

# Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

**To:** Commissioners **Date:** September 4, 2009  
**Thru:** LaDonna Castañuela, Chief Clerk  
Mark R. Vickery, P.G., Executive Director  
**From:** Susana M. Hildebrand, P.E., Chief Engineer  
**Docket No.:** 2009-0843-RUL  
**Subject:** Commission Approval for Proposed Rulemaking  
Chapter 115, Control of Air Pollution from Volatile Organic Compounds  
Volatile Organic Compounds (VOC) Control Techniques Guidelines (CTG) Update  
Rule Project No. 2008-019-115-EN

## Reasons for the rule package:

The 1990 Federal Clean Air Act (FCAA) Amendments (42 United States Code (U.S.C.), §§7401 *et seq.*) require the United States Environmental Protection Agency (EPA) to establish primary National Ambient Air Quality Standards (NAAQS) that protect public health and to designate areas exceeding the NAAQS as nonattainment areas. For each designated nonattainment area, the state is required to submit a state implementation plan (SIP) revision to the EPA that provides for attainment and maintenance of the NAAQS.

FCAA, §172(c)(1) requires that the SIP incorporate all reasonably available control measures, including 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). For nonattainment areas classified as moderate and above, FCAA, §182(b)(2) requires the state to submit a SIP revision that implements RACT for VOC emission sources addressed in a CTG document issued between November 15, 1990, and the area's attainment date.

CTG documents provide information to assist states and local air pollution control authorities in determining RACT for specific emission sources. CTG documents do not impose any legally binding regulations or change any applicable regulations. EPA guidance on RACT indicates that states can choose to implement the CTG recommendations, implement an alternative approach, or demonstrate that additional control for the CTG emission source category is not technologically or economically feasible in the area. FCAA, §183(e) directs the EPA to regulate VOC emissions from certain consumer and commercial product categories by issuing national regulations or by issuing CTG documents in lieu of regulations. On October 5, 2006, the EPA published a CTG document in lieu of national regulations for VOC emissions from Offset Lithographic Printing and Letterpress Printing (71 FR 58745).

Under the 1997 eight-hour ozone NAAQS, the Dallas-Fort Worth eight-hour ozone nonattainment area (DFW area) is currently classified as a moderate nonattainment area, and the Houston-Galveston-Brazoria eight-hour ozone nonattainment area (HGB area) is currently classified as a severe nonattainment area. The purpose of the proposed rulemaking is to implement RACT for offset lithographic printing lines in the DFW and HGB areas as required by FCAA, §172(c)(1) and §182(b)(2), considering the recommendations of the 2006 CTG document Offset Lithographic Printing and Letterpress Printing.

Re: Docket No. 2009-0843-RUL

**Under what authority are we proposing these changes?**

The new and amended 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 Texas Water Code; TWC, §5.103, concerning Rules, that authorizes the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code; 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 new and amended 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 new and amended 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 §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 new and amended sections are also proposed under FCAA, 42 U.S.C., §§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.

**Is this rulemaking required by federal rule or state statute? Which ones?**

Yes. FCAA, §172(c)(1) requires that the SIP for nonattainment areas include reasonably available control measures, including RACT, for sources of emissions. FCAA, §182(b)(2) requires states to revise their SIP for certain nonattainment areas to include RACT for sources of VOC emissions covered by a CTG document issued after November 15, 1990, and prior to the area's date of attainment.

**Are there any legal deadlines by which these rules must be proposed, adopted, or effective?**

Yes. The EPA requires states to submit SIP revisions in response to the CTG documents issued for Consumer and Commercial Products one year after the final CTG is published in the *Federal Register*. During the formal comment period on these Consumer and Commercial Products CTG documents, the commission requested that the EPA extend the deadline for the SIP revision because the allotted one-year time frame would not provide the state enough time to review the CTG documents, determine what rule changes need to be made, communicate with stakeholders regarding proposed changes, and fulfill all the necessary steps in the Texas rulemaking process. The EPA did not extend the deadline but did indicate they would work with states to ensure timely submittals of the required SIP revisions.

**What issue(s) or problem(s) are we trying to solve?**

The purpose of the proposed rules is to implement RACT for offset lithographic printing facilities in the DFW and HGB areas by limiting the VOC content of solvents used by affected sources.

**Why is it important that we do this rule package?**

The proposed rules would implement RACT for offset lithographic printing facilities in the DFW and HGB areas as required by FCAA, §172(c)(1) and §182(b)(2).

Re: Docket No. 2009-0843-RUL

**Other important background or historical information.**

NA

**Scope of the rulemaking:**

The proposed rules would reduce the VOC content limits on fountain solutions used by offset lithographic printing operations currently subject to the Chapter 115, Subchapter E, Division 4 regulations. The proposed rules would also limit the VOC content of fountain and cleaning solutions used by offset lithographic printing operations that are exempt under current rules. Existing Chapter 115 rules limit the content of fountain and cleaning solutions used by offset lithographic printing lines in the DFW area with combined VOC emissions of at least 50 tons per calendar year (tpy) when uncontrolled and in the HGB area with combined VOC emissions of at least 25 tpy when uncontrolled. The proposed rules would expand requirements in the DFW and HGB areas beginning March 1, 2011, to limit the content of fountain and cleaning solutions used by offset lithographic printing lines located on a property with combined VOC emissions of at least 3 tpy when uncontrolled.

The proposed rules would require the owner or operator of an affected offset lithographic printing line to reduce the VOC content of the fountain solution. The proposed rules provide several compliance options including: reducing the alcohol content of the solution; reducing the alcohol content of the solution in combination with add-on refrigeration equipment; and using reformulated materials to eliminate alcohol in the solution. The proposed rules would also require an affected owner or operator to comply with monitoring, testing, and recordkeeping requirements to demonstrate continuous compliance with the content limits.

The proposed rules would also expand the applicability of the existing Chapter 115 rules that limit the VOC content of cleaning materials used in offset lithographic printing processes to include offset lithographic printing lines located on a property with combined VOC emissions of at least 3 tpy when uncontrolled. The proposed rules would require the owner or operator of an affected facility to reduce the VOC content of the cleaning materials and would provide several compliance options. The proposed rules would also require an affected owner or operator to comply with monitoring, testing, and recordkeeping requirements to demonstrate continuous compliance with the content limits.

**Changes required by federal rule:**

The proposed rules would implement RACT for offset lithographic printing lines in the DFW and HGB areas as required by FCAA, §172(c)(1) and §182(b)(2).

**Changes required by state statute:**

NA

**Staff recommendations that are not expressly required by federal rule or state statute:**

On October 5, 2006, the EPA published CTG documents in lieu of national regulations for VOC emissions from offset lithographic printing. Although the FCAA requires the state to implement RACT, EPA guidance indicates the state can implement the CTG recommendations, implement an alternative approach, or demonstrate that additional control is not economically or technically feasible for the area. The proposed rule revisions implement the EPA's RACT recommendations in the 2006 Offset Lithographic and Letterpress Printing CTG with the following exceptions.

Re: Docket No. 2009-0843-RUL

- ***Letterpresses*** -  
In the 2006 CTG, the EPA recommends controlling VOC emissions from letterpress printing. No new rules are being proposed for letterpress printing sources because review of the point source emissions inventory, Title V, and central registry databases did not identify any letterpresses that would be subject to the CTG-recommended controls.
- ***Heatset Offset Lithographic Presses*** -  
In the 2006 CTG, the EPA recommends requiring an add-on air pollution control device on each individual heatset web offset lithographic press with the uncontrolled potential to emit at least 25 tpy of VOC from the dryer. The EPA recommends a 90 percent overall control efficiency for devices installed before the rule effective date of the rule implementing these CTG recommendations. In the HGB area, the existing Chapter 115 rules require control devices with an efficiency of at least 90 percent to be installed on all heatset offset lithographic presses located on a property with combined VOC emissions of at least 25 tpy when uncontrolled. In the DFW area, the existing Chapter 115 rules require control devices with an efficiency of at least 90 percent to be installed on heatset offset lithographic presses located on a property with combined VOC emissions of at least 50 tpy. Staff reviewed available TCEQ databases to identify the heatset presses in the DFW area that are potentially subject to EPA's CTG recommendations and determined that the heatset presses identified have control devices with a minimum efficiency of 90 percent to comply with either Chapter 115 rules or as part of their permit authorization. Since the level of control on heatset presses identified in the DFW and HGB areas either meets or exceeds the EPA's recommendations for control devices installed before the effective date of the rule, no new rules or rule revisions are proposed for heatset presses. The EPA also recommends requiring a 95 percent overall efficiency for control devices installed after the rule effective date on individual heatset web offset lithographic presses with the uncontrolled potential to emit at least 25 tpy of VOC. Applying RACT standards to future equipment installations is not necessary to meet the mandates of the FCAA under §§172(c)(1), 182(b)(2), and 182(f). Additionally, control devices installed after the rule effective date will be required to meet best available control technology standards of at least 95 percent control efficiency as part of their permit authorization. Therefore, no new rules or rule amendments are being proposed for control devices installed on heatset presses after the effective date of the rule.
- ***Fountain Solutions*** -  
EPA's 2006 CTG recommends limiting the fountain solution content to 5 percent alcohol substitutes or less by weight and no alcohol in the fountain solution. However, the existing Chapter 115 rules limit the fountain solution content to 3 percent alcohol substitutes or less by weight and no alcohol in the fountain solution. Since the existing rules are incorporated into an EPA-approved SIP, proposing the CTG-recommended 5 percent limit for sources currently complying with the Chapter 115 rules would be backsliding; therefore, the proposed rules retain the 3 percent limit for these sources. The proposed rules would also require newly affected sources to comply with the more stringent 3 percent limit in existing Chapter 115 rules.
- ***Cleaning Solutions*** -  
The 2006 CTG also recommends limiting the VOC content of cleaning solutions used in offset lithographic printing operations to 70 percent VOC by weight in conjunction with work practice standards. However, the proposed rules retain the more stringent existing Chapter 115 cleaning solution content limit of 70 percent VOC by volume in conjunction

Re: Docket No. 2009-0843-RUL

with work practice standards. In addition, the proposed rules retain the existing Chapter 115 option to limit the cleaning solution content to 50 percent VOC by volume. The proposed rule would include this option to retain the flexibility afforded to affected owners and operators by the current rules.

- ***Exemptions*** - EPA's 2006 CTG recommendations include exemptions for presses that meet certain criteria. Since the existing rules are incorporated into an EPA-approved SIP, proposing the CTG-recommended exemptions for sources currently complying with the Chapter 115 rules would be backsliding; therefore, the proposed rules would only provide the exemptions for newly affected sources. The proposed rule would allow an affected owner or operator to exempt any sheet-fed press with a maximum sheet size of 11 inches by 17 inches or less from the proposed new fountain solution content limits; exempt any press with a total fountain solution reservoir of less than one gallon from the proposed new fountain solution content limits; and exempt up to 110 gallons of cleaning solution from the proposed new content limits.
- ***Monitoring and Recordkeeping*** - The existing Chapter 115 rules require the fountain and cleaning solution VOC concentration to be measured directly. The proposed rules would retain this provision and provide a new option allowing the VOC concentration of each batch of fountain or cleaning solution to be determined using analytical data from the material safety data sheet or equivalent information from the supplier that was derived using approved test methods. This new option is expected to be sufficient to ensure continuous compliance with the proposed new content limits and would reduce the compliance burden for affected sources.

#### **Impact on the regulated community:**

##### **Who will be affected?**

In the DFW and HGB areas, the owner or operator of all offset lithographic printing lines located on a property with combined VOC emissions of at least 3 tpy when uncontrolled would be required to comply with the proposed rules unless specifically exempted. The proposed rules require the owner or operator of an affected line to reduce the VOC concentration of the fountain solutions and/or cleaning solutions used in the printing process by March 1, 2011. The proposed rules also require the owner or operator of an affected facility to comply with monitoring, testing, and recordkeeping requirements to demonstrate continuous compliance with the content limits.

##### **Does it create a group of affected persons who were not affected previously? How?**

Yes. In the DFW area, existing Chapter 115 regulations apply to all offset lithographic printing lines located on a property with combined emissions of at least 50 tpy of VOC when uncontrolled. In the HGB area, existing Chapter 115 regulations apply to all offset lithographic printing lines located on a property with combined emissions of at least 25 tpy of VOC when uncontrolled. The proposed rules would apply in the DFW and HGB areas to the owner or operator of all offset lithographic printing lines located on a property with combined VOC emissions of at least 3 tpy when uncontrolled.

##### **Will there be a fiscal impact? If so, estimate.**

Yes. The proposed rules provide options for compliance, and although affected owners or operators are expected to choose the most cost-effective option the exact fiscal impacts cannot be determined. The costs will differ depending on the compliance option used or other site-specific variables like the

Re: Docket No. 2009-0843-RUL

type of solution being used. Some costs, such as purchasing monitoring equipment, are initial one-time costs, and some costs are increases in annual operating costs, such as the incremental increases in the cost of solutions. The fiscal impacts are not expected to be the same for each affected offset lithographic printing line.

- ***Fountain Solution Content Limits***

- Material Substitution - Affected owners or operators are not expected to incur any additional cost from the use of compliant materials. Fountain solution material costs are not typically based on the VOC content of those materials; differences in price are based on the color, amount of metal in the ink, and volume purchased. However, the average cost of a gallon of fountain solution is \$15.50, and assuming a conservative 6 percent price increase, the price could increase to \$16.43 per gallon.
- Refrigeration Unit - The proposed rules provide affected owners and operators with the option to use a higher fountain solution VOC concentration if the fountain solution is refrigerated below 60 degrees Fahrenheit. A small refrigeration unit capable of servicing two to three presses could cost as much as \$27,847 with annual operating costs of \$1,876.
- Reduced Alcohol Use - The proposed rules require affected owners and operators to reduce the alcohol content of the fountain solution. In the 2006 Offset Lithographic and Letterpress Printing CTG, the EPA estimates that implementing the recommendations will result in cost savings due to the reduction in alcohol use or the conversion to alcohol substitutes. However, the exact cost savings, if any, cannot be determined without site-specific operational data.
- Monitoring - Owners or operators subject to the existing regulations are not expected to incur any additional cost associated with the proposed monitoring requirements. The proposed rules provide affected owners and operators with the option to monitor the fountain solution concentration either directly (using equipment specified in the rule) or indirectly (using manufacturer-supplied information). Affected owners and operators monitoring the fountain solution content indirectly are not expected to incur any additional cost since the necessary analytical data is supplied by the manufacturer. Monitoring the fountain solution content directly may require an affected owner or operator to purchase a refractometer (estimated to cost \$200-\$300), hydrometer (estimated to cost \$50-\$100) or conductivity meter (estimated to cost \$300-\$1,100).
- Recordkeeping - Owners or operators subject to the existing regulations are not expected to incur any additional cost associated with the proposed recordkeeping requirements. The cost for complying with the proposed recordkeeping requirements is expected to be negligible for newly affected owners or operators.

- ***Cleaning Solution Content Limits***

- Material Substitution - Owners or operators subject to the existing regulations are not expected to incur any additional costs associated with the proposed requirements. Newly affected owners or operators are expected to choose the most cost-effective option to comply with the proposed rules. The average cost of a gallon of cleaning solution is \$15.00, and assuming a conservative 6 percent price increase, the price could increase to \$15.90 per gallon.
- Monitoring - Owners or operators subject to the existing regulations are not expected to incur any additional cost associated with the proposed monitoring requirements. The proposed rules provide affected owners and operators with the

Re: Docket No. 2009-0843-RUL

option to monitor the cleaning solution concentration either directly (using equipment specified in the rule) or indirectly (using manufacturer-supplied information). Affected owners and operators monitoring the cleaning solution content indirectly are not expected to incur any additional cost since the necessary analytical data is supplied by the manufacturer. Monitoring the cleaning solution content directly may require an affected owner or operator to purchase a flow monitor estimated to cost \$200 to \$1,000.

- Recordkeeping - Owners or operators subject to the existing regulations are not expected to incur any additional cost associated with the proposed recordkeeping requirements. The cost for complying with the proposed recordkeeping requirements is expected to be negligible for newly affected owners or operators.

### **Impact on the public:**

#### **Who will be affected?**

The proposed rules apply to offset lithographic printing sources in the DFW and HGB areas. People living or working in these areas would benefit from improved air quality.

#### **Does it create a group of affected persons who were not affected previously? How?**

No.

#### **Will there be a fiscal impact? If so, estimate.**

No fiscal impact on the public is expected. However, it is possible that any costs incurred by affected offset lithographic printing facilities will be passed on to their customers.

### **Impact on agency programs:**

TCEQ Regional Field Operations Division staff would be required to perform inspections of affected facilities to verify compliance with the proposed rules. However, enforcement of these rules should not significantly increase the number of facilities inspected by state and local governments. The proposed rules may increase the workload for the Small Business and Environmental Assistance Division since the proposed rules impact small business owners. Since these are established agency programs, the proposed rules are not anticipated to have fiscal implications for the TCEQ.

### **Stakeholder meetings:**

#### **Have any stakeholder meetings been held?**

Yes. One CTG Stakeholder Group meeting was held on December 9, 2008. The meeting was held at the TCEQ office in Austin and a video teleconference of the meeting was broadcast to the Dallas and Houston Regional Offices. In addition, stakeholders had the opportunity to submit informal written comments on the scope regarding the project.

#### **With whom?**

The CTG Stakeholder Group meeting was open to the public. Three stakeholders attended the meeting; no informal written comments were received.

#### **What were the general sentiments?**

Stakeholders asked general questions about how the CTG recommendations compared to the existing Chapter 115 regulations, if the CTG recommendations would be implemented as prescribed in EPA's

Re: Docket No. 2009-0843-RUL

CTG document, and if it was possible that the state would implement more stringent regulations than recommended in EPA's CTG document.

**Were any changes made in response to stakeholder concerns?**

No specific changes were made in response to stakeholder concerns.

**Policy issues:**

**What policy issues are affected?**

No policy issues are affected by the proposed rules.

**Are any policies that are not currently based on rule being made into a rule?**

No.

**What are the consequences if this rulemaking is not approved to go forward?**

If the proposed rules are not approved to go forward, the EPA may determine that the state has not met its obligation to implement RACT as required in FCAA, §172(c)(1) and §182(b)(2).

**Are there alternatives?**

The commission can decide to implement more stringent regulations, less stringent regulations, or no additional regulations.

**Potentially controversial matters:**

The proposed rulemaking would impact small businesses, and the owners and operators required to comply with more stringent content limits may object to the rule changes.

**Key points in proposed rulemaking schedule:**

**Anticipated proposal date:** September 23, 2009

**Anticipated *Texas Register* publication date:** October 9, 2009

**Public hearing date (if any):** October 28-30, 2009

**Public comment period:** October 9, 2009 - November 9, 2009

**Anticipated adoption date:** March 10, 2010

**Agency contacts:**

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**Attachments**

cc: Chief Clerk, 5 copies  
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