

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Commissioners **Date:** May 20, 2011

Thru: LaDonna Castañuela, Chief Clerk
Mark R. Vickery, P.G., Executive Director

From: Susana M. Hildebrand, P.E., Chief Engineer

Docket No.: 2010-1773-RUL

Subject: Commission Approval for Proposed Rulemaking
Chapter 115, Control of Air Pollution from Volatile Organic Compounds
Chapter 115 Volatile Organic Compounds (VOC) Storage Rule Revisions
Rule Project No. 2010-025-115-EN

Background and reason(s) for the rulemaking:

The United States Environmental Protection Agency (EPA) reclassified the nine-county Dallas-Fort Worth (DFW) area as a serious nonattainment area under the 1997 eight-hour ozone National Ambient Air Quality Standard (NAAQS) effective January 19, 2011 (75 Federal Register (FR) 79302). A state implementation plan (SIP) revision will need to be submitted to the EPA within one year after reclassification. Federal Clean Air Act (FCAA), §172(c)(1) requires that the SIP revision incorporate all reasonably available control measures, including all reasonably available control technology (RACT), for sources of relevant pollutants. The EPA defines RACT as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53761, September 17, 1979). The reason for the proposed rulemaking is to address RACT for VOC storage in the DFW area as required by FCAA, §172(c)(1). The proposed rulemaking would provide additional flexibility for affected owners or operators by allowing for the use of alternative control options. The rulemaking may also be necessary to achieve VOC reductions for a Reasonable Further Progress SIP revision.

Scope of the proposed rulemaking:

The proposed rulemaking would repeal §§115.115 - 115.117; propose new §§115.111, 115.115 - 115.118; and amend §§115.110, 115.112 - 115.114, and 115.119; within Subchapter B, Division 1 of Chapter 115.

A) Summary of what the rulemaking will do:

This rulemaking proposes that storage tanks in the DFW area operate under a more stringent level of control for VOC storage than currently required in the Houston-Galveston-Brazoria (HGB) area. The technological and economic feasibility of control devices capable of achieving 95% VOC control has been demonstrated by the previous implementation of 90% VOC control in the HGB area and by the voluntary installation of vapor recovery units and flares capable of meeting 95% VOC control in other counties affected by the proposed rule. The proposed rulemaking also addresses concerns raised by stakeholders by making revisions to clarify the rule requirements for sources in all affected areas, including the HGB area; provide additional flexibility for affected owners or operators by allowing for the use of alternative control options, and facilitate rule enforcement.

B) Scope required by federal regulations or state statutes:

The proposed rulemaking addresses RACT for VOC storage in the DFW area as required by FCAA, §172(c)(1). The rulemaking may also be necessary to achieve VOC reductions for the Dallas-Fort

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Worth Reasonable Further Progress State Implementation Plan Revision for the 1997 Eight-Hour Ozone Standard, (Project No. 2010-023-SIP-NR), scheduled for proposal June 8, 2011.

C) Additional staff recommendations that are not required by federal rule or state statute:

General clarification of rule requirements--The proposed rulemaking would reformat the existing rule in Chapter 115, Subchapter B, Division 1 to simplify and clarify the requirements. Some of these formatting changes include: clarifying rule applicability and definitions in §115.110; repealing §115.117 and proposing new §115.111 to move exemptions to the beginning of the division; repealing §115.116 and proposing new §115.115 and §115.118 to split monitoring and recordkeeping into two separate sections; proposing new §115.116 to contain new clarifying requirements for testing; and repealing §115.115 and proposing new §115.117 to move approved test methods after all test-related requirements. In addition, the proposed rule would make other non-substantive revisions to update the rule language to current *Texas Register* style and format requirements.

Expand control options--The proposed rule revision would clearly specify design and operational parameters. It will also specify monitoring and recordkeeping requirements for several control devices not listed in the current rule but commonly used at affected sites.

- *Vapor recovery units*--The proposed rulemaking would define *vapor recovery unit* and specify design, operational parameters, and monitoring requirements for vapor recovery units.
- *Flares*--The proposed rulemaking also specifies design and operational requirements for flares. The proposed rule revisions specifically allow the use of flares that are designed and operated in accordance with 40 Code of Federal Regulations (CFR) §60.18(b) - (f). In addition to complying with the operating parameters in 40 CFR §60.18, the commission is proposing that flares must be lit at all times when VOC vapors are routed to the device.
- *Other devices*--Proposed monitoring, testing, and recordkeeping requirements account for the emergence of unlisted devices.

Control efficiency and flare demonstration--The proposed rulemaking would require an initial control efficiency demonstration for certain control devices required to meet a numerical control percentage; however, the proposed demonstration is intended to be a clarification of the existing requirements and is not intended to impose any additional requirements on affected sources. The commission is also proposing to require the control device to be retested after any modification that could reasonably be expected to decrease the efficiency of a control device. The commission is also proposing that flares meet the one time testing requirements in 40 CFR §60.18(f) that verify their design.

Floating roof landings--An additional clarification is proposed in the requirements for emission reduction during the landing of floating roofs. One of the proposed options is to control the emissions from the moment the storage tank has been emptied to the extent practical or the drain pump loses suction until it is within 10% of being refilled. A change is proposed to allow floating roof landings when necessary for preventative maintenance, roof repair, primary seal inspection, or removal and installation of a secondary seal. In order to qualify, product cannot be transferred into or out of the storage tank, emissions must be minimized, and the repair must be completed within seven calendar days.

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Additional test methods and procedure--The proposed rule allows for the use of additional test methods to demonstrate compliance with Division 1.

Record retention--The proposed rule would require new records to be maintained for five years in the DFW area.

Statutory authority:

The repealed, amended, and new sections are proposed under Texas Water Code (TWC), §5.102, concerning General Powers, that provides the commission with the general powers to carry out its duties under the TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC, §5.105, concerning General Policy, that authorizes the commission by rule to establish and approve all general policy of the commission; and under Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act. The repealed, amended, and new sections are also proposed under THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the proper control of the state's air. The repealed, amended, and new sections are also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, that authorizes the commission to prescribe reasonable requirements for the measuring and monitoring of air contaminant emissions and THSC, §382.021, concerning Sampling Methods and Procedures, that authorizes the commission to prescribe the sampling methods and procedures to determine compliance with its rules. The repealed, amended, and new sections are also proposed under FCAA, 42 United States Code (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 repealed, amended, and new sections implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.017, and 382.021, and FCAA, 42 USC, §§7401 *et seq.*

Effect on the:

A) Regulated community:

Owners and operators of VOC storage tanks in the DFW and HGB ozone nonattainment areas, and the Beaumont-Port Arthur, El Paso ozone maintenance areas, and Aransas, Bexar, Calhoun, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties are currently affected by this rule and would continue to be affected by the proposed revisions. Proposed rule revisions would require affected owners and operators of floating roof storage tanks in the DFW area to implement operational limitations on landing these roofs; retrofit these tanks with more effective fittings and seals; perform inspections; and keep records. Owners and operators of storage tanks storing crude oil and condensate in the DFW area would be required to implement control requirements for VOC emissions from some upstream oil and gas storage tanks, monitor and test equipment, and keep records. Owners and operators in all affected areas, including the HGB area, would also be subject to clarified requirements. Owners and operators of storage tanks in the DFW area would need to control VOC emissions from storage tanks by 95%, while owners and operators in other affected areas would need to control VOC emissions by 90%.

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The estimated cost to retrofit a floating roof tank with required fittings and seals is \$900 per tank. Estimated retrofits of controls on slotted guidepoles could be as much as \$10,000 per tank. Adding flare temperature monitors to verify flare compliance could cost as much as \$500 to \$1,000 per monitor. Use of a portable control device to control VOC emissions during roof landings could be as much as \$25,000 per day. If vapor recovery units are used, it could cost as much as \$60,000 to \$110,000 per vapor recovery unit plus the monitoring costs of \$300 to install a run time meter, or \$3,000 for a totalizing flow meter, or \$10,000 for a hydrocarbon analyzer and up to \$50 for a weekly test. If vapor recovery units are used, it is expected that product recovery could possibly offset these types of control costs. If a decision is made to never land a tank roof, more tank capacity could be needed. Although it is not expected that this option would be used, this option could cost as much as \$610,400 per tank to construct a one million gallon capacity tank. Estimated costs to perform an initial compliance demonstration for a control device could be as much as \$15,000. Estimated costs to perform flare design testing required by 40 CFR §60.18(f) could be as much as \$4,000.

B) Public: The proposed rule revisions are not expected to directly affect the general public. However, people living or working near these sources may benefit from reductions of VOC emissions.

C) Agency programs: The proposed rule revisions may increase the workload for Office of Compliance and Enforcement staff when inspecting affected facilities to verify compliance with any revised Chapter 115 VOC storage requirements.

Stakeholder meetings:

Stakeholder meetings were held June 24, 25, and 28, 2010, in Arlington, Austin, Beaumont, Corpus Christi, El Paso, Houston, San Antonio, and Tyler. The stakeholder meetings were open to all participants, and stakeholders had the opportunity to submit informal written comments on the rule project. Attendees included private citizens, industry representatives, consultants, and environmental groups. Stakeholders expressed desire for VOC controls on all crude oil and condensate storage tanks, preferably installation of vapor recovery units. Stakeholders suggested that these regulations be included in either the permit by rule for maintenance or individual permits for maintenance, startup, and shutdown emissions rather than Chapter 115. Some stakeholders questioned the need for VOC controls in the DFW area since they would not advance attainment of the ozone NAAQS. The same group also questioned the need for controls on floating roof tanks since the VOC stored in the DFW area is different than the VOC stored in the HGB area and suggested that the rule revision wait until promulgation of a new ozone standard. Other stakeholders told of their success in controlling these emissions. Several stakeholders asked for a definition of condensate.

No changes were made in response to stakeholder concerns due to the need for SIP-creditable VOC reductions codified in Chapter 115 rather than in permits; the expressed viability of controls; the split between comments suggesting more and less VOC control; and the existence of a definition of condensate in §101.1.

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Potential controversial concerns and legislative interest:

Emissions from upstream oil and gas operations in the Barnett Shale have generated legislative and media interest. Owners and operators of VOC storage facilities in the DFW area required to add controls or comply with new operational limitations may object to the rule changes. Industry may object to the time frame to implement controls. Owners and operators of crude oil and condensate storage tanks with VOC emissions between 25 and 50 tons of VOC per year in the DFW area may object to controls.

Will this rulemaking affect any current policies or require development of new policies? No.

What are the consequences if this rulemaking does not go forward?

The commission may need to find VOC reductions from other sources to apply to the SIP revision for the DFW area if anticipated reductions from this rulemaking are not available. If the agency could not propose and adopt sufficient emission reductions, the state may be at risk of SIP disapproval, which could result in the imposition of sanctions or the initiation of a federal implementation plan by EPA

Are there alternatives to rulemaking?

Yes. The commission could decide not to propose the Chapter 115 VOC storage rule.

Key dates in the proposed rulemaking schedule:

Anticipated proposal date:	June 8, 2011
Anticipated <i>Texas Register</i> publication date:	June 24, 2011
Public hearing dates (if any):	July 14, 18, 22, 2011
Public comment period:	June 24, 2011 - July 25, 2011
Anticipated adoption date:	November 16, 2011

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