following categories of refrigerant are permitted by rule:

(1) simple asphyxiants limited to argon, carbon dioxide, ethane, helium, hydrogen, methane, neon, nitrogen, propane, propylene, or liquefied natural gas; or

(2) any other chemical, excluding anhydrous ammonia, with a short-term effects screening level (ESL) published in the commission’s ESL list greater than 150Fµg/m3;

(3) anhydrous ammonia (ammonia) provided:

(A) the facility is registered with the commission’s Office of Permitting, Remediation, and Registration in Austin using Form PI-7; and

(B) the system is maintained in good working order and such that ammonia leaks are not detectable beyond the operator’s property line. Adopted August 9, 2000 Effective September 4, 2000

Section 106.374. Lime Slaking Facilities.

Any lime slaking facility used to mix quicklime with water is permitted by rule, provided the following conditions of this section are met:

(1) the mixing vessel shall be horizontal;

(2) the mixing vessel shall use interior mechanical agitation parallel to the bottom and agitate the water over the full length of the vessel;

(3) quicklime shall be injected into the mixing vessel as follows:

(A) where injection is from a pneumatic transfer system, the quicklime shall be injected at a point at least 12 inches under the surface of the agitated water; or

(B) where injection is from a non-pneumatic conveying system unloading at the top of the vessel, emissions from any vent on the vessel shall be controlled by an appropriately sized wet scrubber;

(4) there shall be no visible emissions (other than uncombined water). Adopted August 9, 2000 Effective September 4, 2000

Section 106.375. Aqueous Solutions for Electrolytic and Electroless Processes.

Equipment using aqueous solutions is permitted by rule, providing the conditions of this section are met.

(1) This section authorizes the following operations:

(A) anodizing, chromate conversion coating processes, electroplating, electrodeposition, electroless plating, electrolytic polishing, and electrolytic stripping, as follows.

(i) For plating onto or stripping from any basis substrate, only brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals may be used.

(ii) Chromic acid shall not be used in any step of a process which involves electrical current, air agitation, or any other factor which causes the chromic acid to bubble or mist.

(B) cleaning, electroless stripping, etching, or other surface preparation and finishing, not including chemical milling or electrolytic metal recovery and reclaiming systems.

(2) Operating conditions.

(A) Hydrochloric acid tank operating conditions shall not exceed:

(i) a temperature of 100 degrees Fahrenheit and a hydrochloric acid concentration of 19.0% by solution weight; or

(ii) a partial pressure of 0.5 millimeters of mercury.

(B) Hydrochloric acid in any state, and any aqueous solution which bubbles or mists due to electrical current, air agitation, or any other factor shall be used in an enclosed building. If the doors and windows of the building are open for any reason other than temporarily for access, emissions shall either be:

(i) captured and exhausted using forced air through a stack with an unobstructed minimum vertical discharge of four feet above the peak of the roofline; or

(ii) controlled with a fume suppressant.

(3) If a facility cannot comply with the hydrochloric acid temperature and concentration limits in paragraph (2)(A)(i) of this section, then to demonstrate compliance with paragraph (2)(A)(ii) of this section, the maximum hydrochloric acid temperature and concentration for each tank shall be recorded daily. At least once per month, the recorded data shall be converted to partial pressure. All data shall be maintained for the most recent 24-month period. Adopted August 9, 2000 Effective September 4, 2000

Section 106.376. Decorative Chrome Plating.

Decorative chromium electroplating operations that have a maximum combined rated capacity for all decorative chrome plating rectifiers of not more than 5,000 amperes and which use a fume suppressant or other equivalent control as sufficient to meet §113.190 of this title (relating to Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (40 CFR 63, Subpart N)) are permitted by rule. This permit by rule may not be used at any site where other chrome plating or chromic acid anodizing operations are conducted. Adopted August 9, 2000 Effective September 4, 2000

Subchapter Q: Plastics and Rubber

Section 106.391 - 106.396

Effective September 4, 2000

Section 106.391. Rubber and Plastic Curing Presses.

Presses used for the curing of rubber products and plastic products are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.392. Thermoset Resin Facilities.

Facilities using thermoset resins (excluding resins that do not emit air contaminants) to manufacture or repair products are permitted by rule, provided that the following conditions of this section are satisfied for paragraph (1) and either paragraph (2) or (3) of this section.

(1) The following requirements shall apply to all thermoset resin facilities.

(A) Before construction begins, the facility must be registered with the commission using Form PI-7.

(B) Records of resin and acetone usage shall be kept on a monthly and calendar year-to-date basis to show compliance with this section, and shall be maintained for the most recent 24 months.

(C) All resin spraying and cleaning operations shall be conducted between two hours before sunrise and two hours after sunset. The exhaust fan(s) must be operating during and for at least 30 minutes after any usage of resin and/or cleaning solvents.

(D) All solid trim grinding operations shall be vented through a dry filter system or a water wash system which has a particulate removal efficiency of at least 95%. Particulates trapped in the dry filter system or water wash sludge shall be handled and stored in a way to minimize the escape of fugitive dust emissions.

(E) No more than five tons of acetone shall be used per year (gross usage minus waste disposal).

(2) The following requirements shall apply to facilities that have spraying operations (the facilities may include non-spraying operations).

(A) No more than 75 tons of resin and gelcoat combined shall be used per year (gross usage minus waste disposal).

(B) All resin spraying operations shall be conducted in a booth or an enclosed work area and the emissions shall be exhausted through elevated stack(s). All stacks shall discharge vertically to the atmosphere with no restrictions or obstructions to flow. Each stack shall meet one of the following minimum requirements:

(i) a flow rate of 20,000 actual cubic feet per minute (acfm) and the greater of six feet above the peak of the manufacturing building or 25 feet above ground level; or

(ii) a flow rate of 15,000 acfm and the greater of six feet above the peak of the manufacturing building or 30 feet above ground level.

(C) No more than 1,000 pounds per year of resin shall be used outdoors.

(D) If annual resin usage is less than 1,000 pounds, a facility is exempt from all requirements of this section except recordkeeping (paragraph (1)(B) of this section).

(3) The following requirements shall apply only to non-spraying operations.

(A) No more than 150 tons of resin and gelcoat combined shall be used per year (gross usage minus waste disposal).

(B) All resin operations shall be conducted in a booth or an enclosed work area or the manufacturing building and the emissions shall be exhausted through elevated stack(s). All stacks shall discharge vertically to the atmosphere with no restrictions or obstructions to flow. Each stack shall meet one of the following minimum requirements:

(i) a flow rate of 20,000 acfm and the greater of six feet above the peak of the manufacturing building or 25 feet above ground level; or

(ii) a flow rate of 15,000 acfm and the greater of six feet above the peak of the manufacturing building or 30 feet above ground level.

(C) No more than 3,000 pounds per year of resin shall be used outdoors.

(D) If annual resin usage is less than 3,000 pounds, a facility is exempt from all requirements of this section except recordkeeping (paragraph (1)(B) of this section). Adopted August 9, 2000 Effective September 4, 2000

Section 106.393. Conveyance and Storage of Plastic and Rubber Material.

Equipment used exclusively for conveying and storing plastic and/or rubber solid materials is permitted by rule, provided that no visible emissions occur and all the conditions of this section are met:

(1) equipment used for conveying of powders or resins to storage silos must be equipped with fabric filter(s) having a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical shaking or 7.0 ft/min with air cleaning; and

(2) transfer of powders or resins is accomplished in an enclosed system. Adopted August 9, 2000 Effective September 4, 2000

Section 106.394. Plastic Compression and Injection Molding.

Equipment used for compression molding and injection molding of plastics is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.395. Equipment for Mixing Plastic and Rubber (No Solvent).

Mixers, blenders, roll mills, or calenders for rubber or plastics are permitted by rule, provided the following conditions of this section are satisfied. Mixers, blenders, roll mills, or calenders handling or adding asbestos shall not be eligible to be permitted by rule under this section.

(1) Organic solvents, diluents, or thinners shall not be used.

(2) Material in powder form shall not be added unless the mixer, blender, roll mill, or calender is vented to a fabric filter having a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical cleaning, or 7.0 ft/min with automatic air cleaning.

(3) There shall be no visible emissions. Adopted August 9, 2000 Effective September 4, 2000

Section 106.396. Equipment for Mixing Plastic and Rubber (With Solvent).

Roll mills or calenders for rubber or plastics in which organic solvents, diluents, or thinners are used are permitted by rule, provided that before construction begins, the facility is registered with Form PI-7 and information regarding process rate and type of material emitted is submitted. Adopted August 9, 2000 Effective September 4, 2000

Subchapter R: Service Industries

Section 106.411, 106.412, 106.414 - 106.419

Effective September 3, 2009

Section 106.411. Steam or Dry Cleaning Equipment.

Equipment used exclusively for steam or dry cleaning of fabrics, plastics, rubber, wood, or vehicle engines or drive trains is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.412. Fuel Dispensing.

Equipment used exclusively to store and dispense motor fuels into heavy and light-duty motor vehicles and marine vessels or other watercraft, aircraft, and railroad locomotive engines is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.414. Packaging Lubes and Greases.

Equipment used exclusively for the packaging of lubricants or greases is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.415. Laundry Dryers.

Laundry dryers, extractors, or tumblers used for fabrics cleaned with water solutions of bleach or detergents are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.416. Uranium Recovery Facilities.

A uranium in-situ solution recovery facility producing yellowcake is permitted by rule, provided that the facility operates according to the following conditions of this section.

(1) The facility is located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located.

(2) The facility shall have no emissions other than:

(A) ammonia which shall not exceed an emission rate of 2.0 pounds per hour (lb/hr); and

(B) particulate dust from yellowcake drying not to exceed 0.1 lb/hr.

(3) The facility shall have no visible particulate emissions from any part of the process.

(4) Before construction begins, the facility shall be registered with the commission’s Office of Permitting, Remediation, and Registration in Austin using Form PI-7. Adopted August 9, 2000 Effective September 4, 2000

Section 106.417. Ethylene Oxide Sterilizers.

Ethylene oxide (EO) sterilizing chambers/operations located on the same or contiguous property and under common ownership that use 1,000 pounds or less of EO per year are permitted by rule provided that the following conditions of this section are satisfied.

(1) Any sterilizer usage that is less than 0.04 pounds of EO (20 milliliters liquid EO) per charge and the annual usage is 4.0 pounds or less of EO for the entire facility, is exempted from all requirements.

(2) All sterilizers must meet the following conditions.

(A) EO shall only be handled by medical professionals or appropriately trained personnel in medical and industrial use areas.

(B) Written records shall be maintained for a minimum of two years and shall be made available to representatives of the commission upon request. Records shall include:

(i) documentation of the date and time of each sterilizer operation cycle;

(ii) the total pounds of EO purchased and used per calendar year listed as monthly totals;

(iii) leak test results.

(C) Leak tests of each sterilizer system shall be performed at least every six months. Results of the tests shall be made available to the commission upon request.

(D) EO shall only be used alone or in combination with carbon dioxide, nitrogen, chlorofluorocarbon, hydrochlorofluorocarbon diluent gases, or other mixtures as approved by the executive director.

(E) The sterilizer vent system exhaust stack shall meet the following conditions.

(i) The stack shall be uncapped and exhaust vertically upward.

(ii) The stack height shall be extended to at least 15 feet above the roof line of the building; and the stack tip shall be located at least 25 feet from any opening to the building interior, such as fresh air intake, unsealed windows, or pedestrian traffic areas. Stacks on multi-level roofs must only extend 15 feet above the roof upon which the stack is located.

(iii) Stack exit velocity shall be at least 50 feet per second.

(3) The following conditions apply only to sterilizers that use more than four pounds, but less than 100 pounds of EO per year.

(A) Sterilizer systems which vent entirely to atmosphere shall not exceed 0.5 pounds of EO used per cycle. Sterilizer systems which use nonrecirculating, water sealed vacuum systems shall not exceed two pounds of EO charged per cycle. For facilities with multiple sterilizers, the usage rate is based on total EO usage at any given time.

(B) Any combination of sterilizers located on the same or contiguous property under common ownership shall not exceed a total EO usage of less than 100 pounds per year.

(4) The following conditions apply only to sterilizers that use between 100 and 1,000 pounds of EO per year.

(A) Before construction begins, the facility shall be registered with the commission using Form PI-7.

(B) The sterilizer chamber exhaust shall vent through an emission control device that will continuously achieve a minimum EO removal efficiency of 99%. Thermal incineration shall not be used to control sterilizer exhaust emissions if chlorofluorocarbons are used as a diluent.

(C) There shall be no discharge of water containing dissolved EO through a sanitary sewer system.

(D) Any combination of sterilizers located on the same or contiguous property under common ownership shall be limited to a total EO usage of 1,000 pounds per year. Adopted August 9, 2000 Effective September 4, 2000

Section 106.418. Printing Presses.

Printing operations (including, but not limited to, screen printers, ink-jet printers, presses using electron beam or ultraviolet light curing, and labeling operations) and supporting equipment (including, but not limited to, corona treaters, curing lamps, preparation, and cleaning equipment) which directly supports the printing operation are permitted by rule, provided that all the following conditions of this section are satisfied.

(1) The uncontrolled emission of volatile organic compounds (VOC) and solvents (including, but not limited to, those used for printing, cleanup, or makeup) shall not exceed the following rates:

(A) 15 tons per year (tpy) for any single printing operation proposed to be covered by this section; and

(B) 25 tpy for all printing operations on the property covered by permits by rule.

(2) Facilities which release ten tpy or more of VOC emissions from all printing operations permitted by rule at the site must register with the commission using Form PI-7.

(3) Copying and duplicating equipment employing the xerographic method are exempt from paragraphs (4) - (6) of this section.

(4) Printing presses covered by this section shall not utilize heat set, thermo set, or oven-dried inks. Heated air may be used to shorten drying time, provided the temperature does not exceed 194 degrees Fahrenheit (90 degrees Celsius).

(5) Records of ink and solvent usage shall be kept in sufficient detail to show compliance with paragraph (1) of this section and shall be maintained for a two-year rolling retention period.

(6) Screen printing operations requiring temperatures greater that 194 degrees Fahrenheit (90 degrees Celsius) to set the ink are exempt from paragraph (4) of this section.

(7) Facilities located in ozone nonattainment areas shall meet the requirements of Chapter 115, Subchapters B and E of this title (relating to General Volatile Organic Compound Sources and Solvent-Using Processes). Adopted August 9, 2000 Effective September 4, 2000

Section 106.419. Photographic Process Equipment.

Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Subchapter S: Surface Coating

Section 106.431 - 106.436

Effective September 4, 2000

Section 106.431. Milling and Grinding of Coatings and Molding Compounds.

Equipment used exclusively to mill or grind coatings and molding compounds where all materials charged are in a paste form is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.432. Dipping Tanks and Containers.

Containers, reservoirs, or tanks used exclusively for dipping operations for coating objects with oils, waxes, or greases where no organic solvents, diluents, or thinners are used; or dipping operations for applying coatings of natural or synthetic resins which contain no organic solvents are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.433. Surface Coat Facility.

Surface coating or stripping facilities, excluding vehicle repair and refinishing shops, shall meet the following conditions of this section to be permitted by rule.

(1) This section does not cover metalizing (spraying molten metal onto a surface to form a coating). However, this section does cover the use of coatings which contain metallic pigments.

(2) All facilities covered by this section at a site shall implement good housekeeping procedures to minimize fugitive emissions, including the following.

(A) All spills shall be cleaned up immediately.

(B) The booth or work area exhaust fans shall be operating when cleaning spray guns and other equipment.

(C) All new and used coatings and solvents shall be stored in closed containers. All waste coatings and solvents shall be removed from the site by an authorized disposal service or disposed of at a permitted on-site waste management facility.

(3) Drying or curing ovens shall either be electric or meet the following conditions:

(A) The maximum heat input to any oven must not exceed 40 million British thermal units per hour (Btu/hr).

(B) Heat shall be provided by the combustion of one of the following: sweet natural gas; liquid petroleum gas; fuel gas containing no more than 5.0 grains of total sulfur compounds (calculated as sulfur) per 100 dry standard cubic foot; or Number 2 fuel oil with not more than 0.3% sulfur by weight.

(4) No add-on control equipment shall be used to meet the emissions limits of this section. The total uncontrolled emissions from the coating materials (as applied) and cleanup solvents shall not exceed the following for all operations:

(A) 25 tons per year (tpy) of volatile organic compounds (VOC) and ten tpy of exempt solvents for all surface coating and stripping operations covered by section at a site;

(B) 30 pounds per hour (lb/hr) of VOC and 5.0 lb/hr of exempt solvents for all surface coating and stripping operations covered by this section at a site;

(C) if emissions are less than 0.25 lb/hr of VOC and/or exempt solvents, a facility is exempt from the remaining requirements of this section, including paragraphs (5) - (9) of this section.

(5) Opacity of visible emissions shall not exceed 5.0%. Compliance shall be determined by the United States Environmental Protection Agency Method 9 averaged over a six-minute period.

(6) The following conditions apply to surface coating operations performed indoors, in a booth, or in an enclosed work area:

(A) no more than six lb/hr of VOC emissions, averaged over any five-hour period, and 500 pounds per week per booth or enclosed work area;

(B) minimum face velocity at the intake opening of each booth or work area is 100 feet per minute (ft/min). Emissions shall be exhausted through elevated stacks that extend at least 1.5 times the building height above ground level. All stacks shall discharge vertically; rain protection shall not restrict or obstruct vertical flow;

(C) for spraying operations, emissions of particulate matter must be controlled using either a water wash system or a dry filter system with a 95% removal efficiency as documented by the manufacturer. The face velocity at the filter shall not exceed 250 ft/min or that specified by the filter manufacturer, whichever is less. Filters shall be replaced whenever the pressure drop across the filter no longer meets the manufacturer's recommendation.

(7) For surface coating operations that are performed outdoors or in a non-enclosed work area, or for indoor operations that do not meet the conditions of paragraph (6) of this section, the following conditions apply.

(A) No more than six lb/hr of VOC emissions, averaged over any five-hour period, and 500 pounds per week shall be emitted at any time for all operations authorized by this paragraph.

(B) If coatings applied with spray equipment contain more than 0.1% by weight of chromates, lead, cadmium, selenium, strontium, or cobalt, then total VOC emissions shall be further limited to 240 pounds per week and 2,000 pounds per year. If coatings are applied with non-spray equipment (such as brushes, rollers, dipping or flow coating), the additional restrictions in this paragraph do not apply.

(C) Coating operations shall be conducted at least 50 feet from the property line and at least 250 feet from any recreational area, residence, or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located.

(D) Before construction of the facility begins, written site approval shall be received from the appropriate regional office of the commission or any local program having jurisdiction.

(8) The following records shall be maintained at the plant site for the most recent 24 months and be made immediately available to the commission or any pollution control agency with jurisdiction:

(A) material safety data sheets for all coating materials and solvents;

(B) data of daily coatings and solvent use and the actual hours of operation of each coating or stripping operation;

(C) a monthly report that represents actual hours of operation each day, and emissions from each operation in the following categories:

(i) pounds per hour;

(ii) pounds per day;

(iii) pounds per week; and

(iv) tons emitted from the site during the previous 12 months;

(D) examples of the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions.

(9) Before construction begins, the facility shall be registered with the commission using Form PI-7. Adopted August 9, 2000 Effective September 4, 2000

Section 106.434. Powder Coating Facility.

Surface coating operations utilizing powder coating materials with the powder applied by an electrostatic powder spray gun or an electrostatic fluidized bed are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.435. Classic or Antique Automobile Restoration Facility.

“Classic” or “Antique” vehicle restoration facilities (the terms “classic” and “antique” vehicle as determined by the Texas Department of Public Safety Vehicle Inspection and Registration Section under Texas Transportation Code, Chapter 502, §502.274 (concerning Classic Motor Vehicles) or §502.275 (concerning Certain Antique Vehicles; Offense)) qualify for this permit by rule if all of the following conditions of this section are met.

(1) All automobile body/chassis abrasive blast cleaning and coating operations shall be performed in a closed building or enclosure that is located at least 50 feet away from any property lines; or the facility shall be located a minimum of 300 feet from any recreational area or residence not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located, except that structures occupied by security or watch personnel may be located contiguously.

(2) Total abrasive usage shall be less than 100 pounds per hour, 500 pounds per day, and five tons per year.

(3) Combined clean-up material and paint usage, including solvents used for cleaning or thinning purposes, shall be less than five gallons per day and 100 gallons per year.

(4) All waste coatings, solvents, and spent automotive fluids shall be stored in covered containers and disposed of properly.

(5) The owner or operator of the restoration facilities shall maintain daily and annual records in sufficient detail to verify the usage limits in paragraphs (2) and (3) of this section. These records shall be maintained for a minimum of two years and made available at the request of personnel from the commission or any local pollution control program having jurisdiction.

(6) Facilities conducting vehicle repair and refinishing operations under §106.436 of this title (relating to Auto Body Refinishing Facility) may also conduct classic or antique vehicle restoration. Adopted August 9, 2000 Effective September 4, 2000

Section 106.436. Auto Body Refinishing Facility.

Body repair and refinishing of motorcycle, passenger car, van, light truck and heavy truck and other vehicle body parts, bodies, and cabs is permitted by rule, provided that all the following conditions of this section are met.

(1) Before construction begins, the facility shall be registered with the commission’s Office of Permitting, Remediation, and Registration in Austin using Form PI-7-124.

(2) Facilities which satisfy one of the following conditions.

(A) Spray operations that use less than 1/2 pint of coatings and solvents per hour are exempt from all of the requirements of this section except for paragraphs (3), (4), (16), and (17) of this section.

(B) Spray operations that use less than two gallons of coatings and solvents per week are exempt from all of the requirements of this section except for paragraphs (3), (4), (8), (11), (12), (14), (16), and (17) of this section unless additional controls are specified in §115.421 of this title (relating to Emission Specifications). Additionally, all overspray emissions must be vented through a filter system that meets the requirements of paragraph (7) of this section.

(3) Good housekeeping is practiced: spills are cleaned up as soon as possible, equipment is maintained according to manufacturers’ instructions, and property is kept clean. In addition, all waste coatings, solvents, and spent automotive fluids including, but not limited to, engine oil, gear oil, transmission fluid, brake fluid,

anti-freeze, fresh or waste fuels, and spray booth filters or water wash sludge are disposed of properly. Prior to disposal, all liquid waste shall be stored in covered containers.

(4) There are no visible emissions leaving the property.

(5) All spray coating operations which coat more than nine square feet (one panel) shall be performed in a totally enclosed filtered spray booth or totally enclosed filtered spray area with an air intake area of less than 100 square feet. All spray areas shall be equipped with a fan that achieves one of the following requirements:

(A) a flow capacity of at least 10,000 cubic feet per minute;

(B) a face velocity of at least 100 feet per minute.

(6) All spray coating operations which coat less than nine square feet (one panel) and are not in a totally enclosed booth shall be performed on or in a dedicated preparation area which meets the following requirements.

(A) The preparation area ventilation system shall be operating during spraying, and the exhaust air shall either be vented through a stack to the atmosphere or the air shall be recirculated back into the shop through a carbon adsorption system.

(B) If the preparation area is equipped with a carbon adsorption system, the carbon shall be replaced at the manufacturer’s recommended intervals to minimize solvent emissions.

(C) The preparation area ventilation system shall be equipped with a filter or filter system to control paint overspray.

(7) All paint booth, spray area, and preparation area overspray (exhaust) filters or filter systems shall have a particulate control efficiency of at least 90%.

(8) High transfer efficiency coating application equipment shall be used, such as high volume low pressure spray guns. Electrostatic spray guns or other methods, if demonstrated to provide equivalent or better transfer efficiency are acceptable.

(9) Cleanup emissions shall be minimized by implementing the following procedures:

(A) spray and other equipment cleanup is totally enclosed during washing, rinsing, and draining. Non-enclosed cleaners may be used if the vapor pressure of the cleaning solvent is less than 100 millimeters of mercury at 68 degrees Fahrenheit and the solvent is directed toward a drain that leads directly to a remote reservoir;

(B) all wash solvents are kept in an enclosed reservoir that is covered at all times, except when being refilled with fresh solvents;

(C) all waste solvents and other cleaning materials are kept in closed containers.

(10) All spray booth spray area, preparation area, and shop heaters that are not electrically heated must use pipeline quality natural gas or liquefied petroleum gas only and the heaters are five million British thermal units per hour or smaller. No firing of waste coatings, solvents, oils, or other automotive fluids shall be permitted on-site.

(11) All spray booth, spray area, and preparation area stack heights shall meet the following requirements.

(A) If the stack is located within 200 feet of a building that is taller than the body shop building, the stack height shall be at least 1.2 times the height of the tallest building or higher as measured from ground level.

(B) If the stack is located greater than 200 feet from a building taller than the body shop building, the stack height shall be at least 1.2 times the height of the body shop building as measured from ground level.

(C) If any ground level elevation within 250 feet of the spray booth stack is greater than the stack height required in subparagraphs (A) and (B) of this paragraph, this section cannot be used.

(12) Spray booth, spray area, and preparation area stacks shall be located at least 50 feet away from any residence, recreation area, church, school, child care facility, or medical or dental facility.

(13) Rain caps, goose neck exhaust, or other stack heads that would restrict or obstruct vertical discharge of air contaminants shall not be allowed.

(14) The volatile organic compound (VOC) content limits specified in §115.421 of this title, concerning automobile and light-duty truck coatings, shall apply to the facility regardless of its location.

(15) Definitions of the coating types specified in subparagraphs (A) - (H) of this paragraph are based on §115.10 of this title (relating to Definitions), and the VOC content limits shall be those listed in §115.421 of this title. Shop use of the coating categories listed in subparagraphs (A) - (H) of this paragraph in gallons per month shall not be exceeded:

(A) cleanup solvents - 50 gallons per month;

(B) wipe solvents - 50;

(C) precoat - 50;

(D) pretreatment - 50;

(E) sealers - 50;

(F) primers/primer surfacer - 175;

(G) top coats - 320;

(H) specialty coatings - 50.

(16) The following records and reports shall be maintained at the shop site for a consecutive 24-month period and be made immediately available upon request of personnel from the commission or any other air pollution control agency with jurisdiction:

(A) material safety data sheet (MSDS) or other coating data sheets on paint and solvent systems used during the previous 24-month period or currently in use at the shop. The MSDS or coating data sheets should clearly indicate the VOC content of the product and the VOC content of multiple component coatings when mixed according to manufacturer's instructions;

(B) records of monthly coating and solvent purchases (invoices from suppliers are acceptable);

(C) records of monthly paint and solvent use if purchase volumes are above the levels specified for any category in paragraph (15) of this section;

(D) additional records are kept in sufficient detail, if necessary, to allow an annual emission inventory to be submitted according to the requirements in §101.10 of this title (relating to Emissions Inventory Requirements);

(E) records of the United States Environmental Protection Agency and the commission's Office of Permitting, Remediation, and Registration registration or identification numbers for each waste generator.

(17) Compliance with the requirements of this section does not eliminate the requirement to comply with all rules of the commission, including §101.4 of this title (relating to Nuisance). The commission may require a facility to cease operation until the matter is resolved.

(18) After December 31, 1994, the conditions of this permit by rule are effective as to facilities in existence prior to the adoption of this section. Adopted August 9, 2000 Effective September 4, 2000

Subchapter T: Surface Preparation

Section 106.451 - 106.454

Effective November 1, 2001

Section 106.451. Wet Blast Cleaning.

Blast cleaning equipment using a suspension of abrasives in water is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.452. Dry Abrasive Cleaning.

Any abrasive cleaning operation that will satisfy paragraph (1) or (2) of this section is permitted by rule:

(1) enclosed abrasive cleaning:

(A) the particulate matter emissions are evacuated through a fabric filter with a maximum filtering velocity of 4.0 feet per minute (ft/min) with mechanical cleaning or 7.0 ft/min with air cleaning; and

(B) there are no visible fugitive emissions from the facility.

(2) outside blast cleaning:

(A) abrasive usage rate shall not exceed 150 tons per year, 15 tons per month, and one ton per day; and

(B) the blast cleaning is performed at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located; and

(C) records shall be maintained of operating hours and abrasive material usage; and

(D) before construction begins, the facility is registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7; and

(E) before construction of the facility begins, written site approval shall be received from the executive director. Adopted August 9, 2000 Effective September 4, 2000

Section 106.453. Washing and Drying of Glass and Metal.

Equipment used for washing or drying products fabricated from metal or glass is permitted by rule, provided no volatile organic materials are used in the process and no oil or solid fuel is burned. Adopted August 9, 2000 Effective September 4, 2000

Section 106.454. Degreasing Units.

Any degreasing unit that satisfies the following conditions of this section is permitted by rule.

(1) The following general requirements are applicable to all degreasers unless specifically noted by the conditions of this section.

(A) Units subject to paragraphs (3) - (5) of this section shall meet the following:

(i) register with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7 and a Degreasing Unit Checklist;

(ii) on a monthly basis, records shall be kept of total solvent makeup (gross usage minus waste disposal).

(B) Waste solvent from all degreasing operations shall be stored in covered containers, and be removed by a licensed disposal service or until emptying into an authorized on-site waste management facility.

(C) Porous or absorbent materials, such as cloth, leather, wood, or rope shall not be degreased.

(D) Leaks shall be repaired immediately, or the degreaser shall be shut down until repairs are completed.

(E) A permanent and conspicuous label summarizing proper operating procedures to minimize emissions shall be posted on or near the degreaser.

(F) Each unit, regardless of the county in which it is located, shall meet the requirements of §115.412 and §115.415 of this title (relating to Control Requirements and Testing Requirements).

(2) The following conditions apply only to remote reservoir cleaners.

(A) The cleaner shall be designed to prevent exposure of the solvent reservoir to the atmosphere except for the drain openings. The drain openings shall not exceed 3.0% of the total cleaner open area and shall under no conditions exceed 16 square inches.

(B) All solvent sprays shall be a solid fluid stream (not a fine, atomized, or shower type spray) and at a minimal operating pressure that is necessary to prevent excessive splashing, but not to exceed ten pounds per square inch, gauge (psig).

(C) The true vapor pressure of the solvent shall not exceed 0.6 pounds per square inch, absolute (psia) as measured or calculated at an operating temperature of 100 degrees Fahrenheit.

(D) The solvent shall not be heated.

(3) The following conditions apply only to cold solvent cleaners, not including remote reservoirs.

(A) The cleaner shall have a freeboard that has a minimum four-inch water cover or provides a freeboard ratio (the distance from top of the solvent level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.7. For water covers, the solvent must be insoluble in and heavier than water.

(B) The unit shall be equipped with a cover which is closed whenever parts are not being handled in the cleaner. Also, the cover must be designed for easy one-handed operation if any of the following conditions are present:

(i) the true vapor pressure of the solvent is greater than 0.3 psia as measured or calculated at 100 degrees Fahrenheit;

(ii) the solvent is agitated;

(iii) the solvent is heated.

(C) If a solvent spray is used, it shall be a solid fluid stream (not a fine, atomized, or shower-type spray) with a minimal operating pressure that is necessary to prevent splashing above the acceptable freeboard. The operating pressure shall not exceed ten psig.

(D) An internal-cleaned parts drainage rack or facility, for enclosed draining under a cover, shall be provided. An external-cleaned parts drainage rack or facility, for enclosed draining under a cover, may be used if the vapor pressure of the solvent is less than 0.6 psia at 100 degrees Fahrenheit. In all cases, parts shall be drained for at least 15 seconds or until dripping ceases.

(E) The Form PI-7 registration is not required if total solvent makeup (gross usage minus waste disposal) is 110 gallons per year (gallon/yr) or less.

(F) Total solvent makeup shall not exceed the following:

(i) chlorinated solvents - 660 gallons/yr;

(ii) all other solvents - 1,500 gallons/yr.

(4) The following conditions apply only to open top solvent vapor degreasers.

(A) The surface area of the solvent shall not exceed 15 square feet.

(B) The unit shall be equipped with a cover that can be opened and closed easily without disturbing the vapor zone. If the degreaser opening exceeds ten square feet, a powered cover shall be required.

(C) The cover shall be closed at all times except when parts are moved into and out of the degreaser.

(D) The unit shall be equipped with a properly sized refrigerated chiller, or the unit shall have a freeboard ratio (the distance from top of the vapor level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.75.

(E) Exhaust ventilation for the unit shall operate between 50 and 65 cubic feet per minute (cfm) per square foot of degreaser open area unless this conflicts with Occupational Safety and Health Administration (OSHA) requirements. Ventilation fans or other sources of air agitation shall not be operated near the degreaser opening.

(F) The exhaust stacks shall discharge vertically with no restrictions or obstructions to flow. The stack height shall extend at least 1.3 times the building height as measured from ground level.

(G) Total solvent makeup (gross usage minus waste disposal) shall not exceed the following:

(i) chlorinated solvents - 660 gallons/yr;

(ii) all other solvents - 1500 gallons/yr.

(5) The following conditions apply only to conveyorized degreasers.

(A) The inlet and outlet openings shall be closed at all times except when processing work through the degreaser.

(B) The unit shall be equipped with a properly sized refrigerated chiller which has a volatile organic compound removal efficiency of at least 85%, or the unit shall have a freeboard ratio (the distance from top of the vapor level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.75.

(C) A drying tunnel or other means of control shall be used to limit liquid or vapor carry-out.

(D) Entrances and exits to the degreaser shall be designed to silhouette work loads.

(E) Exhaust ventilation for the unit shall operate between 50 and 65 cfm per square foot of degreaser opening unless this conflicts with OSHA requirements. Ventilation fans or other sources of air agitation shall not be operated near the degreaser openings.

(F) The exhaust stacks shall discharge vertically with no restrictions or obstructions to flow. The stack height shall extend at least 1.5 times the building height as measured from ground level.

(G) Total solvent makeup (gross usage minus waste disposal) shall not exceed the following:

(i) chlorinated solvents - 660 gallons/yr;

(ii) all other solvents - 1,500 gallons/yr. Adopted October 10, 2001 Effective November 1, 2001

Subchapter U: Tanks, Storage, and Loading

Section 106.471 - 106.478

Effective September 4, 2000

Section 106.471. Storage or Holding of Dry Natural Gas.

Equipment used exclusively to store or hold dry natural gas is permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.472. Organic and Inorganic Liquid Loading and Unloading.

Liquid loading or unloading equipment for railcars, tank trucks, or drums; storage containers, reservoirs, tanks; and change of service of material loaded, unloaded, or stored is permitted by rule, provided that no visible emissions result and the chemicals loaded, unloaded, or stored are limited to:

(1) the following list: asphalt, resins, soaps, lube oils, fuel oils, waxes, polymers, detergents, lube oil additives, kerosene, wax emulsions, vegetable oils, greases, animal fats, and diesel fuels;

(2) water or wastewater;

(3) aqueous salt solutions;

(4) aqueous caustic solutions, except ammonia solutions;

(5) inorganic acids except oleum, hydrofluoric, and hydrochloric acids;

(6) aqueous ammonia solutions if vented through a water scrubber;

(7) hydrochloric acid if vented through a water scrubber;

(8) acetic acid if vented through a water scrubber;

(9) organic liquids having an initial boiling point of 300 degrees Fahrenheit or greater. Facilities loading, unloading, or storing butyric acid, isobutyric acid, methacrylic acid, mercaptans, croton oil, 2-methyl styrene, or any other compound with an initial boiling point of 300 degrees Fahrenheit or greater listed in 40 Code of

Federal Regulations 261, Appendix VIII shall be located at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located. Adopted August 9, 2000 Effective September 4, 2000

Section 106.473. Organic Liquid Loading and Unloading.

Organic liquids loading or unloading equipment for railcars, tank trucks, or drums; and storage containers, tanks, or change of service of the material loaded, unloaded, or stored is permitted by rule, provided that all of the following conditions of this section are met.

(1) Uncontrolled emissions calculated using the version of AP-42 in effect at the time are less than 25 tons per year of organic compounds or of any other air contaminant.

(2) The loading rate of the facilities does not exceed 20,000 gallons per day averaged over any consecutive 30-day period.

(3) The capacity of any tank does not exceed 25,000 gallons, except that tanks having a capacity of less than 40,000 gallons may be used to store sweet crude oil, sweet natural gas condensate, gasoline, and petroleum fuels.

(4) The facilities are used exclusively for the loading, unloading, or storage of:

(A) organic liquids normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings;

(B) petroleum, petroleum fuels, other motor vehicle fuels, and natural gas liquids, none of which have a true vapor pressure of 11.0 pounds per square inch, absolute, or greater at maximum temperature of use;

(5) The facilities will meet any applicable requirements of Chapter 115 of this title (relating to Control of Air Pollution from Volatile Organic Compounds);

(6) Facilities used for the loading, unloading, or storage of any compound listed in 40 Code of Federal Regulations 261, Appendix VIII are not permitted by rule under this section. Adopted August 9, 2000 Effective September 4, 2000

Section 106.474. Hydrochloric Acid Storage.

Hydrochloric acid storage tanks used exclusively for the storage of hydrochloric acid with an acid strength of 38% by weight or less are permitted by rule. If an acid more concentrated than 20% by weight is stored, the tank vent must be controlled to reduce emissions by at least 99%. Adopted August 9, 2000 Effective September 4, 2000

Section 106.475. Pressurized Tanks or Tanks Vented to a Firebox.

Any vessel storing carbon compounds composed only of carbon, hydrogen, or oxygen is permitted by rule, provided that the vessel vent is directed to an incinerator, boiler, or other firebox having a stationary flue or a waste gas flare system that will operate with no visible emissions except as provided by Chapter 101 of this title (relating to General Air Quality Rules) for periods of maintenance or operational upset. However, vessels not exceeding 100 barrels capacity and storing only liquid petroleum gas may have the safety relief valve vent directly to the atmosphere. Also, any tank having a capacity not to exceed 1,000 gallons and storing only commercial odorants used to odorize petroleum gases may have the safety relief valve vent directly to the atmosphere. Adopted August 9, 2000 Effective September 4, 2000

Section 106.476. Pressurized Tanks or Tanks Vented to Control.

Any tank or other container storing carbon compounds is permitted by rule, provided that the tank or container pressure is sufficient at all times to prevent vapor or gas loss to the atmosphere or the tank or container is equipped with a relief valve which directs all vapors or gases to an incinerator, boiler, or other firebox having a stationary flue or a waste gas smokeless flare system. The vapors or gases and any necessary fuel gas shall be mixed thoroughly upstream of the heater burner(s) or the flare tip such that the mixed gases have a minimum net or lower heating value of 200 British thermal units per cubic foot. The flare also shall meet the other requirements of §106.492 of this title (relating to Flares). Adopted August 9, 2000 Effective September 4, 2000

Section 106.477. Anhydrous Ammonia Storage.

Anhydrous ammonia storage tanks and distribution facilities that meet the following conditions are permitted by rule.

(1) All valves, connectors, and hoses, associated with permanent storage tanks and any nurse tanks stored on-site, shall be properly maintained in leak-proof condition at all times.

(2) The capacity of each permanent storage tank is 30,000 gallons or less.

(3) When transferring ammonia, all vapors shall be vented back to the host tank and never to the atmosphere.

(4) When relieving pressure from hoses associated with permanent storage tanks and any nurse tanks, all vapors shall be bled into an adequate volume of water and never to the atmosphere.

(5) Each permanent storage tank and any nurse tanks stored on-site are equipped to prevent unauthorized operation.

(6) Before construction begins, written site approval must be received from the regional director and the owner or operator shall file with the commission's Office of Permitting, Remediation, and Registration in Austin a completed Form PI-7 and supporting documentation demonstrating that all of the requirements of this section will be met.

(7) Each permanent storage tank is located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner of the property upon which the facility is located. Adopted August 9, 2000 Effective September 4, 2000

Section 106.478. Storage Tank and Change of Service.

Any fixed or floating roof storage tank, or change of service in any tank, used to store chemicals or mixtures of chemicals shown in Table 478 in paragraph (8) of this section is permitted by rule, provided that all of the following conditions of this section are met:

(1) The tank shall be located at least 500 feet away from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located.

(2) The true vapor pressure of the compound to be stored shall be less than 11.0 psia at the maximum storage temperature.

(3) For those compounds that have a true vapor pressure greater than 0.5 psia and less than 11.0 psia at the maximum storage temperature, any storage vessel larger than 40,000 gallons capacity shall be equipped with an internal floating cover or equivalent control.

(A) An open top tank containing an external floating roof using double seal technology shall be an approved control alternative equivalent to an internal floating cover tank, provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal. Double seals having a vapor-mounted primary seal are an approved alternative for existing open top floating roof tanks undergoing a change of service.

(B) The floating cover or floating roof design shall incorporate sufficient flotation to conform to the requirements of American Petroleum Institute Code 650, Appendix C or an equivalent degree of flotation.

(4) Compounds with a true vapor pressure of 0.5 psia or less at the maximum storage temperature may be stored in a fixed roof or cone roof tank which includes a submerged fill pipe or utilizes bottom loading.

(5) For fixed or cone roof tanks having no internal floating cover, all uninsulated tank exterior surfaces exposed to the sun shall be painted chalk white except where a dark color is necessary to help the tank absorb or retain heat in order to maintain the material in the tank in a liquid state.

(6) Emissions shall be calculated by methods specified in Section 4.3 of the current edition of the United States Environmental Protection Agency Publication AP-42. This document may be obtained from the Superintendent of Documents, Washington D.C. 20402. It is Stock Number 0550000251-7, Volume I.

(7) Before construction begins, storage tanks of 25,000 gallons or greater capacity and located in a designated nonattainment area for ozone shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7. The registration shall include a list of all tanks, calculated emissions for each carbon compound in tons per year for each tank, and a Table 7 of Form PI-2 for each different tank design.

(8) Mixtures of the chemicals listed in Table 478 which contain more than a total of 1.0% by volume of all other chemicals not listed in Table 478 are not covered by this section.

Table 478

Approved Chemical List for Exemption from Permitting

A. Compounds of the following classes containing only atoms of carbon and hydrogen, not including aromatic compounds:

Paraffins. Examples: hexane, pentane, octane, isooctane.

Cycloparaffins (except cyclopentane). Examples: cyclohexane, methyl cyclopentane.

Olefins (except butadiene). Examples: octene, isoprene.

Cycloolefins. Examples: cyclopentadiene, cyclohexene.

B. Aromatic hydrocarbons only as follows: Ethyl benzene, styrene, xylenes.

C. Compounds of the following classes containing only atoms of carbon, hydrogen, and oxygen:

Alcohols (except allyl alcohol, isobutyl alcohol, and propargyl alcohol). Examples of approved alcohols: butyl alcohol, ethylene glycol.

Ethers (except vinyl ethers, glycol ethers, epoxides, and other ringed oxide compounds such as ketenes, furans, and pyrans). Examples of approved ethers: butyl ether, isopropyl ether.

Esters (except acrylates, methacrylates, allyl acetate, vinyl acetate, isopropyl formate). Examples of approved esters: ethyl acetate, butyl formate, methyl propionate.

Ketones (except allyl acetone, methyl ethyl ketone, methyl normal butyl ketone, acetophenone, and vinyl ketones). Examples of approved ketones: acetone, hexanone.

D. Additional chemicals:

Crude oil and refinery petroleum fractions (except pyrolysis naphthas and pyrolysis gasolines) containing less than 10% benzene. Examples of approved petroleum fractions: intermediate and finished gasolines, naphthas, alkylates, fluid catalytic cracking unit feed, fuel oils, distillates, other liquid fuels, and condensates.

Natural gas and crude oil condensates that do not emit sour gas.

E. Non-approved chemicals:

Other chemicals not specifically included within the classes defined above are not approved. Examples of non-approved chemicals: aromatics (other than those listed or those found in the crude oil and refinery liquids as listed); aldehydes; amines; amides; imines; nitriles; halogenated compounds; sulfonated chemicals; cyanates; organic acids; ethylene oxide (EtO), propylene oxide, and other oxygenated compounds not listed; organometallic compounds; pesticides. Adopted August 9, 2000 Effective September 4, 2000

Subchapter V: Thermal Control Devices

Section 106.491, 106.492, 106.494 - 106.496

Effective June 30, 2004

Section 106.491. Dual-Chamber Incinerators.

(a) Applicability. This section authorizes dual-chamber incinerators that burn only waste generated on site, or illegal drugs confiscated by federal, state, or local law enforcement agencies. Incinerators used in the processing or recovery of materials or to dispose of pathological waste as defined in §106.494 of this title (relating to Pathological Waste Incinerators), hospital waste, infectious waste, hazardous waste, or radioactive waste are not authorized by this section.

(b) Design requirements. The incinerator must meet the following design requirements.

(1) The incinerator must be equipped with an afterburner automatically controlled to operate with a minimum temperature of 1,400 degrees Fahrenheit, equipped with a continuous exhaust temperature monitor, and designed and operated with a minimum gas retention time of 0.5 seconds.

(2) The manufacturer's rated capacity (burn rate) must be 500 pounds per hour or less. Each claim under this section must address the model of incinerator and specify the types and amounts of waste to be destroyed for determination of a specific unit’s appropriate capacity.

(3) Stacks must comply with the following:

(A) height at least 15 feet from the ground;

(B) height at least six feet above the peak of the highest structure within 150 feet;

(C) located at least 200 feet from nearest property line; and

(D) have unobstructed vertical discharge when the incinerator is operated. Properly installed and maintained spark arresters are not considered obstructions.

(c) Operational limits. The incinerator must meet the following operational conditions.

(1) This facility must be used solely for the disposal of waste materials generated on site and only one of the following:

(A) paper, wood, cardboard cartons, rags, garbage (animal and vegetable wastes as defined in Chapter 101 of this title (relating to General Air Quality Rules)), and combustible floor sweepings; containing overall not more than 10% treated papers, plastic, or rubber scraps. Plastics containing polyvinyl chloride or polyvinyl fluoride are prohibited. Neither garbage content nor moisture content may exceed 50% and noncombustible solids may not exceed 10% of total weight; or

(B) drugs confiscated by law enforcement, limited to marijuana, cocaine, opiates, and methamphetamines.

(2) The incinerator must be operated with the following limits:

(A) cocaine, opiates, and methamphetamines are limited to a burn rate of no more than four pounds per hour (lb/hr) and ten pounds in any eight-hour period. Emissions must not exceed 0.04 lb/hr for each of these compounds; and

(B) marijuana is limited to a burn rate of no more than 500 lb/hr. Emissions must not exceed 1.0 lb/hr total inhalable particulate matter (PM10).

(3) Fuel for the incinerator must be limited to sweet natural gas, liquid petroleum gas, Number 2 fuel oil with less than 0.5% sulfur by weight, or electric power. Products of fuel combustion (sulfur dioxide, nitrogen oxides, and carbon monoxide) and volatile organic compounds are authorized, if the facility is operated in compliance with this section.

(4) The manufacturer's recommended operating instructions must be posted at the incinerator, and the unit must be operated in accordance with these instructions. The incinerator must be operated in accordance with the manufacturer’s specifications and maintained in good working order.

(5) Visible emissions must not exceed an opacity of 5.0% averaged over any six-minute period as determined by the United States Environmental Protection Agency Test Method 9.

(d) Compliance and administrative requirements.

(1) Registration. Before construction begins, the facility must be registered with the commission's Office of Permitting, Remediation, and Registration using Form PI-7, Registration for Permits by Rule.

(2) Waste regulations. Compliance with this section serves as a commission authorization under §330.51 of this title (relating to Permit Application for Municipal Solid Waste Facilities).

(3) State and federal air compliance demonstrations.

(A) Emission limits. Within 180 days of operation, all facilities processing confiscated drugs must provide sampling to demonstrate compliance with the emission limits of this section. Similar facility sampling may be used if the owner or operator provides documentation, including model number, burn rate, materials burned, and all relevant operating conditions, that demonstrates the previously-sampled incinerator is equivalent to the facility to be authorized under this section.

(B) Federal requirements. Registrations must address the applicability of 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS), Subpart CCCC, Standards of Performance for Commercial and Industrial Solid Waste Incineration Units, for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001 (as published in the December 1, 2000 issue of the *Federal Register*); or 40 CFR Part 60, Subpart DDDD, Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units, that Commenced Construction On or Before November 30, 1999 (as published in the December 1, 2000 issue of the *Federal Register*). If determined to be applicable, commercial and industrial solid waste incinerators must demonstrate compliance with these federal regulations, including initial stack sampling, opacity readings, reporting, and recordkeeping.

(C) State air regulations. Upon the request of the executive director, a designated representative of the commission, or a local air pollution control agency having jurisdiction over the site, compliance with §111.121 and §111.125 of this title (relating to Single-, Dual-, and Multiple-Chamber Incinerators; and Testing Requirements) must be demonstrated.

(4) Monitoring. Incinerator operators/owners shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the temperature of the exhaust gas of the incinerator, in addition to any monitoring required by an appropriate NSPS subpart.

(5) Recordkeeping. Records must be kept of the type and amount of waste charged/burned; type and amount of fuel usage, including sulfur content for fuel oil; monitoring and testing results; hours of operation; and routine maintenance of abatement systems sufficient to demonstrate each of the requirements listed previously are met. Such records must be retained for a minimum rolling two-year period and comply with §106.8 of this title (relating to Recordkeeping). Adopted June 9, 2004 Effective June 30, 2004

Section 106.492. Flares.

Smokeless gas flares which meet the following conditions of this section are permitted by rule:

(1) design requirements.

(A) The flare shall be equipped with a flare tip designed to provide good mixing with air, flame stability, and a tip velocity less than 60 feet per second (ft/sec) for gases having a lower heating value less than 1,000 British thermal units per cubic foot (Btu/ft3) or a tip velocity less than 400 ft/sec for gases having a lower heating value greater than 1,000 Btu/ft3.

(B) The flare shall be equipped with a continuously burning pilot or other automatic ignition system that assures gas ignition and provides immediate notification of appropriate personnel when the ignition system ceases to function. A gas flare which emits no more than 4.0 pounds per hour (lb/hr) of reduced sulfur compounds, excluding sulfur oxides, is exempted from the immediate notification requirement, provided the emission point height meets the requirements of §106.352(4) of this title (relating to Oil and Gas Production Facilities).

(C) A flare which burns gases containing more than 24 parts per million by volume (ppmv) of sulfur, chlorine, or compounds containing either element shall be located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the flare or the owner of the property upon which the flare is located.

(D) The heat release of a flare which emits sulfur dioxide (SO2) or hydrogen chloride (HCl) shall be greater than or equal to the following values:

For HCl $Q = 2.73 \times 10^5 \times HCl$

For SO2 $Q = 0.53 \times 10^5 \times SO2$

Where Q = heat release, British thermal units per hour, based on lower heating value

HCl = HCl emission rate, lb/hr

SO2 = SO2 emission rate, lb/hr

(2) operational conditions.

(A) The flare shall burn a combustible mixture of gases containing only carbon, hydrogen, nitrogen, oxygen, sulfur, chlorine, or compounds derived from these elements. When the gas stream to be burned has a net or lower heating value of more than 200 Btu/ft3 prior to the addition of air, it may be considered combustible.

(B) A flare which burns gases containing more than 24 ppmv of sulfur, chlorine, or compounds containing either element shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7 prior to construction of a new flare or prior to the use of an existing flare for the new service.

(C) Under no circumstances shall liquids be burned in the flare. Adopted August 9, 2000 Effective September 4, 2000

Section 106.494. Pathological Waste Incinerators.

(a) Definitions. The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise.

(1) **Pathological waste (as defined in 25 TAC Section 1.132 (relating to Definitions))** - Includes, but is not limited to:

(A) human materials removed during surgery, labor and delivery, autopsy, or biopsy, including:

(i) body parts;

(ii) tissues or fetuses;

(iii) organs; and

(iv) bulk blood and body fluids;

(B) products of spontaneous or induced human abortions, including body parts, tissues, fetuses, organs, and bulk blood and body fluids, regardless of the period of gestation;

(C) laboratory specimens of blood and tissue after completion of laboratory examination; and

(D) anatomical remains.

(2) **Human remains (as defined in Health and Safety Code (H&SC), Section 711.001)** - The body of decedent.

(3) **Carcasses** - Dead animals, in whole or part.

(4) **Crematory (as defined in the H&SC, Section 711.001)** - A structure containing a furnace used or intended to be used for the cremation of human remains.

(5) **Animal feeding operations** - A lot or facility (other than an aquatic animal feeding facility or veterinary facility) where animals are stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and the animal confinement areas do not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season.

(6) **Non-commercial incinerator** - An incinerator which does not accept pathological waste or carcasses generated off-site for monetary compensation.

(7) **Stack height** - Elevation of the stack exit above the ground.

(b) Conditions of permit by rule. Crematories and non-commercial incinerators used to dispose of pathological waste and carcasses which meet the following conditions of this section are permitted by rule. Incinerators used in the recovery of materials are not covered by this section.

(1) Design requirements.

(A) The manufacturer's rated capacity (burn rate) shall be 200 pounds per hour (lbs/hr) or less.

(B) The incinerator shall be a dual-chamber design.

(C) Burners shall be located in each chamber, sized to manufacturer's specifications, and operated as necessary to maintain the minimum temperature requirements of subparagraphs (D) or (E) of this paragraph at all times when the unit is burning waste.

(D) Excluding crematories, the secondary chamber much be designed to maintain a temperature of 1,600 degrees Fahrenheit or more with a gas residence time of 1/2 second or more.

(E) In lieu of subparagraph (D) of this paragraph, incinerators at animal feeding operations that:

(i) are used to dispose of carcasses generated on-site; and

(ii) are located a minimum of 700 feet from the nearest property line, shall be designed to maintain a secondary chamber temperature of 1,400 degrees Fahrenheit or more with a gas residence time of 1/4 second or more. Alternatively, incinerators may be located in accordance with Table 494, provided the total manufacturer's rated capacity (burn rate) of all units located less than 700 feet from a property line shall not exceed 200 lb/hr. Setback distances shall be measured from the stack exit.

Table 494

Stack Height (feet)	Property Line Distance (feet) For 24-hour Operation	Property Line Distance (feet) For *Daytime-only Operation
8 or less	210	150
> 8 and ≤ 12	200	140
> 12 and ≤ 16	180	130
> 16 and ≤ 20	160	110
> 20	140	90

*One hour after sunrise to one hour before sunset

(F) There shall be no obstructions to stack flow, such as by rain caps, unless such devices are designed to automatically open when the incinerator is operated. Properly installed and maintained spark arresters are not considered obstruction.

(2) Operational conditions.

(A) Before construction begins, the facility shall be registered with the commission using Form PI-7.

(B) The manufacturer's recommended operating instructions shall be posted at the unit and the unit shall be operated in accordance with these instructions.

(C) The opacity of emissions from the incinerator shall not exceed 5.0% averaged over a six-minute period.

(D) Heat shall be provided by the combustion of sweet natural gas, liquid petroleum gas, or Number 2 fuel oil with less than 0.3% sulfur by weight, or by electric power.

(E) Incinerators installed and operated in accordance with the conditions of this section shall not be used to dispose of any medical waste, other than pathological waste and/or carcasses.

(F) Incinerators installed and operated in accordance with the conditions of this section shall also meet the requirements of §§111.121, 111.125, 111.127, and 111.129 of this title (relating to Single-, Dual-, and Multiple-Chamber Incinerators; Testing Requirements; Monitoring and Recordkeeping Requirements; and Operating Requirements).

(G) Crematories shall be used for the sole purpose of cremation of human remains and appropriate containers. Adopted August 9, 2000 Effective September 4, 2000

Section 106.495. Heat Cleaning Devices.

Heat cleaning devices (such as ovens, furnaces, and/or direct flame incinerators) used to thermally remove residual combustible or semi-combustible materials from noncombustible electrical or mechanical parts are permitted by rule, provided the following conditions of this section are satisfied.

(1) Before construction begins, the facility shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7.

(2) The combustible material shall not exceed 10% by weight of the total load to the oven, furnace, and/or incinerator.

(3) The combustible material shall contain no halogenated organic compounds.

(4) The oven, furnace, and/or incinerator shall be equipped with an afterburner automatically controlled to operate with a minimum temperature of 1,400 degrees Fahrenheit and a gas retention time of 0.5 second or greater.

(5) Opacity of emissions from the oven, furnace, and/or incinerator shall not exceed 5.0% averaged over a five-minute period.

(6) The manufacturer's recommended operating instructions shall be posted at each oven, furnace, and/or incinerator, and each unit shall be operated in accordance with these instructions.

(7) Heat shall be provided by the combustion of sweet natural gas, liquid petroleum gas, or Number 2 fuel oil with no more than 0.5% sulfur by weight, or by electric power.

(8) The emission of any air contaminant shall not exceed 0.5 pounds per hour and 2.0 tons per year. Adopted August 9, 2000 Effective September 4, 2000

Section 106.496. Air Curtain Incinerators.

(a) Applicability. The commission encourages the recycling of the materials specified in this section. Composting, mulching, or other processing to produce a useable material can be authorized by §332.8 of this title (relating to Air Quality Requirements). This section authorizes any air curtain incinerator used for the burning of trees, clean lumber, and brush from land-clearing as referenced in 40 Code of Federal Regulations §60.2245, right-of-way maintenance, emergency clean-up operations, noncommercial industrial sites, and municipal solid waste sites, if operated in accordance with this section.

(b) Scope and terms. The following terms apply only to this section.

(1) **Air curtain incinerator (ACI)** - An incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor.

(2) **Clean lumber** - Wood or wood products that have been cut or shaped and includes wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate, copper arsenate, pentachlorophenol, or creosote.

(3) **Emergency cleanup** - The removal and disposal of wastes resulting from events such as high winds, floods, and other events of nature that are necessary to protect public health and safety.

(4) **Land-clearing** - The removal of trees, brush, and other vegetative matter from agriculture, forest management, or land development.

(5) **Municipal solid waste sites** - Landfills that may burn on- or off-site generated waste as specifically authorized by the executive director under §330.4 of this title (relating to Permit Required).

(6) **Noncommercial industrial sites** - Locations at which on-site generated waste resulting from the processing or manufacturing of products may be burned. These industrial sites must be noncommercial, as limited by §335.2(d)(1) of this title (relating to Permit Required), and burn only on-site generated waste that results from the processing or manufacturing of products, and do not include sites that accept off-site generated waste for disposal or destruction.

(7) **Site** - One or more contiguous or adjacent properties that are under common control of the same person, or persons under common control.

(c) Operational limits.

(1) Distance limitations. The ACI must be operated at least 300 feet from the closest property line and any other facility with an air permit authorization under §116.110 of this title (relating to Applicability), or any ACI operating under this section.

(2) Facility locations. ACIs may not be operated at a given site more than the following.

(A) All facilities may operate up to a total of 600 hours in any rolling 12-month period.

(B) Portable facilities temporarily located at a site may operate up to 180 consecutive calendar days or 600 hours, whichever occurs first. The ACI must be removed from the site after ceasing operation.

(C) Permanent facilities may process materials for municipal solid waste or noncommercial industrial sites only.

(3) Daily operation.

(A) Daily burning must not commence earlier than one hour after sunrise.

(B) Burning must be completed on the same day, not later than one hour before sunset. At the end of the burn, embers must not be flaming or smoking, and no additional fuel may be added to the ACI.

(C) Material must not be added to the ACI in such a manner as to be stacked above the air curtain.

(D) An operator shall remain with the ACI at all times when it is operating.

(E) The ACI blower must remain on at the end of daily burning until enough material is consumed so that any remaining material in the trench does not flame or cause smoke that exceeds the requirement of this section when the blower is turned off.

(F) Material not being worked, and material being stockpiled to be burned at a later date, must be kept at least 75 feet from the trench or firebox.

(4) Visible emissions.

(A) Visible emissions from an ACI, stockpiles, work areas, and any in-plant roads associated with the facility must not leave the property for a period exceeding 30 seconds in any six-minute period as determined by United States Environmental Protection Agency Test Method 22.

(B) Best management practices must be used to ensure that the ACI blower is operated in a manner to minimize smoke and ash becoming airborne.

(5) Emissions from products of combustion. Products of combustion (sulfur dioxide, nitrogen oxides, and carbon monoxide) and volatile organic compounds are authorized if the facility is operated in compliance with this section.

(6) Compliance. Upon notification by a representative of the commission or any local air pollution control program having jurisdiction that the ACI is not complying with the conditions of this section, additional material must not be added to the ACI until the facility returns to compliance.

(d) Trench burning. An ACI operation using a trench and air manifold system must meet the following conditions.

(1) At all times, trench dimensions must not exceed 12 feet in width, 35 feet in length, and be no less than ten feet in depth, such that the combustion of the materials within the trench is maintained.

(2) The length of the trench must not exceed the length of the air blower manifold.

(3) The walls of the trench must be maintained such that they remain sufficiently vertical to maintain the air curtain.

(4) Upon removal of the ACI from the burn site, ash may be left in the trench, subject to the conditions of this section, and the trench must be completely filled with incombustible material and covered with soil.

(e) Firebox burning. An ACI operation using a manufactured aboveground container and blower system must meet the following requirements and operational limits.

(1) The interior dimensions of the firebox must not exceed eight feet in width, 35 feet in length, and be no less than six feet in depth.

(2) The walls of the ACI must be maintained such that they remain sufficiently vertical to maintain the air curtain and the combustion of the materials within the ACI.

(3) The air blower manifold length must be equal to the length of the burning area.

(4) Firebox facilities, which are equipped with refractory walls and above-fire air supply, may operate up to a total of 750 hours in any rolling 12-month period.

(f) Ash processing.

(1) Handling. All ash generated as a result of the operation of an ACI must be handled in accordance with the following requirements.

(A) Ash must be removed from the ACI during burning as necessary to maintain efficient combustion.

(B) Ash must be removed from the ACI in such a manner as to minimize the ash becoming airborne.

(C) All material removed from the ACI must be completely extinguished before being disposed of or placed in contact with combustible material, and must be stored in a manner that does not constitute a fire hazard or allow the material to smolder or burn outside of the ACI.

(2) Disposal. The ash generated from an ACI operated under this section must be disposed of by one of the following methods:

(A) buried on-site in an ACI trench, if deed recorded and a copy of the document is provided to the executive director as required by §330.7 of this title (relating to Deed Recordation);

(B) sent to a Type I landfill, if the ash is containerized and no hot coals are present; or

(C) beneficially used, if the use is determined to be acceptable by the executive director in accordance with §330.8 of this title (relating to Notification Requirements).

(g) Other requirements.

(1) Local restrictions. This section does not exempt ACIs from any local government regulations or other local government requirements, permits, registrations, or other authorizations required by local authorities.

(2) State air regulations. This section does not exempt ACIs from compliance with any additional state air regulations.

(3) Federal air requirements. Registrations for permanent ACIs must address the applicability of 40 Code of Federal Regulations (CFR) Part 60, Subpart CCCC, Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001 (as published in the December 1, 2000 issue of the *Federal Register*). If determined to be applicable, commercial and industrial solid waste incinerators must demonstrate compliance with this federal regulation, including initial stack sampling, opacity readings, reporting, and recordkeeping.

(4) State waste regulations.

(A) Landfill sites:

(i) ACIs located at a landfill require separate authorization by the executive director in accordance with §330.4 of this title (relating to Permit Required); and

(ii) below-ground ACIs must be located in undisturbed soil not previously excavated, built up, compacted, or used in any type of active landfill operation.

(B) Ash disposal. For materials authorized to be burned under this section and the resulting ash from ACIs, categorized as municipal solid waste as defined in §330.2 of this title (relating to Definitions), compliance with this section serves as a commission authorization to store, process, remove, and/or dispose of the ash resulting from the operation of ACIs as required by §330.4(a) of this title.

(5) State water regulations. Nothing in this section removes the responsibility of the owner/operator from obtaining any necessary authorization under Chapter 308 of this title (relating to Criteria and Standards for the National Pollutant Discharge Elimination System).

(h) Administrative.

(1) Multiple locations at a single site. Multiple ACIs at a given site may be combined into a single registration if individual ACI locations at the site are in compliance with all design requirements and operating restrictions. Operations for all ACIs under common control at a given site must cumulatively meet the annual hourly limitations as listed.

(2) Registration.

(A) ACIs must be initially registered with the executive director using the Core Data Form and Form PI-7.

(B) Re-registration is required when any notice of enforcement is issued by the commission, or delegated representative, to the owner or operator of an ACI facility or every five years, whichever occurs first.

(C) Any ACI used for emergency clean-up operations does not require registration, but the owner or operator shall meet the notification requirements of this section except for the 14-day prior notice requirement.

(D) Registration reviews will include site approval and a compliance history evaluation in accordance with Chapter 60 of this title (relating to Compliance History).

(3) Notification. Notifications are not subject to the requirements of §106.50 of this title (relating to Registration Fees for Permits by Rule) or Chapter 60 of this title.

(A) The owner or operator of an ACI that has previously been registered with the executive director in accordance with this section and is being relocated to a new site, other than a landfill, shall notify the appropriate regional office and any local air pollution control agency having jurisdiction over the site.

(B) Notifications must be in writing using the Regional Standard Permit/Permit by Rule Relocation Form, include a return receipt, and be received by the regional director and any local air pollution control agency having jurisdiction over the site at least 14 calendar days prior to locating at the site.

(4) Records. To demonstrate compliance with this section and §106.8 of this title (relating to Recordkeeping), owners or operators of ACIs shall, at a minimum, meet the following requirements.

(A) The ACI must be equipped with a run time meter. A written record or log of the hours of operation of the ACI must be maintained at the site and made available at the request of personnel from the commission or any

air pollution control program having jurisdiction. This run time record or log must be organized such that compliance with the requirements of this section can be readily determined.

(B) Records must be kept to demonstrate compliance with all operational or location requirements of this section. These records must include a copy of the return receipt demonstrating notification to the appropriate regional office and local air pollution control programs having jurisdiction, and plot plans showing distance limits are met. For portable facilities, once relocated to a new site, records must be maintained at a central location for a two-year rolling period.

(C) A copy of this section and any operating instructions must be kept at the burn site, followed by owners or operators, and made available at the request of personnel from the commission or any local air pollution control program having jurisdiction.

(D) The ACI must be clearly and permanently marked with the regulated entity (preferred) or account identification number on the fan manifold or aboveground unit. Adopted June 9, 2004 Effective June 30, 2004

Subchapter W: Turbines and Engines

Section 106.511 - 106.513

Effective August 16, 2012

Section 106.511. Portable and Emergency Engines and Turbines.

Internal combustion engine and gas turbine driven compressors, electric generator sets, and water pumps, used only for portable, emergency, and/or standby services are permitted by rule, provided that the maximum annual operating hours shall not exceed 10% of the normal annual operating schedule of the primary equipment; and all electric motors. For purposes of this section, “standby” means to be used as a “substitute for” and not “in addition to” other equipment. Adopted August 9, 2000 Effective September 4, 2000

Section 106.512. Stationary Engines and Turbines.

Gas or liquid fuel-fired stationary internal combustion reciprocating engines or gas turbines that operate in compliance with the following conditions of this section are permitted by rule.

(1) The facility shall be registered by submitting the commission’s Form PI-7, Table 29 for each proposed reciprocating engine, and Table 31 for each proposed gas turbine to the commission’s Office of Permitting, Remediation, and Registration in Austin within ten days after construction begins. Engines and turbines rated less than 240 horsepower (hp) need not be registered, but must meet paragraphs (5) and (6) of this section, relating to fuel and protection of air quality. Engine hp rating shall be based on the engine manufacturer’s maximum continuous load rating at the lesser of the engine or driven equipment’s maximum published continuous speed. A rich-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content less than 4.0% by volume. A lean-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content of 4.0% by volume, or greater.

(2) For any engine rated 500 hp or greater, subparagraphs (A) - (C) of this paragraph shall apply.

(A) The emissions of nitrogen oxides (NO_x) shall not exceed the following limits:

(i) 2.0 grams per horsepower-hour (g/hp-hr) under all operating conditions for any gas-fired rich-burn engine;

(ii) 2.0 g/hp-hr at manufacturer’s rated full load and speed, and other operating conditions, except 5.0 g/hp-hr under reduced speed, 80-100% of full torque conditions, for any spark-ignited, gas-fired lean-burn engine, or any compression-ignited dual fuel-fired engine manufactured new after June 18, 1992;

(iii) 5.0 g/hp-hr under all operating conditions for any spark-ignited, gas-fired, lean-burn two-cycle or four-cycle engine or any compression-ignited dual fuel-fired engine rated 825 hp or greater and manufactured after September 23, 1982, but prior to June 18, 1992;

(iv) 5.0 g/hp-hr at manufacturer’s rated full load and speed and other operating conditions, except 8.0 g/hp-hr under reduced speed, 80-100% of full torque conditions for any spark-ignited, gas-fired, lean-burn four-cycle engine, or any compression-ignited dual fuel-fired engine that:

(I) was manufactured prior to June 18, 1992, and is rated less than 825 hp; or

(II) was manufactured prior to September 23, 1982;

(v) 8.0 g/hp-hr under all operating conditions for any spark-ignited, gas-fired, two-cycle lean-burn engine that:

(I) was manufactured prior to June 18, 1992, and is rated less than 825 hp; or

(II) was manufactured prior to September 23, 1982;

(vi) 11.0 g/hp-hr for any compression-ignited liquid-fired engine.

(B) For such engines which are spark-ignited gas-fired or compression-ignited dual fuel-fired, the engine shall be equipped as necessary with an automatic air-fuel ratio (AFR) controller which maintains AFR in the range required to meet the emission limits of subparagraph (A) of this paragraph. An AFR controller shall be deemed necessary for any engine controlled with a non-selective catalytic reduction (NSCR) converter and for applications where the fuel heating value varies more than □ 50 British thermal unit/standard cubic feet from the design lower heating value of the fuel. If an NSCR converter is used to reduce NO_x, the automatic controller shall operate on exhaust oxygen control.

(C) Records shall be created and maintained by the owner or operator for a period of at least two years, made available, upon request, to the commission and any local air pollution control agency having jurisdiction, and shall include the following:

(i) documentation for each AFR controller, manufacturer's, or supplier's recommended maintenance that has been performed, including replacement of the oxygen sensor as necessary for oxygen sensor-based controllers. The oxygen sensor shall be replaced at least quarterly in the absence of a specific written recommendation;

(ii) documentation on proper operation of the engine by recorded measurements of NO_x and carbon monoxide (CO) emissions as soon as practicable, but no later than seven days following each occurrence of engine maintenance which may reasonably be expected to increase emissions, changes of fuel quality in engines without oxygen sensor-based AFR controllers which may reasonably be expected to increase emissions, oxygen sensor replacement, or catalyst cleaning or catalyst replacement. Stain tube indicators specifically designed to measure NO_x and CO concentrations shall be acceptable for this documentation, provided a hot air probe or equivalent device is used to prevent error due to high stack temperature, and three sets of concentration measurements are made and averaged. Portable NO_x and CO analyzers shall also be acceptable for this documentation;

(iii) documentation within 60 days following initial engine start-up and biennially thereafter, for emissions of NO_x and CO, measured in accordance with United States Environmental Protection Agency (EPA) Reference Method 7E or 20 for NO_x and Method 10 for CO. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. Modifications to these methods will be subject to the prior approval of the Source and Mobile Monitoring Division of the commission. Emissions shall be measured and recorded in the as-found operating condition; however, compliance determinations shall not be established during start-up, shutdown, or under breakdown conditions. An owner or operator may submit to the appropriate regional office a report of a valid emissions test performed in Texas, on the same engine, conducted no more than 12 months prior to the most recent start of construction date, in lieu of performing an emissions test within 60 days following engine start-up at the new site. Any such engine shall be sampled no less frequently than biennially (or every 15,000 hours of elapsed run time, as recorded by an elapsed run time meter) and upon request of the executive director. Following the initial compliance test, in lieu of performing stack sampling on a biennial calendar basis, an owner or operator may elect to install and operate an elapsed operating time meter and shall test the engine within 15,000 hours of engine operation after the previous emission test. The owner or operator who elects to test on an operating hour schedule shall submit in writing, to the appropriate regional office, biennially after initial sampling, documentation of the actual recorded hours of engine operation since the previous emission test, and an estimate of the date of the next required sampling.

(3) For any gas turbine rated 500 hp or more, subparagraphs (A) and (B) of this paragraph shall apply.

(A) The emissions of NO_x shall not exceed 3.0 g/hp-hr for gas-firing.

(B) The turbine shall meet all applicable NO_x and sulfur dioxide (SO_2) (or fuel sulfur) emissions limitations, monitoring requirements, and reporting requirements of EPA New Source Performance Standards Subpart GG--Standards of Performance for Stationary Gas Turbines. Turbine hp rating shall be based on turbine base load, fuel lower heating value, and International Standards Organization Standard Day Conditions of 59 degrees Fahrenheit, 1.0 atmosphere and 60% relative humidity.

(4) Any engine or turbine rated less than 500 hp or used for temporary replacement purposes shall be exempt from the emission limitations of paragraphs (2) and (3) of this section. Temporary replacement engines or turbines shall be limited to a maximum of 90 days of operation after which they shall be removed or rendered physically inoperable.

(5) Gas fuel shall be limited to: sweet natural gas or liquid petroleum gas, fuel gas containing no more than ten grains total sulfur per 100 dry standard cubic feet, or field gas. If field gas contains more than 1.5 grains hydrogen sulfide or 30 grains total sulfur compounds per 100 standard cubic feet (sour gas), the engine owner or operator shall maintain records, including at least quarterly measurements of fuel hydrogen sulfide and total sulfur content, which demonstrate that the annual SO_2 emissions from the facility do not exceed 25 tons per year (tpy). Liquid fuel shall be petroleum distillate oil that is not a blend containing waste oils or solvents and contains less than 0.3% by weight sulfur.

(6) There will be no violations of any National Ambient Air Quality Standard (NAAQS) in the area of the proposed facility. Compliance with this condition shall be demonstrated by one of the following three methods:

(A) ambient sampling or dispersion modeling accomplished pursuant to guidance obtained from the executive director. Unless otherwise documented by actual test data, the following nitrogen dioxide (NO_2)/NO_x ratios shall be used for modeling NO_2 NAAQS;

Device	NO_X Emission Rate (Q) g/hp-hr	NO_2/NO_X Ratio
IC Engine	Less than 2.0	0.4
IC Engine	2.0 thru 10.0	0.15 +(0.5/Q)
IC Engine	Greater than 10.0	0.2
Turbines		0.25
IC Engine with catalytic converter		0.85

(B) all existing and proposed engine and turbine exhausts are released to the atmosphere at a height at least twice the height of any surrounding obstructions to wind flow. Buildings, open-sided roofs, tanks, separators, heaters, covers, and any other type of structure are considered as obstructions to wind flow if the distance from the nearest point on the obstruction to the nearest exhaust stack is less than five times the lesser of the height, Hb, and the width, Wb, where:

Hb = maximum height of the obstruction, and

Wb = projected width of obstruction =

$$\sqrt[2]{\frac{lw}{3.141}}$$

where:

L = length of obstruction

W = width of obstruction

(C) the total emissions of NO_x (nitrogen oxide plus NO_2) from all existing and proposed facilities on the property do not exceed the most restrictive of the following:

(i) 250 tpy;

(ii) the value (0.3125 D) tpy, where D equals the shortest distance in feet from any existing or proposed stack to the nearest property line.

(7) Upon issuance of a standard permit for electric generating units, registrations under this section for engines or turbines used to generate electricity will no longer be accepted, except for:

(A) engines or turbines used to provide power for the operation of facilities registered under the Air Quality Standard Permit for Concrete Batch Plants;

(B) engines or turbines satisfying the conditions for facilities permitted by rule under Subchapter E of this title (relating to Aggregate and Pavement); or

(C) engines or turbines used exclusively to provide power to electric pumps used for irrigating crops. Adopted May 23, 2001 Effective June 13, 2001

Section 106.513. Natural Gas-Fired Combined Heat and Power Units.

(a) Applicability.

(1) This section applies to combined heat and power (CHP) units that are powered by pipeline-quality natural gas-fired engines, including turbines. This section also authorizes any fugitive components associated with a CHP unit authorized by this section.

(2) This section does not relieve the owner or operator from complying with any other applicable provision of the Texas Health and Safety Code, Texas Water Code, rules of the Texas Commission on Environmental Quality (TCEQ), or any additional local, state, or federal laws or regulations. Emissions that exceed the limits in this section are not authorized and are violations.

(b) Definitions.

(1) Combined heat and power (CHP) unit--A collection of facilities and other equipment that generally consists of an electric generating unit (EGU) and a means of extracting energy from the EGU for useful purposes other than electricity generation, such as heating or cooling. A CHP unit does not include facilities for generating additional electricity after the EGU. Equipment that is not a source of emissions itself but also extracts energy from the exhaust flow to create electricity is not a facility and may be used in addition to a CHP unit authorized by this section.

(2) Pipeline-quality natural gas-A naturally occurring fluid mixture of hydrocarbons (composed predominantly of methane, with lesser amounts of ethane, propane, nitrogen, carbon dioxide, and trace amounts of hydrogen sulfide) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and that is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70% methane by volume, or have a gross calorific value between 950 and 1,100 British thermal units (BTU) per standard cubic foot. Sour gas as defined in §101.1 of this title (relating to Definitions) is not pipeline-quality natural gas for purposes of this section.

(c) General Requirements.

(1) A CHP unit must be registered with the commission using the appropriate PI-7 form or an approved electronic registration method before start of construction. A CHP unit at a residential location that generates less than 20 kilowatts (kW) of electricity does not require registration and does not have to meet any other requirements of this section except subsection (a) of this section and paragraph (2) of this subsection.

(2) For a CHP unit to be eligible for authorization under this section, the heat recovered must equal at least 20% of the total heat energy output of the CHP unit. This requirement must be met continuously based on any calendar week of operation except for no more than two weeks in a rolling 52-week period if operation of the EGU component is necessary due to lack of available electricity.

(3) No owner or operator of a CHP unit that is required to register under this section may begin construction and/or operation without first obtaining written approval from the executive director.

(4) Except for oxidation-reduction (three-way) catalysts on rich-burn engines, and oxidation catalyst controls as required by subsection (d)(3) or (4) of this section, add-on controls may not be used to comply with the emission standards of this section.

(5) Any individual CHP unit, or any group of units meeting paragraph (7)(B) of this subsection, may not exceed 15 megawatts (MW) in capacity.

(6) Only one permit by rule (PBR) for Natural Gas-Fired CHP Units per this section may be registered at a site.

(7) No more than one CHP unit may be authorized at a site under this section, except as follows:

(A) Any units with a capacity of less than 20 kW are not limited in number, or restricted in location. Units with a capacity of less than 20 kW are not required to be considered when applying subparagraphs (B) or (C) of this paragraph.

(B) Multiple units may be authorized under this PBR if all stack emission points associated with the units are located within a circular area with a radius of 200 feet, and the total EGU capacity of the group is not greater than 15 MW.

(C) Multiple units may be authorized under this PBR if all stack emission points associated with the units are separated by a distance of at least 900 feet. Multiple groups of units meeting the requirements of subparagraph (B) of this paragraph may be authorized if the groups' emission points are separated by a distance of at least 900 feet.

(8) Notwithstanding fuel restrictions elsewhere in this section, during an emergency, this PBR authorizes the use of propane, liquefied petroleum gas, gasoline, diesel, or fuel oil as an approved fuel for not more than 720 hours in any 365-day period. This PBR also authorizes brief use of these emergency fuels as needed for purposes of maintenance or testing, for not more than two hours in any seven-day period.

(d) Emission Standards and Control Requirements.

(1) Notwithstanding paragraphs (2), (3), or (4) of this subsection, a CHP unit with a capacity less than 20 kW is not subject to a nitrogen oxides (NO_X) or carbon monoxide (CO) emission standard, and is not subject to the requirement for an oxidation catalyst control device.

(2) A CHP unit or any combination of units with a total capacity greater than or equal to 20 kW, but less than or equal to 8 MW, must meet the following emission standards: 1.0 pound of NO_X per megawatt-hour (lb NO_X/MWh); and 9.0 lb CO/MWh.

(3) Except as provided in paragraph (4) of this subsection, a CHP unit or any combination of units with a total capacity greater than 8 MW must meet the following emission standards: 0.7 lb NO_X/MWh; and 9.0 lb CO/MWh. A CHP unit or units under this paragraph must also be equipped with an oxidation catalyst control device that maintains a minimum of 70% control of volatile organic compounds (VOC) in the CHP unit exhaust stream.

(4) Any combination of CHP units with a total capacity greater than 8 MW that are at least 900 feet apart from one another must meet the following emission standards and control requirements. For the purposes of this paragraph, any group of units under subsection (c)(7)(B) of this section is considered to be one unit when determining whether subparagraph (A) or (B) of this paragraph applies.

(A) CHP units with a capacity less than or equal to 8 MW: 1.0 pound of NO_X per megawatt-hour (lb NO_X/MWh); and 9.0 lb CO/MWh.

(B) CHP units with a capacity greater than 8 MW: 0.7 lb NO_X/MWh; and 9.0 lb CO/MWh. A CHP unit under this subparagraph must also be equipped with an oxidation catalyst control device that maintains a minimum of 70% control of VOC in the CHP unit exhaust stream.

(5) Compliance with the NO_x standards above may be achieved by taking credit for the heat recovered from the combustion unit. Credit will be at the rate of 1.0 MWh for each 3.4 million BTU of heat recovered. In order to claim this credit for CHP for units not sold and certified as an integrated package by the manufacturer, the owner or operator must provide as part of the application documentation of the heat recovered, electric output, efficiency of the generator alone, efficiency of the generator including CHP, and the use for the non-electric output.

(e) Monitoring and Testing. CHP units authorized under this section with an electric generating capacity greater than or equal to 20 kW must meet the following requirements:

(1) Internal combustion engine-based CHP units (excluding turbines).

(A) The owner or operator shall initially analyze the emissions from the CHP unit using a portable analyzer no later than 180 calendar days after startup.

(B) After the initial testing specified by subparagraph (A) of this paragraph, the owner or operator shall conduct ongoing monitoring using a portable analyzer, once in the first half of each calendar year and once in the second half of each calendar year, with at least two months between tests. When a CHP unit did not operate for more than 1,000 hours in that half of the year, this test is not required.

(C) The portable analyzer must be operated at minimum in accordance with the manufacturer's instructions. A copy of the manufacturer's instructions shall be made available upon request. The NO_x and CO emissions must be converted into units of lb/MWh.

(2) Internal combustion engine-based CHP units and turbines. If the CHP unit is not certified to meet the emission standards of subsection (d) of this section by the manufacturer according to a United States Environmental Protection Agency (EPA) testing protocol, the unit must be tested within 90 days of startup for NO_x and CO according to appropriate EPA reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director and in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual. Tests must consist of three runs with a minimum of 30 minutes for each run or longer if required by the reference method. All engine- and turbine-based CHP units designed to generate more than 375 kW must be retested by the above method after every 16,000 hours of operation, regardless of certification.

(3) All CHP units which are required by subsection (d)(3) or (4) of this section to have an oxidation catalyst control device shall be tested to verify compliance with the required 70% VOC control efficiency within 90 days of startup. In lieu of the above test, the 70% VOC control requirement shall be satisfied if the unit is tested for gaseous organic compounds and the reduction is at least 90%. The testing shall be conducted using EPA reference methods or equivalent alternative testing methods approved by the executive director and in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual. All units required to be equipped with an oxidation catalyst control device must also be retested after every 16,000 hours of operation.

(4) Except for rich-burn engines equipped with oxidation-reduction (three-way) catalysts, and units required to be equipped with an oxidation catalyst under subsection (d)(3) or (4) of this section, the uncontrolled source must demonstrate compliance with the emission standards in subsection (d) of this section.

(f) Recordkeeping. In addition to the minimum records required by §106.8 of this title (relating to Recordkeeping), the owner or operator must keep the following records:

(1) For the life of the CHP unit, the registration application and any additional representations made during the approval process to obtain the registration; and

(2) The owner or operator must keep the following records for at least two years and make them available to the TCEQ or any local pollution control program with jurisdiction upon request:

(A) A record of every one-week period of operation where the CHP unit did not comply with subsection (c)(2) of this section;

(B) All monitoring and testing data generated in compliance with subsection (e) of this section and in a format that shows the emission standards have been met;

(C) Records of CHP unit operation sufficient to demonstrate compliance with any applicable hour-based requirements of subsection (e) of this section;

(D) Records of maintenance described in subsection (g)(2) of this section; and (E) Records of the number of hours that any emergency fuel is used under subsection (c)(8) of this section, and the reason why operating on an emergency fuel is necessary.

(g) Planned Maintenance, Startup, and Shutdown.

(1) This PBR authorizes all emissions from planned startup and shutdown activities associated with facilities that are authorized by this section.

(2) This PBR authorizes emissions from the following planned maintenance activities associated with facilities authorized by this section: routine maintenance including, but not limited to, filter changes, oxygen sensor replacements, overhauls, lubricant changes, spark plug changes, and emission control system maintenance. Adopted July 25, 2012 Effective August 16, 2012

Subchapter X: Waste Processes and Remediation

Section 106.531 - 106.534

Effective March 23, 2006

Section 106.531. Sewage Treatment Facility.

Sewage treatment facilities, excluding combustion or incineration equipment, land farms, or grease trap waste handling or treatment facilities are permitted by rule. Adopted August 9, 2000 Effective September 4, 2000

Section 106.532. Water and Wastewater Treatment.

Water and wastewater treatment units are permitted by rule, provided the following conditions of this section are met.

(1) The facility performs only the following functions:

(A) disinfection;

(B) softening;

(C) filtration;

(D) flocculation;

(E) stabilization;

(F) taste and odor control;

(G) clarification;

(H) carbonation;

(I) sedimentation;

(J) neutralization;

(K) chlorine removal;

(L) activated sludge treatment, anaerobic treatment, and associated control of gases from these treatments;

(M) aerobic oxidation/biodegration using oxygen or peroxide in the absence of nitrogen or other gas that would cause stripping of volatile organic compounds (VOC) from the water;

(N) stripping VOC, ammonia, or other air contaminants from the water with air or other gas, provided the stripped gases are controlled with an abatement system that meets the requirements of §106.533(5) of this title (relating to Water and Soil Remediation). For ammonia or hydrogen chloride (HCl) or other acid gas emissions, abatement may include a water or caustic scrubbing system as a means of complying with this section. Final emissions of HCl resulting from combustion of chlorine or chlorine-containing compounds shall not exceed 0.1 pounds per hour;

(O) liquid phase separation of VOC and water in which:

(i) the sum of the partial pressures of all species of VOC in any sample is less than 1.5 psia; or

(ii) the separator is enclosed and emissions are vented through an emission abatement system meeting the requirements specified previously for stripped VOC and ammonia;

(2) Chlorine or sulfur dioxide (SO2) shall be used only in containers approved by the United States Department of Transportation and emissions of chlorine or SO2 from treatment of water or decontamination of equipment at any water treatment plant shall not exceed ten tons per year.

(3) The following shall not be permitted by rule under this section:

(A) gas stripping or aeration facilities where VOC or other air contaminants are stripped from water directly to the atmosphere;

(B) disposal facilities using land surface treatment;

(C) surface facilities associated with injection wells;

(D) cooling towers in which VOC or other air contaminants may be stripped to the atmosphere. Adopted August 9, 2000 Effective September 4, 2000

Section 106.533. Remediation.

(a) Applicability. Equipment used to extract, handle, process, condition, reclaim, or destroy contaminants for the purpose of remediation is permitted by rule, provided that all the following conditions of this section are satisfied.

(b) Scope. The following terms apply to this section.

(1) **Affected property** - The entire area, including on-site and off-site and including all environmental media that contains releases of chemicals of concern.

(2) **Affected sources** - Include, but are not limited to, stockpiles of contaminated/remediated materials/soils and surface impoundments.

(3) **Dry cleaning compounds** - Include the following chlorinated and non-chlorinated dry cleaning solvents used in the cleaning of garments or other fabrics:

(A) perchloroethylene, also known as tetrachloroethylene, and its degradation products, including trichloroethylene, 1,2-dichloroethylene, and vinyl chloride;

(B) petroleum-based solvents such as Stoddard Solvent, naphtha, and other petroleum distillates;

(C) hydrocarbons and synthetic hydrocarbons such as DF-2000TM fluid, EcoSolvTM, PureDryTM, or the equivalent;

(D) silicone-based solvents containing decamethylcyclopentasiloxane; and

(E) other nonaqueous solvents such as carbon tetrachloride, dipropylene glycol tertiary butyl ether, 1,1,1-trichloroethane, and 1,1,2-trichloro-1,1,2-trifluoroethane.

(4) **Effects screening levels (ESLs)** - Values used by the commission to evaluate the potential for effects that may occur as a result of exposure to concentrations of constituents in the air. The ESLs are based on data concerning health effects, odor nuisance potential, effects with respect to vegetation, and corrosion effects. ESL updates, which are published periodically, were last revised October 1, 2003.

(5) **Facility** - A discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source. Once a remediation facility is at a site, all remediation equipment and related sources are covered by this section. Facilities include, but are not limited to, control devices, tanks, containers, liquid separators, material transfer systems, vacuum pumps, and associated components and connecting piping, but do not include below-ground pilot wells or well tests when no additional aboveground equipment is used. An extraction well used during a remediation project is considered a facility, not a well test.

(6) **Off-site receptor** - Any recreational area, residence, commercial/industrial facility, or other normally occupied structures not used solely by the owner or operator of the facilities or the owner of the site upon which the facilities are located. Measurements of distances to determine compliance with this distance restriction must be taken toward structures that are in use as of the date that a notification is filed with the commission.

(7) **Petroleum compounds** - Solids, liquids, or gases produced from natural formations of crude oil, tar sands, shale, coal, and natural gas; or refinery fuel products (which may contain additives).

(8) **Remediation** - An act or process taken to reduce or eliminate contaminants in the environment. This process may include, but is not limited to, assessment or treatment activities such as air, soil, or water sampling, or pilot tests, treatment, or post-clean-up activities that use facilities.

(c) General requirements. The following general requirements apply to this section.

(1) Applicability. This section covers only remediation performed at the affected property on a given site where the original contamination occurred, or at a nearby site secondarily affected by the contamination. This section does not cover any treatment facility where materials are brought in from another site or facilities unrelated to remediation. Such treatment facilities are subject to §116.110 of this title (relating to Applicability) and must obtain an air new source review permit.

(2) Contaminants. The identification of the contaminants at a site must be accomplished using the methodology specified by the applicable remediation program and the United States Environmental Protection Agency (EPA) or commission-approved method.

(3) Controls. The selection of appropriate equipment for remediation, at a minimum, must meet the methodology approved by the applicable remediation program (e.g., Petroleum Storage Tank (PST) Program, Voluntary Cleanup Program, Superfund, etc.). Use of any control device may be discontinued when the influent concentrations show that the facility can meet the appropriate emission limits without controls.

(4) Elevated vents. The height of any vents associated with the remediation must be at least ten feet above ground level.

(5) Multiple facilities at a site. There may be multiple remediation facilities at a site. However, each remediation facility must be separated from all other remediation facilities by a distance of at least 100 feet. Any individual facilities not separated by this distance must be combined and treated as a single facility for purposes of meeting the conditions of this section.

(6) Nuisance. The handling, processing, and stockpiling of any materials associated with facilities under this section must not cause a nuisance as defined in §101.4 of this title (relating to Nuisance).

(7) Operations. Wherever this section specifies that an action be performed periodically (e.g., weekly), the requirement applies only when the equipment is in operation for that period.

(8) Spills. Air emissions resulting from emergency containment and removal of soil or water from spills must comply with Chapter 101 of this title (relating to General Air Quality Rules) and are not authorized by this section.

(9) Visible emissions. Compliance with this requirement will be determined by use of EPA Test Method 22, found in 40 Code of Federal Regulations, Part 60, Appendix A, as published in the February 12, 1999 issue of the *Federal Register*. There will be no visible emissions leaving the site for a period exceeding 30 seconds in any six-minute period from the following operations:

(A) handling, processing (screening, crushing, etc.), groundwater air stripping, and stockpiling of contaminated soil;

(B) handling, stockpiling, and in-situ chemical oxidation of groundwater and soils; and

(C) conditioning (adding moisture) of remediated soil.

(d) Requirements for sites contaminated only with petroleum compounds. For the remediation of sites contaminated only with petroleum compounds, the following requirements must be met.

(1) For facilities with an off-site receptor within 100 feet:

(A) if a control device meeting the conditions of subsection (g) of this section is used, the total emissions from each facility must meet the following emission limits:

(i) total petroleum hydrocarbons must not exceed 1.0 pound per hour (lb/hr);

(ii) the benzene component must not exceed 0.1 lb/hr; and

(iii) the hydrogen sulfide component (for non-fuel-dispensing sites) must not exceed 0.1 lb/hr; and

(B) when a control device is not used, the total emissions from each facility must meet the following emission limits:

(i) the total petroleum hydrocarbons must not exceed 0.1 lb/hr;

(ii) the benzene component must not exceed 0.01 lb/hr; and

(iii) the hydrogen sulfide component (for non-fuel-dispensing sites) must not exceed 0.01 lb/hr.

(2) For facilities with equal to or greater than 100 feet to the nearest off-site receptor, emissions from all point sources are limited to the following:

(A) total petroleum hydrocarbons are limited to 1.0 lb/hr;

(B) the benzene component must meet the emissions and distance requirements of §106.262 of this title (relating to Facilities (Emission and Distance Limitations));

(C) the hydrogen sulfide component (for non-fuel-dispensing sites) must meet the emissions and distance requirements of §106.262 of this title;

(3) For all sites regulated by this section to which the agency's PST remediation and/or reimbursement requirements are applicable, sampling and lab analysis of influent and effluent vapors must be performed at least monthly to demonstrate compliance with the control equipment efficiency and/or emission rate limits of this section, and with any related PST requirements, unless an alternative evaluation method is approved by the applicable agency remediation program.

(e) Requirements for sites contaminated only with dry cleaning compounds. For the remediation of sites contaminated only with dry cleaning compounds, the following requirements must be met.

(1) For facilities with an off-site receptor within 100 feet, emissions of each individual compound from each facility must meet the following emission limits:

(A) if a control device meeting the requirements of subsection (g) of this section is used, §106.261 of this title (relating to Facilities (Emission Limitations)) or §106.262 of this title (assuming 100 feet), whichever is more stringent;

(B) if a control device is not used, 10% of the values determined by subparagraph (A) of this paragraph;

(C) the maximum allowable emission rate limit for any individual compound must be 0.04 lb/hr, regardless of the control method unless §106.261 or §106.262 of this title specify a higher emission rate.

(2) For facilities with equal to or greater than 100 feet to the nearest off-site receptor, emissions of each individual compound from each facility must meet the emissions and distance requirements of §106.261 and §106.262 of this title. The maximum emission rate limit for any individual compound must be 0.04 lb/hr, regardless of the control method unless §106.261 or §106.262 of this title specify a higher emission rate.

(3) If a control device is needed to meet the emission limits of this section, only a carbon adsorption system (CAS) that meets the requirements of subsection (g) of this section may be used.

(4) Additional technical and administrative requirements for the remediation of dry cleaning sites may be found in Texas Health and Safety Code, §§374.001 - 374.253.

(f) Requirements for all other sites and affected properties. For the remediation of sites not covered by subsections (d) or (e) of this section, the following requirements must be met.

(1) The emission rates are limited to the following requirements.

(A) Hourly emissions of each individual organic and inorganic compound from each facility (other than products of combustion) must meet the most stringent of the following:

(i) §106.261 of this title;

(ii) §106.262 of this title; or

(iii) if not specifically listed in §106.262 of this title and is on the ESL list, effective October 1, 2003, with a short-term ESL for the compound of less than or equal to 100 micrograms per cubic meter (µg/m3) but greater than or equal to 2 µg/m3, emissions may not exceed 0.04 lb/hr. If the short-term ESL for the compound is less than 2 µg/m3, emissions may not exceed 0.01 lb/hr.

(B) Total annual emissions of each organic or inorganic compound are limited to five tons per year for each facility.

(2) If a control device is needed to meet the emissions limits of this section, the device must satisfy the appropriate conditions listed under subsection (g) of this section.

(3) All emission points and area sources associated with each facility must be located at least 100 feet from any off-site receptor.

(g) Control devices. When a control device is used at a facility, the device must satisfy one of the following conditions. If a thermal control device is used, the products of fuel combustion (nitrogen oxides, sulfur dioxide, carbon monoxide, volatile organic compounds (VOC), or total inhalable particulate matter) are authorized if the facility is operated in compliance with this section, and all control devices must comply with applicable opacity restrictions in Chapter 111 of this title (relating to Control of Air Pollution from Visible Emissions and Particulate Matter).

(1) Direct-flame combustion. The vapors may be burned in a direct-flame combustion device (incinerator, furnace, boiler, heater, or other enclosed direct-flame device) that meets the following requirements.

(A) Design requirements. Each direct-flame combustion device must be automatically controlled to maintain a minimum temperature of 1,400 degrees Fahrenheit or higher in the combustion chamber (secondary chamber, if dual-chamber) and have a gas retention time of 0.5 second or greater.

(B) Operational restrictions. The temperature of the device must be maintained at a minimum of 1,400 degrees Fahrenheit.

(C) Compliance demonstrations. Continuous temperature monitors to record the temperature of the combustion chamber (secondary chamber, if dual-chamber) must be installed and maintained. Records of temperature data must be maintained.

(2) Flare. The vapors may be burned in a flare that meets the following requirements.

(A) Design requirements.

(i) The flare must be equipped with a flare tip designed to provide good mixing with air, flame stability, and meet the most stringent of either §106.492 of this title (relating to Flares); or 40 Code of Federal Regulations (CFR) §60.18, General Control Device Requirements (as published in the October 17, 2000 issue of the *Federal Register*).

(ii) The flare must be equipped with a continuously burning pilot or other automatic ignition system that assures gas ignition and provides immediate notification of appropriate personnel when the ignition system ceases to function.

(B) Operational restrictions. Under no circumstances may liquids be burned in the flare.

(C) Compliance demonstrations. Visible emissions must not be permitted for more than five minutes in any two-hour period.

(3) Catalytic oxidizer. The vapors may be burned in a catalytic oxidizer that meets the following requirements.

(A) Design requirements. The design destruction efficiency of the catalytic oxidizer must be at least 90% for the contaminants at the site.

(B) Operational restrictions. The appropriate catalyst must be used depending on the type of contaminants in accordance with the manufacturer's guidelines.

(C) Compliance demonstrations. An evaluation of oxidizer effectiveness must be made initially (within two hours of startup), and at least weekly, using a portable flame ionization detection (FID) or photo-ionization detector (PID) in conjunction with a flow meter to determine the quantity of carbon compounds in the inlet and outlet of the catalytic oxidizer and to demonstrate compliance with the emission rate limits of this section. The FID or PID instrument chosen must be capable of properly detecting the types of contaminants present. Records of oxidizer effectiveness must be maintained.

(4) Internal combustion engine. The vapors may be burned in an internal combustion engine that meets the following requirements.

(A) Design requirements. The design destruction efficiency of the internal combustion engine must be at least 99% for the contaminants at the site.

(B) Operational restrictions. Chlorinated or sulfur compounds must not be burned in these facilities.

(C) Compliance demonstrations. An evaluation of engine effectiveness must be made initially (within two hours of startup) and at least weekly, using a PID or FID in conjunction with a flow meter to determine the quantity of carbon compounds in the inlet gas stream and the engine exhaust, and to demonstrate compliance with the emission rate limits of this section. The FID or PID instrument chosen must be capable of properly detecting the types of contaminants present. Records of engine effectiveness must be maintained.

(5) CAS. The vapors may be routed through a CAS consisting of at least two activated carbon canisters that are connected in a series. The system must meet the following additional requirements.

(A) Design requirements. Prior to the use of a CAS at a site, there must be a demonstration that activated carbon is an appropriate choice for control of the contaminants at the site.

(B) Operational restrictions. The CAS must be operated to minimize breakthrough and maintain compliance with the emission limits of this section. When the VOC breakthrough is detected in the outlet of the initial canister, the waste gas flow must be switched to the second canister immediately. Within four hours of detection of breakthrough, a fresh canister must be placed as the new final polishing canister. Sufficient fresh activated carbon canisters must be maintained at the site to ensure fresh polishing canisters are installed within four hours of detection of breakthrough.

(C) Compliance demonstrations.

(i) The CAS must be sampled initially (within two hours of startup) and periodically to determine breakthrough. Breakthrough is defined as a measured VOC concentration of 100 parts per million by volume (ppmv) in the outlet of the initial canister. The sampling point must be at the outlet of the initial canister, but before the inlet to the second or final polishing canister. Sampling must be performed while venting maximum emissions to the CAS (e.g., during loading of tank trucks, during tank filling, during process venting). The CAS must be monitored on a weekly basis or 20% of the design carbon replacement interval, whichever is less.

(ii) An FID or PID instrument capable of properly detecting the types of contaminants present must be used for VOC sampling.

(iii) At dry cleaning remediation sites, additional sampling to determine total organics and speciated chlorinated compounds is required initially (within two hours of startup) and at least monthly.

(h) Fugitive emissions when no control device is used for remediation. In the cases where emission releases are not directly emitted from a control device or stack which can be sampled, compliance must be demonstrated by the use of a PID or FID initially and at least on a weekly basis. The FID or PID instrument chosen must be capable of properly detecting the types of contaminants present. Measurement should occur as close as possible to the remediation activity, but no further away than the nearest property line. The concentration measured must be equal to or less than the specific air contaminant's ESL. If an ESL is exceeded, remediation must cease until corrective action restores the concentration to below ESL values. The conversion from PID and FID devices to ESLs must use the following formula.

Figure: 30 TAC §106.533(h)

$$\mu g/m3 = \{(ppmv)\ (gram\ molecular\ weight\ of\ substance)\} / .02445$$

(i) Other regulatory requirements.

(1) Voluntary Cleanup Program. A state or local permit is not required for remediation conducted on a site as part of a voluntary cleanup. A voluntary cleanup must be coordinated with ongoing federal and state hazardous waste programs. The persons conducting a voluntary cleanup shall comply with any federal or state standard, requirement, criterion, or limitation that the remediation would otherwise be subject if a permit were required (see Texas Health and Safety Code, §361.611).

(2) Superfund Cleanup Program. A state or local permit is not required for remediation conducted on a site as part of a Superfund project. A Superfund project must be coordinated with ongoing federal and state hazardous waste programs. The persons conducting a cleanup shall comply with any federal or state standard, requirement, criterion, or limitation that the remediation would otherwise be subject if a permit were required (see Texas Health and Safety Code, §361.196).

(3) Local restrictions. This section does not exempt these facilities from any local government regulations or other local government requirements, permits, registrations, or other authorizations required by local authorities.

(4) State regulations. This section does not exempt remediation equipment from any additional state regulations.

(5) Federal air regulations. Compliance with all applicable federal requirements must be satisfied, including air standards and requirements for hazardous air pollutants under 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart GGGGG, National Emission Standards for Hazardous Air Pollutants: Site Remediation, effective October 8, 2003.

(j) Administrative requirements.

(1) Notification. Before starting remediation (pilot test or treatment), the owner or operator shall notify the commission in writing using the Standard Permit/Permit by Rule Relocation Form. Notifications for multiple sites that are part of the same affected property may be submitted at the same time in accordance with the following requirements.

(A) The notification is not subject to the requirements of §106.50 of this title (relating to Registration Fees for Permits by Rule) or Chapter 60 of this title (relating to Compliance History).

(B) Notifications must be sent to the appropriate commission regional office, any local air pollution control program having jurisdiction over the site, and appropriate remediation program. Notifications must include a return receipt of delivery.

(C) Pilot test notifications must be received by those listed in subparagraph (B) of this paragraph prior to commencement of activities.

(D) Updated or additional notification must be received by those listed in subparagraph (B) of this paragraph prior to commencement of treatment activities and must contain specific information concerning the basis (measured or calculated) for the expected emissions from the facility. The notification must also explain details as to why the control device can be expected to perform as represented.

(E) Any remediation project that changes or eliminates a represented control device during the lifetime of the project must update those listed in subparagraph (B) of this paragraph by filing an amended notification as soon as practicable after the change and after confirmation with the appropriate remediation program.

(2) Records. To demonstrate compliance with this section and with §106.8 of this title (relating to Recordkeeping), owners and operators of remediation equipment must, at a minimum, meet the following requirements.

(A) Records required by this section must be maintained at the site or at the nearest staffed location, and made available upon request to personnel from the commission or any local agency having jurisdiction over the site.

(B) The following minimum records of sampling or monitoring must be maintained:

(i) sample time and date;

(ii) monitoring results (ppmv);

(iii) corrective action taken, including the time and date of the action;

(iv) process operations occurring at the time of sampling;

(v) records of compliance with the emission rate limits of this section;

(vi) a record of the demonstration that the chosen control method is an appropriate choice for the site; and

(vii) a record of the return receipt demonstrating notification to the appropriate regional office, local air pollution control programs having jurisdiction over the site, and appropriate remediation program. Adopted June 9, 2004 Effective June 30, 2004

Section 106.534. Municipal Solid Waste Landfills and Transfer Stations.

Municipal solid waste landfill (MSWLF) cell construction or modification, as defined in 40 Code of Federal Regulations (CFR) §60.751, of MSWLF Type I, Type I-AE, Type II, Type III, Type IV, Type IV-AE, and Type V transfer stations as defined in §330.5 of this title (relating to Classification of Municipal Solid Waste Facilities) that meet the conditions listed in this section are permitted by rule.

(1) The following are not authorized by this section:

(A) MSWLF sites that have facilities other than cell construction and waste disposal; or

(B) maintenance, startup, shutdown, or emission excursions under Chapter 101, Subchapter F of this title (relating to Emissions Events and Scheduled Maintenance, Startup, and Shutdown Activities).

(2) The owner or operator must have obtained a valid permit or registration under §330.7 of this title (relating to Permit Required), for the site.

(3) The MSWLF or transfer station must have a design capacity of less than 2.5 million megagrams (Mg) by mass or 2.5 million cubic meters by volume. (4) The MSWLF or transfer station must have a non-methane organic compound emission rate of less than 50 Mg per year as determined by United States Environmental Protection Agency (EPA) publication AP-42, Compilation of Air Pollutant Emission Factors.

(5) Emissions from the site are limited to 25 tons per year of volatile organic compounds or particulate matter. There are no short-term limitations for particulate matter and volatile organic compounds.

(6) Visible emissions from the site must not leave the property for a period exceeding 30 seconds in any six-minute period as determined by EPA Test Method 22, as found in 40 CFR Part 60, Appendix A.

(7) Transfer stations not located at an MSWLF site shall:

(A) operate in compliance with the Texas Solid Waste Disposal Act, and;

(B) be required to have the waste holding area covered by a ventilated building that has a minimum vertical exhaust vent located at least 16 feet above ground level with a capacity of 45,000 cubic feet per minute, if the facility retains over 1,000 tons of waste overnight. (8) Facilities shall comply with applicable requirements of all federal regulations and state rules. Adopted March 1, 2006 Effective March 23, 2006