

Texas Commission on Environmental Quality

5 Chapter 115 - Control of Air Pollution from Volatile Organic Compounds

5D Subchapter D : Petroleum Refining, Natural Gas Processing, and Petrochemical Processes

5D2 DIVISION 2 : FUGITIVE EMISSION CONTROL IN PETROLEUM REFINERIES IN GREGG, NUECES, AND VICTORIA COUNTIES

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Section 329:

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Outline:

§115.322. Control Requirements. 5-89, TXd166

§115.323. Alternate Control Requirements. 5-89, TXd166

§115.324. Inspection Requirements. 5-89, TXd166

§115.325. Testing Requirements. 5-89, TXd166

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§115.327. Exemptions. 5-71, TXd89

§115.329. Counties and Compliance Schedules. 5-70, TXd89

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~~sections are also adopted under FCAA, 42 USC, §§7401, et seq., which requires states to submit SIP revisions that specify the manner in which the NAAQS will be achieved and maintained within each air quality control region of the state.~~

~~The amended sections implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.017, and 382.021, and FCAA, 42 USC, §§7401 et seq.~~

§115.322. Control Requirements.

For Gregg, Nueces, and Victoria Counties, no person shall operate a petroleum refinery without complying with the following requirements.

(1) No component may be allowed to have a volatile organic compound (VOC) leak as defined in §101.1 of this title (relating to Definitions) for more than 15 calendar days after the leak is found, except as provided in paragraph (2) of this section. If the owner or operator elects to use the alternative work practice in §115.358 of this title (relating to Alternative Work Practice), the definition of a leak for the purposes of this paragraph is as specified in §115.358 of this title, including any leak detected using the alternative work practice on a component that is subject to the requirements of this division (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties) but not specifically selected for alternative work practice monitoring.

(2) A first attempt at repair must be made no later than five calendar days after the leak is found, and the component must be repaired no later than 15 calendar days after the leak is found, unless the repair of a component would require a unit shutdown that would create

more emissions than the repair would eliminate. A component in gas/vapor or light liquid service is considered to be repaired when it is monitored with an instrument using Method 21 in 40 Code of Federal Regulations Part 60, Appendix A-7 (October 17, 2000) and shown to no longer have a leak after adjustments or alterations to the component. A component in heavy liquid service is considered to be repaired when it is monitored by audio, visual, and olfactory means and shown to no longer have a leak after adjustments or alterations to the component. For any component that the owner or operator monitors using the alternative work practice in §115.358 of this title, the component is considered repaired when the component is monitored using either an optical gas imaging instrument as specified in §115.358 of this title or the normal monitoring method required under this division and is demonstrated to no longer have a leak after adjustments or alterations to the component. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown.

(3) All leaking components, as defined in paragraph (1) of this section, that cannot be repaired until the unit is shut down for turnaround must be identified for such repair by tagging. The executive director may require early unit turnaround or other appropriate action based on the number and severity of tagged leaks awaiting turnaround.

(4) Except for pressure relief valves, no valves may be installed or operated at the end of a pipe or line containing a VOC, unless the pipe or line is sealed with a second valve, a blind flange, a plug, or a cap. The sealing device may be removed only while a sample is being taken or during maintenance operations, and when closing the line, the upstream valve must be closed first.

(5) Pipeline valves and pressure relief valves in gaseous VOC service must be marked in some manner that will be readily obvious to monitoring personnel. Alternatively, the owner or operator of the refinery may choose to monitor all components in liquid service on the schedule for components in gaseous service specified in §115.324(2) of this title (relating to Inspection Requirements). If the owner or operator elects to use the alternative work practice in §115.358 of this title to monitor components in liquid service, the frequency must be as specified in §115.358 of this title.

§115.323. Alternate Control Requirements.

For all affected persons in Gregg, Nueces, and Victoria Counties, the following alternate control techniques may apply.

(1) Any alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this division (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

(2) The executive director may approve an alternate monitoring method if the refinery operator can demonstrate that the alternate monitoring method satisfies the conditions of §115.324(7) of this title (relating to Inspection Requirements). Any request for an alternate monitoring method must be made in writing to the executive director.

(3) The owner or operator of a site in Gregg, Nueces, or Victoria Counties that is subject to this division may use the alternative work practice in §115.358 of this title (relating to Alternative Work Practice) as an optional alternative to hydrocarbon gas analyzer monitoring required under this division.

§115.324. Inspection Requirements.

For Gregg, Nueces, and Victoria Counties, the owner or operator of a petroleum refinery shall conduct a monitoring program consistent with the following provisions.

(1) The owner or operator shall measure yearly (with a hydrocarbon gas analyzer) the emissions from all:

(A) pump seals;

(B) pipeline valves in liquid service;

(C) process drains; and

(D) all valves elevated more than two meters above any permanent structure.

(2) The owner or operator shall measure quarterly (with a hydrocarbon gas analyzer) the emissions from all:

(A) compressor seals;

(B) pipeline valves in gaseous service; and

(C) pressure relief valves in gaseous service.

(3) The owner or operator shall visually inspect, weekly, all pump seals.

(4) The owner or operator shall measure (with a hydrocarbon gas analyzer) the emissions from any component, except those exempted by §115.327(2) and (3) of this title (relating to Exemptions), whenever a potential leak is detected by sight, sound, or smell.

(5) The owner or operator shall measure (with a hydrocarbon gas analyzer) emissions from any relief valve that has vented to the atmosphere within 24 hours.

(6) Upon the detection of a leaking component, the owner or operator shall affix to the leaking component a weatherproof and readily visible tag, bearing an identification number and the date the leak was located. This tag must remain in place until the leaking component is repaired.

(7) The monitoring schedule of paragraphs (1) - (3) of this section may be modified as follows.

(A) After completion of the required quarterly valve monitoring for a period of at least two years, the operator of a refinery may request in writing to the executive

director that the valve monitoring schedule be revised based on the percent of valves leaking. The percent of valves leaking must be determined by dividing the sum of valves leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements. This request must include all data that have been developed to justify the following modifications in the monitoring schedule.

(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.

(iii) Leak detection skip period requirements for any New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants may be substituted for clauses (i) and (ii) of this subparagraph.

(B) If the executive director determines that there is an excessive number of leaks in any given process area, the executive director may require an increase in the frequency of monitoring for that process area of the refinery.

(8) For any components that the owner or operator elects to use the alternative work practice in §115.358 of this title (relating to Alternative Work Practice), the following provisions apply.

(A) The frequency for monitoring any components listed in paragraphs (1) or (2) of this section must be the frequency determined according to §115.358(e) of this title, except as specified in subparagraph (C) of this paragraph.

(B) The alternative monitoring schedules allowed under paragraph (7) of this section are not allowed.

(C) If the owner or operator elects to use the alternative work practice in §115.358 of this title to satisfy the hydrocarbon gas analyzer monitoring requirement of paragraph (5) of this section, the time limitation specified in paragraph (5) of this section for performing the monitoring continues to apply.

(D) If the executive director determines that there is an excessive number of leaks in any given process area that the alternative work practice in §115.358 of this title is used, the executive director may require an increase in the frequency of monitoring under the alternative work practice for that process area of the refinery.

§115.325. Testing Requirements.

For all affected persons in Gregg, Nueces, and Victoria Counties, compliance with this division (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties) must be determined by applying the following test methods, as appropriate:

(1) Method 21 in 40 Code of Federal Regulations Part 60, Appendix A-7 (October 17, 2000) for determining volatile organic compound (VOC) leaks, with the provision that the leak detection equipment can be calibrated with methane, propane, or hexane, but the meter readout must be as parts per million by volume hexane;

(2) determination of true vapor pressure using American Society for Testing and Materials Test Method D323 for the measurement of Reid vapor pressure, adjusted for 68 degrees Fahrenheit (20 degrees Celsius) in accordance with American Petroleum Institute Publication 2517, Third Edition, 1989;

(3) the alternative work practice in §115.358 of this title (relating to Alternative Work Practice); or

(4) minor modifications to these test methods approved by the executive director.

§115.326. Recordkeeping Requirements.

For Gregg, Nueces, and Victoria Counties, the owner or operator of a petroleum refinery shall have the following recordkeeping requirements.

(1) The owner or operator shall submit to the executive director a monitoring program plan. This plan must contain, at a minimum, a list of the refinery units and the quarter that the unit will be monitored, a copy of the log book format, and the make and model of the monitoring equipment to be used. If the owner or operator elects to use the alternative work

practice in §115.358 of this title (relating to Alternative Work Practice), the owner or operator must update and resubmit the plan to the executive director. The updated plan must also:

(A) identify which units are monitored according to the alternative work practice; and

(B) include the frequency of monitoring under the alternative work practice.

(2) The owner or operator shall maintain a leaking-components monitoring log for all leaks of more than 10,000 parts per million by volume (ppmv) of volatile organic compound detected by the monitoring program required by §115.324 of this title (relating to Inspection Requirements). If the owner or operator elects to use the alternative work practice in §115.358 of this title, the log must also be maintained for all leaks detected using the alternative work practice. This log must contain, at a minimum, the following data:

(A) the name of the process unit where the component is located;

(B) the type of component (e.g., valve or seal);

(C) the tag number of the component;

(D) the date the component was monitored;

(E) the results of the monitoring (in ppmv), except for components monitored according to the alternative work practice in §115.358 of this title, which must be maintained according to paragraph (4) of this section;

(F) a record of the calibration of the monitoring instrument, except for the daily instrument check specified in the alternative work practice in §115.358 of this title, which must be maintained according to paragraph (4) of this section;

(G) if a component is found leaking:

(i) the date that a leaking component is discovered;

(ii) the date that a first attempt at repair was made to a leaking component;

(iii) the date that a leaking component is repaired;

(iv) the date and instrument reading of the recheck procedure after a leaking component is repaired; and

(v) those leaks that cannot be repaired until turnaround and the date that the leaking component is placed on the shutdown list;

(H) the total number of components checked and the total number of components found leaking; and

(I) the test method used (Method 21, sight/sound/smell, or the alternative work practice in §115.358 of this title).

(3) The owner or operator shall retain copies of the monitoring log for a minimum of five years after the date that the record was made or the report prepared.

(4) If an owner or operator elects to use the alternative work practice in §115.358 of this title, the following records must be maintained in addition to the records required by paragraphs (1) - (3) of this section.

(A) The owner or operator shall maintain a list of each component that is monitored according to the alternative work practice in §115.358 of this title.

(B) The owner or operator shall maintain records of the detection sensitivity level selected from the table in §115.358(e)(1) of this title.

(C) The owner or operator shall maintain records of the analysis to determine the component in contact with the lowest mass fraction of chemicals that are detectable, as required by the daily instrument check procedure referenced in §115.358(c)(2) of this title.

(D) The owner or operator shall maintain records of the technical basis for the mass fraction of detectable chemicals used for the daily instrument check procedure referenced in §115.358(c)(2) of this title.

(E) The owner or operator shall maintain records of each daily instrument check required by §115.358(c)(2) of this title. These records include:

(i) the flow meter reading of the leak used in the daily instrument check and the distance from which the leak was imaged;

(ii) a video record, with a date and time stamp, of the daily instrument check for each configuration and operator of the optical gas imaging instrument used during monitoring; and

(iii) the name of each operator performing the daily instrument check.

(F) The owner or operator shall maintain records of the leak survey results as follows for all components that the owner or operator monitors using the alternative work practice in §115.358 of this title.

(i) A video record must be used to document the leak survey results and the results of the recheck to verify the leak has been repaired, if the alternative work practice in §115.358 of this title is used to perform the recheck. The video record must meet the following requirements.

(I) The video record must include a time and date stamp for each monitoring event.

(II) Each component must be identifiable in the video record.

(ii) The records must include the name of each operator performing the leak survey for each monitoring event.

(G) The owner or operator shall maintain records of the annual Method 21 screening required by §115.358(f) of this title, including:

(i) the components screened according to Method 21;

(ii) the concentration measured according to Method 21;

(iii) the date and time of the Method 21 screening; and

(iv) the calibrations required by Method 21.

(H) The owner or operator shall maintain records of the training required by §115.358(h) of this title.

(I) The owner or operator shall maintain records of the optical gas imaging instrument manufacturer's operating parameters.

(5) The owner or operator shall maintain all monitoring records for at least five years and make them available for review upon request by authorized representatives of the executive director, United States Environmental Protection Agency, or local air pollution control agencies with jurisdiction.

§115.327. Exemptions.

As adopted by TNRCC April 26, 2002 effective May 16, 2002 (5-71).

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For all affected persons in Gregg, Nueces, and Victoria Counties, the following exemptions shall apply.

(1) Valves with a nominal size of two inches (five centimeters (cm)) or less are exempt from the requirements of this division (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties), provided allowable emissions at any refinery from sources affected by this division after controls are applied with exemptions will not exceed by more than 5.0% such allowable emissions with no exemptions. Any person claiming an exemption for valves two inches (five cm) nominal size or smaller under this section shall, at the time he provides his control plan, also provide the following information:

(A) identification of valves or classes of valves to be exempted;

(B) an estimate of uncontrolled emissions from exempted valves, and an estimate of emissions if controls were applied, plus an explanation of how the estimates were derived; and

(C) an estimate of the total volatile organic compound (VOC) emissions within the refinery from sources affected by §115.322 of this title (relating to Control Requirements), §115.324 of this title (relating to Inspection Requirements), and §115.326 of this title (relating to Recordkeeping Requirements) after controls are applied and assuming no exemptions for small valves, plus an explanation of how the estimate was derived.

(2) Components which contact a process fluid that contains less than 10% VOC by weight are exempt from the requirements of this division.

(3) Components which contact a process liquid containing a VOC having a true vapor pressure equal to or less than 0.147 pounds per square inch absolute (psia) (1.013 kPa) at 68 degrees Fahrenheit (20 degrees Celsius) are exempt from the requirements of §115.324 of this title if the components are inspected visually according to the inspection schedules specified within this same section.

(4) Petroleum refineries or individual process units in a temporary nonoperating status shall submit a plan for compliance with the provisions of this division, as soon as practicable, but no later than one month before the process unit is scheduled for start-up and be in compliance as soon as practicable, but no later than three months after start-up. All petroleum refineries affected by this section shall notify the executive director of any nonoperating refineries or individual process units when they are shut down and dates of any start-ups as they occur.

(5) Pressure relief devices connected to an operating flare header, components in continuous vacuum service, storage tank valves, and valves that are not externally regulated (such as in-line check valves) are exempt from the monitoring requirement of §115.324 of this title.

Adopted April 26, 2002, Effective May 16, 2002 (5-71).

end tx 115.3275-71***EPA-R06-OAR-2005-TX-0015***TX021***TXd89***k36***

§115.329. Counties and Compliance Schedules.

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All affected persons in Gregg, Nueces, and Victoria Counties shall continue to comply with applicable sections of this division (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties) as required by §115.930 of this title (relating to Compliance Dates).

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end tx 115.3295-70***EPA-R06-OAR-2005-TX-0015***TX021***TXd89***k36***