

Tracking No. 0628-01

From: [REDACTED]
To: [REDACTED]
Date: 6/28/2011 9:05 AM
Subject: 2010-016-115-EN

06/28/2011 09:14 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: mary
Last Name: logue
Company/Organization:
E-mail Address: [REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

In the proposed rule change, and in the background summary, there is a discussion as to proposed paragraph (2), currently section 115.117(a)(3) exempting storage tanks with a storage capacity less than 25,000 gallons located at motor vehicle fuel dispensing facilities from the requirements of the division.

In the definitions section 115.10, there is no definition for "motor vehicle fuel dispensing facility". Can you define as to whether a "motor vehicle fuel dispensing facility" is defined as one that is the sole purpose of dispensing fuel (ie a gas station or a fuel distributor) or can a facility also be defined as a fuel dispensing facility (eg fuel island) at a location that's main function is possibly a trucking company. Is there also a less than quantity of fuel dispensed applicability? Can you clarify?

Tracking No. 0706-01

From: [REDACTED]
To: [REDACTED]
Date: 7/6/2011 10:14 AM
Subject: 2010-016-115-EN

07/06/2011 10:24 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

Can you respond to the definition of "motor vehicle fuel dispensing facilities"? I'm not sure if the proposed rule addresses facilities which are solely for the use of fueling vehicles (as in a gas station) and/or equipment or if it also includes "fueling islands" at a facility which is used for VOC storage.

Tracking No. 0708-01

From: [REDACTED]
To: [REDACTED]
Date: 7/8/2011 2:31 PM
Subject: 2010-016-115-EN

07/08/2011 02:41 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

I find myself with another question about the proposed changes to the rules. In Section 115.111, Exemptions, item (a), last sentence, there is the following statement: In the DFW area, the exemptions in this subsection no longer apply after the date in 115.119(c) of this title. 115.119(c) states that the exemption is withdrawn on 12.1.2012. My interpretation, would be that any facilities in the DFW area that are applicable to the rule have until 12/1.2012 to get into compliance.

I thought I understood, until I got to section 115.111(d) which states: the following exemptions apply in the DFW area as of the date in 115.119(c) (12/1/2012): I guess I'm just confusing myself, but wanted to clarify that this section (115.111(d) allows some exemptions after 12/1/2012 for the DFW area?

Can you verify that I am correct in my question in the second paragraph?

Tracking No. 0708-02

From: [REDACTED]
To: [REDACTED]
Date: 7/8/2011 2:32 PM
Subject: 2010-016-115-EN

07/08/2011 02:42 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

Can you also clarify with 115.111(2), "except as noted in paragraphs (2) and (9); paragraph (2) includes an exemption of storage tanks with capacity less than 210,000 gallons storing crude oil and condensate in DFW area are exempt from requirements of this division.

This exemption doesn't state anything about date in 115.119(c), but with the last sentence in item (a), they seem in conflict. Is there an exemption for DFW area for crude oil and condensate tanks in the DFW are before and after 12/1/2012?

Tracking No. 0711-01

From: [Redacted]
To: [Redacted]
Date: 7/9/2011 12:15 PM
Subject: 2010-023-SIP-NR
Attachments: Letter to TCEQ RE Nat Gas Policy Change.doc

07/09/2011 12:21 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Brian
Last Name: Walker



Rule: 2010-023-SIP-NR

Comments:

July 8, 2011

Charlotte Horn
Texas Register Team
Office of Legal Services
Texas Commission on Environmental Quality
MC 205
P.O. Box 13087
Austin, Texas 78711-3087

Dear Ms. Horn:

I wish to express my concerns regarding the proposed changes to the State Implementation Plan (SIP Project Number 2010-023-SIP-NR) that are currently being considered by TCEQ. Please note that my comments come from my own concerns. I am not a paid lobbyist, I have not been hired to air these concerns, and my views do not necessarily reflect anyone else associated with my law firm.

I am very worried that these changes will place additional regulatory burdens on natural gas producers in the Barnett Shale at a time when producers are taking every possible step to reduce their emissions in order to produce this valuable resource with minimal harm to the environment.

I believe that drilling for natural gas is a great opportunity for the Barnett Shale counties, Texas, and America. This is of particular importance to our state because of the jobs that it provides and the security it brings.

For decades energy production has propelled our state's economy and the recent technological advances that allow drilling in the Barnett Shale have the potential to allow the energy sector to continue to grow during the coming decades.

I, like everyone else, want clean air and a healthy environment in North Texas. Natural gas has proven to be a way to get cleaner air through the reduction of emissions that pollute the air and handicapping the industry's ability to grow will only harm our nation's move to cleaner sources of energy.

For Texas to continue to be the nation's leader in all forms of energy production, we must be very careful in striking the balance between safe operations and overzealous regulation. Our state has the potential to be a global leader in natural gas production and I think that we should take care to make certain that we do not lose out on the investment opportunities that are currently available to harness this clean energy resource.

Sincerely,

Brian Walker, Attorney

Tracking No. 0711-02

From: [REDACTED]
To: [REDACTED]
Date: 7/10/2011 11:48 AM
Subject: 2010-016-115-EN

07/10/2011 11:54 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: prakash
Last Name: parameswaran

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

Please ensure that all volatile organic compounds from gas drilling sites are captured by the most effective available technologies. Please mandate vapor recovery systems for each and every gas well in the state. This includes gas wells that have already been drilled and those that have not yet been drilled.

Please remember your duty to protect the public from these harmful emissions that are being released on an unsuspecting population. I believe your duty is not to create jobs or worry about the economy. It is to safeguard the public from environmental damage and I hope to see TCEQ discharge its duties effectively. I am very concerned that my kids are growing up exposed to these emissions in the air. One wonders whether there is any respect for Life in Texas and for the basic requirements of life which include clean air and water.

By not using these technologies, costs are being externalized to the general public by Oil & Gas companies. There is significant increase in air pollution that is causing

degradation in air quality in the DFW metroplex that is now unacceptable based on the EPA standards.

I am kindly requesting you to do the right thing here.

Tracking No. 0711-03

From: [REDACTED]
To: [REDACTED]
Date: 7/11/2011 10:50 AM
Subject: 2010-016-115-EN

07/11/2011 10:58 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

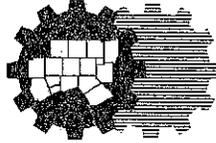
[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

For this proposed rule, are the terms "condensate" and "produced water" interchangeable? There is a definition in Section 100.1 for condensate, but didn't see one in either 100.1 or in 115.110.



0714-02

North Central Texas Council Of Governments

July 13, 2011

Ms. Jamie Zech
MC 206
Air Quality Division
Chief Engineer's Office
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

Dear Ms. Zech:

On behalf of the North Texas Clean Air Steering Committee (NTCASC), please accept the following comments relating to Proposed Dallas-Fort Worth Attainment Demonstration (2010-022-SIP-NR) and Reasonable Further Progress (2010-023-SIP-NR) State Implementation Plan Revisions for the 1997 Eight-Hour Ozone Standard Nonattainment Area, including corresponding supplements. The NTCASC was formed and its members are appointed by the North Central Texas Council of Governments Executive Board. The Committee's purpose is to work in partnership with the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency in the development of ozone State Implementation Plans (SIPs) and to support their implementation once approved. Attachment 1 contains a Committee roster.

Oil and Gas Operations

Over the last six plus years, gas exploration activities in the Barnett Shale area have escalated, with a significant amount of operations now occurring in highly urbanized areas. The Barnett Shale's eastern area happens to reside in the western portion of the Dallas-Fort Worth (DFW) nonattainment, where the region's highest levels of ozone are being recorded (namely at monitors located at Denton Airport, Eagle Mountain Lake, Keller, and Grapevine). These monitors will be critical in determining future attainment of the ozone standard. Due to these facts, the NTCASC formed an Oil and Gas Task Force (roster included as Attachment 2) to become educated about industry practices and, as appropriate, to assist the NTCASC in recommending potential emission reduction measures for the DFW SIP. On May 25, 2011, the Task Force took action recommending oil and gas SIP measures for the NTCASC to consider and forward to TCEQ. Attachment 3 contains the NTCASC letter dated May 27, 2011, summarizing these measures for incorporation into the SIP.

As identified in the above referenced letter, the NTCASC maintains its position that TCEQ should officially formalize in the DFW SIP what has been identified as best practices of the oil and gas industry and which are already being employed by a very large percentage of the industry, including:

July 13, 2011

Green Completions – Process used to recover gas that would otherwise be vented or flared during the completion phase of a natural gas well.

Vapor Recovery Units – Equipment installed on condensate storage tanks that capture rather than vent vapors.

Plunger Lifts – System using gas pressure buildup in a well to lift a column of accumulated fluid out of the well to allow expected gas production.

Low-Bleed Pneumatic Valves – Devices that regulate gas flow and pressure.

As follow-up to questions raised by Task Force members, TCEQ provided estimated 2012 oil and gas emissions by category in the DFW area ([Attachment 4](#)). It should be noted that three of the top five oil and gas categories that are recommended as formalized SIP control measures contribute 94.1 tons per day (tpd) out of a total 114.1 tpd volatile organic compounds (VOC).

Review of the SIP proposals and supplements identified that the Commission is proposing to implement the Houston area condensate and crude oil storage tank rule (30 TAC Chapter 115, Subchapter B, Division 1) in the DFW nonattainment area, requiring 95 percent control of VOC flash emissions applicable to those tanks emitting over 25 tons per year (tpy) of VOCs. The NTCASC welcomes this rule but recommends the Permit By Rule (PBR) threshold be reduced from 25 tpy to 15 tpy. This recommendation is supported by information provided by TCEQ staff ([Attachment 5](#), Table 3) that 8.8 tpd more VOC emission reductions can be obtained at a PBR of 15 tpy while not being cost prohibitive to the industry as most of these vapors would be collected and brought to market for sale.

The request to formalize the above best practices as rules and strengthen the condensate and crude oil storage tank rule in the SIP is made to better ensure that federal RFP requirements regarding VOCs can be achieved and that the reclassification and future reconsideration SIPs can demonstrate attainment. This will also provide a contingency in the 2012 RFP if existing calculations change and an uncoverable shortfall surfaces. In addition, such initiatives would guarantee an equal playing field for all oil and gas companies operating in the DFW area. As a secondary benefit beyond ozone reductions, such initiatives would aid in reduction of emissions (i.e. benzene, formaldehyde) that are being reported at the local level and are known to cause unwarranted and unnecessary health impacts.

Lastly, the NTCASC continues to advocate that the Commission and its staff review existing regulations to be sure that they are adequate to achieve their intended purpose and to meet today's standards.

Use of Motor Vehicle Emission Simulator (MOVES) -Based On-Road Emission Inventories

The NTCASC supports the decision to utilize MOVES-based on-road emission inventories in both the attainment demonstration and reasonable further progress SIP revision, as outlined in the proposed documentation and again in recent supplemental information. As summarized in a Regional Transportation Council letter to TCEQ on February 10, 2011 ([Attachment 6](#)), the benefits significantly outweigh associated risks to the region's ability to reach the federal ozone standard. In addition, use of the MOVES model is supported because it replaces the outdated

July 13, 2011

MOBILE6 model with current available vehicle technology assumptions, behavioral trends, etc., and shows that photochemical modeling for this SIP revision performs at an improved tolerance within EPA's guidelines, allows for better decision making, and represents an improved assessment of emission trends to the public.

Comment Period Extension

The NTCASC acknowledges TCEQ's recent action to extend the public comment period from July 25, 2011 to August 8, 2011. Recognizing that preparing a reclassification SIP revision has many tight deadlines, the extension is warranted to ensure the public has a minimum 30-day review and comment on supplemental information recently released.

We extend our gratitude to Commission staff that have participated at each meeting of the NTCASC, Oil and Gas Task Force, and the Photochemical Modeling Technical Committee. We appreciate the opportunity to emphasize these requests and to be a partner in the effort to improve air quality in North Texas.

Sincerely,



Mark Burroughs, Chair
North Texas Clean Air Steering Committee
Mayor, City of Denton



Jungus Jordan, Chair
North Texas Clean Air Steering Committee –
Oil and Gas Task Force
Councilmember, City of Fort Worth

CK:ch
Attachments

cc: Elizabeth Ames Jones, Chairman, Railroad Commission
David Porter, Commissioner, Railroad Commission
Barry T. Smitherman, Commissioner, Railroad Commission
Michael Gange, Assistant Director, Environmental Services, City of Fort Worth
North Texas Clean Air Steering Committee
Mike Eastland, Executive Director, North Central Texas Council of Governments

NORTH TEXAS CLEAN AIR STEERING COMMITTEE ROSTER

COUNTIES

Maurine Dickey County Commissioner Dallas County	Ron Marchant County Commissioner Denton County	John Matthews County Commissioner Johnson County
Mark Riley County Judge Parker County	Keith Self County Judge Collin County	Roy Brooks County Commissioner Tarrant County

CITIES

Mark Burroughs - Chair Mayor City of Denton	Dr. Robert Cluck Mayor City of Arlington	Jungus Jordan – Vice Chair Councilmember City of Fort Worth
Linda Koop Councilmember City of Dallas	Amir Omar Councilmember City of Richardson	Darren Rozell Mayor City of Forney

BUSINESS ORGANIZATIONS

Howard Gilberg Dallas Regional Chamber	Mabrie Jackson North Texas Commission	Tim Keleher Fort Worth Chamber of Commerce
Margaret Keliher Texas Business for Clean Air		

ENVIRONMENTAL INTERESTS

Ramon Alvarez Environmental Defense Fund	Rita Beving Sierra Club/Public Citizen	Jim Schermbeck Downwinders At Risk
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**NORTH TEXAS CLEAN AIR STEERING COMMITTEE
OIL AND GAS TASK FORCE**

Jungus Jordan – Chair
Councilmember, City of Fort Worth

Ramon Alvarez
Environmental Defense Fund

Rita Beving
Sierra Club/Public Citizen

Roy Brooks
Tarrant County Commissioner

Dr. Robert Cluck
Mayor, City of Arlington

Howard Gilberg
Dallas Regional Chamber

Mabrie Jackson
North Texas Commission

Tim Keleher
Fort Worth Chamber of Commerce

Margaret Keliher
Texas Business for Clean Air

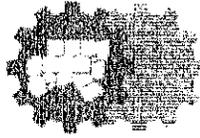
Linda Koop
Councilmember, City of Dallas

John Matthews
County Commissioner, Johnson County

Mark Riley
County Judge, Parker County

Keith Self
County Judge, Collin County

Jim Schermbeck
Downwinders At Risk



North Central Texas Council Of Governments

May 27, 2011

Chairman Bryan W. Shaw, Ph.D., MC 100
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

Commissioner Buddy Garcia, MC 100
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

Commissioner Carlos Rubinstein, MC 100
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

Dear Chairman Shaw and Commissioners Garcia and Rubinstein:

This letter is written on behalf of the North Texas Clean Air Steering Committee (NTCASC) and its Oil and Gas Task Force. NTCASC was formed and its members are appointed by the Executive Board of the North Central Texas Council of Governments. The Committee's purpose is to work in partnership with the Texas Commission on Environmental Quality and the Environmental Protection Agency in the development of ozone State Implementation Plans and to support their implementation once approved.

The Oil and Gas Task Force was created to examine the role that emissions from this industry might be contributing to ozone formation in the Dallas-Fort Worth Nonattainment Area. Through presentations by local, State, and federal regulators and from the industry, it is recognized that there are many existing regulations in force and that the industry, in general, has adopted practices that are designed to reduce nitrogen oxides (NO_x) and volatile organic compound (VOC) emissions. Examples include:

State and Federal Regulations

- Dallas-Fort Worth 8-Hour Ozone Nonattainment Area Minor Sources Rule (30 TAC Chapter 117)
- Permit By Rule for Oil & Gas Handling and Production Facilities (30 TAC 106.352)
- New Source Performance Standards (40 CFR Part 60)
 - Subpart KKK – Equipment Leaks of VOC from Onshore Natural Gas Processing Plants
 - Subpart LLL – Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions
 - Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
- National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63)
 - Subpart HH – Natural Gas Production Facilities
 - Subpart HHH – Natural Gas Transmission and Storage Facilities
 - Subpart ZZZZ – Reciprocating Internal Combustion Engines
- On-road Engine Standards (40 CFR 86)
- Non-road Engine Standards (40 CFR 89)

May 27, 2011

Industry Best Practices

- Green Completions – Process used to recover gas that would otherwise be vented or flared during the completion phase of a natural gas well.
- Vapor Recovery Units – Equipment installed on condensate storage tanks that capture rather than vent vapors.
- Plunger Lifts – System using gas pressure buildup in a well to lift a column of accumulated fluid out of the well to allow expected gas production.
- Low-Bleed Pneumatic Valves – Devices that regulate gas flow and pressure.

Due to the existing gas exploration activities, plus those expected to continue for many more years in highly urbanized areas, we request that the Commission and its staff review existing regulations to be sure that they are adequate to achieve their intended purpose and are adequate to meet today's standards. We further request the Commission considers making the Houston area condensate and crude oil storage tank rule (30 TAC Chapter 115, Subchapter B, Division 1) applicable in our nonattainment area, requiring 95 percent control of VOC flash emissions applicable to those over 15 tons per year (tpy) VOC emissions. Our final request is that the Commission formalizes what has been identified as best practices of the oil and gas industry which are already being employed by a very large percentage of the industry.

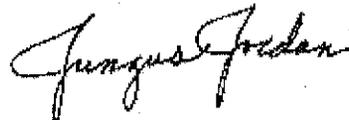
These requests are made with the intention that federal requirements of Reasonable Further Progress regarding VOCs can be achieved and better assure that the reclassification and future reconsideration State Implementation Plans can demonstrate attainment.

We appreciate the opportunity to present these requests and to be a partner in the effort to improve air quality in North Texas.

Sincerely,



Mark Burroughs, Chair
North Texas Clean Air Steering Committee
Mayor, City of Denton



Jungus Jordan, Chair
North Texas Clean Air Steering Committee –
Oil and Gas Task Force
Councilmember, City of Fort Worth

ME:ch

cc: North Texas Clean Air Steering Committee
Railroad Commission

DFW Area 2012 Estimated Oil and Gas Emissions

Oil & Gas Category	2012 NO _x tpd	2012 VOC tpd
Drilling Emissions (drill rig)	9	1
2-Cycle Lean Burn Compressor	0.3	0.1
4-Cycle Lean Burn Compressor	0.5	0.3
4-Cycle Rich Burn Compressor	1.2	0.1
4-Cycle Rich Burn Compressor w/ Catalyst	4.6	3.2
Oil Fugitives (grouped)		0.1
Gas Fugitives (grouped)		6.7
Crude Tanks		0.4
Condensate Tanks		33.5
Oil Heaters	0.0	0.0
Gas Heaters	3.0	0.2
Dehydrators		3.6
Pumpjacks	0.1	0.0
Oil Loading		0.0
Condensate Loading		0.3
Oil Well Completions		0.1
Gas Well Completions		3.3
Oil Well Blowdowns		0.1
Gas Well Blowdowns		1.7
Pneumatic Devices		57.2
Produced Water		2.2
Total	18.7	114.1

Note that on-road mobile emissions associated with oil and gas activities would be included in on-road emission estimates and not in this table.

Volatile Organic Compounds (VOC) Storage Rule Information for DFW

Table 1. DFW 9 County Ozone Nonattainment Area Equipment Count, Crude Oil and Condensate Production

County	Total Oil Storage Tanks	Total Condensate Storage Tanks	Total Sites with Oil and/or Condensate Tanks	Total Produced Water Storage Tanks	Total Slop Storage Tanks	Percent of Oil and Condensate Production
Collin	0	0	0	0	0	0
Dallas	0	5	5	24	0	0
Denton	29	710	632	2879	10	48
Ellis	0	1	1	91	6	0
Johnson	17	209	158	3889	22	6
Kaufman	0	0	0	0	0	0
Parker	19	598	491	1119	40	40
Rockwall	0	0	0	0	0	0
Tarrant	3	132	83	2926	10	6
Totals	68	1655	1370	10928	88	100

Note: Equipment data are from Phase 1 of the TCEQ Barnett Shale special inventory in 2010, and production data are from the Texas Railroad Commission in 2008.

Table 2. Sites Potentially Affected if Houston Area VOC Storage Tank Rules Were Applied in the DFW Area at Different Emission Thresholds

County	Number of Sites with Condensate Tanks						Floating Roof Tanks (>25,000 gal)
	Total Sites ¹	Sites affected at 25 tpy	Sites affected at 20 tpy	Sites affected at 15 tpy	Sites affected at 10 tpy	Sites affected at 5 tpy	
Collin	0	0	0	0	0	0	0
Dallas	5	2	3	3	4	5	26 (3 sites)
Denton	632	271	391	422	542	572	0
Ellis	1	0	1	1	1	1	0
Johnson	158	68	98	105	135	143	0
Kaufman	0	0	0	0	0	0	0
Parker	491	211	304	327	421	444	7 (1 site)
Rockwall	0	0	0	0	0	0	0
Tarrant	83	36	51	55	71	75	72 (11 sites)
Total	1370	588	848	913	1174	1240	105 (15 sites)

1. Total sites include sites with crude oil and/or condensate tanks.

Note: Potentially affected sites with condensate tanks estimated using emissions from HARC51C study. The number of potentially affected floating roof tanks and sites from TCEQ Emissions Inventory, 2009 data.

Table 3. DFW 9-County Ozone Nonattainment Area Condensate and Crude Oil Storage Tanks

115.112(d) Rule Applicability	25	20	15	10	5
Tank battery VOC emissions (tons per year (tpy))					
VOC reduction in 2012 (tons per day)	14.4	16.2	23.2	29.3	29.6
% sites with crude oil or condensate tanks affected	40.6	53.1	59.4	75.0	81.3
% sites with condensate tanks affected	42.9	61.9	66.7	85.7	90.5
% condensate production	65.9	70.0	85.8	99.4	99.7

Note: Emission estimates based on a 2006 study (HARC51C) of 32 sites with tanks in the Barnett Shale, east and southeast Texas. Results will vary with composition of natural gas and crude oil produced in different areas. Reductions are beyond an assumed 25% VOC reduction from voluntarily installed control devices. Assumes no VOC reductions associated with produced water tanks. The 2012 emission reduction is based on a 95% assumed control efficiency.

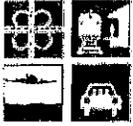
Technological Feasibility of Control Devices

Flares have no lower bound of technological feasibility. However, makeup fuel may be required at low or intermittent flows.

Vapor recovery units (VRUs) have a technological feasibility lower bound of approximately one thousand cubic feet of vent gas flow per day (Mcf/d) from a crude oil or condensate tank battery. If a natural gas pipeline with operating pressure less than 50 pounds per square inch gauge is not readily available, higher priced multi-stage compression options are required. Based on study data, including measured and speciated vent gas volumes, an oil tank battery emitting 10 tons of VOC per year (tpy), or a condensate tank battery emitting 15 tpy will be at the vapor recovery unit technology lower limit of approximately 1 Mcf/d of vent gas.

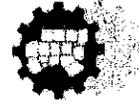
Emission Implications of Control Device Choice

Flares will emit nitrogen oxides (NOx). Vapor recovery units will emit zero or minimal NOx. Proportionally more NOx will be emitted per ton of VOC reduced as the applicability requirement for VOC emission control is lowered.



Regional Transportation Council

The Transportation Policy Body for the North Central Texas Council of Governments
(Metropolitan Planning Organization for the Dallas-Fort Worth Region)



February 10, 2011

Mr. Mark R. Vickery, P.G.
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087, MC 100
Austin, Texas 78711

RE: Request to Provide MOVES2010-Based Motor Vehicle Emission Budgets

Dear Mr. Vickery:

On January 12, 2010, the North Central Texas Council of Governments (NCTCOG) sent a letter to your agency summarizing future transportation conformity impacts utilizing the Environmental Protection Agency's (EPA) new Motor Vehicle Emission Simulator (MOVES2010), and requested incorporating results from this new model into the Dallas-Fort Worth reclassification State Implementation Plan (SIP), currently under development. By doing so, motor vehicle emission budgets (MVEBs) would be established that would allow for future conformity determinations. As this SIP continues to reflect planning assumptions that will lead to significant transportation ramifications, the Regional Transportation Council (RTC) is expressing its request for the Texas Commission on Environmental Quality (TCEQ) to provide MOVES2010-based MVEBs as soon as possible.

Sensitivity tests conducted by EPA and other agencies comparing differences from the existing MOBILE6.2 model to MOVES2010 result in significant increases in nitrogen oxide (NO_x) emissions. Because of this significant increase in NO_x, it will be impossible to handle the situation where the MOVES2010 model will be required for use in future transportation conformities against MVEBs previously established using MOBILE6.2.

As you know, upon the March 2, 2010, release of MOVES2010, the EPA established a two-year grace period requiring its use in new regional emissions analyses for transportation conformity determinations. Establishing MOVES2010 MVEBs will allow future consistency with transportation conformity emission inventories and avoid transportation planning consequences such as:

- Region's inability to modify the long-range multi-modal transportation plan for existing projects. Due to unforeseen design concept and scope changes, staff processes hundreds of project modifications each year totaling millions of dollars. These modifications usually contain dozens of projects that are put on hold and require the plan to go through a conformity determination in order to proceed. If MOVES2010 MVEBs are not established in the reclassification SIP, estimates indicate these updates may not be achievable and projects may be kept on hold quite possibly until 2015 when the SIP and corresponding MVEBs will be required in response to new ozone National Ambient Air Quality Standards (NAAQS).

February 10, 2011

- Region's inability to modify the long-range multi-modal transportation plan for new project funding. The RTC has a history of success in capitalizing on funding opportunities that advance projects. If MOVES2010 MVEBs are not established in the reclassification SIP, the RTC would be unable to put those funds to practical use and ultimately delay critical infrastructure projects, or worse, lose out on those funding opportunities. Examples include the American Recovery and Reinvestment Act (ARRA) of 2009, a variety of Comprehensive Development Agreements (CDA), other innovative financing opportunities, and results of local bond elections. Currently, Congress is underway to reauthorize the nation's surface transportation bill which authorizes federal surface transportation programs for highways, highway safety, and transit. In total, this can impact approximately \$5 billion in financing for the Dallas-Fort Worth area over the next four years.
- Region's inability to implement the long-range multi-modal transportation plan due to escalating costs incurred for delayed projects. A four percent per year inflation cost added to a delayed project means less funding for other projects, causing more delays and continuance of a compounding financial crisis throughout the entire plan.
- Region's inability to implement the long-range multi-modal transportation plan due to a possible conformity freeze. By not utilizing MOVES2010, an argument can be made that the reclassification SIP is not incorporating recent planning assumptions as required in Section 172(c)(3) of the Clean Air Act. Also, current choice of model is significantly underestimating on-road mobile emission estimates, which could be leading to an insufficient package of control strategies needed for the region to reach attainment. At a minimum, \$46.2 billion worth of projects in the region's multi modal transportation plan are at risk.
- Region's inability to implement the long-range multi-modal transportation plan due to challenging ozone NAAQS. It is necessary to establish MOVES2010 MVEB as soon as possible because new stringent ozone standards may make it extremely difficult to develop future SIPs. At a minimum, \$46.2 billion worth of projects in the region's multi modal transportation plan are at risk.

For all the reasons identified above and the consequences facing future transportation conformity determinations, the following are prioritized options to incorporate MOVES2010 into the reclassification SIP currently under development:

1. Include a MOVES2010 link-based on-road emissions inventory in the reclassification SIP;
2. TCEQ to perform MOVES2010 sensitivity runs and adjust the on-road emissions inventory in the reclassification SIP; or
3. TCEQ to commit to a revised reclassification SIP incorporating MOVES2010 as soon as possible.

Mr. Mark Vickery
Page Three

February 10, 2011

Realizing there may be numerous constraints to overcome in order to establish MOVES2010 MVEBs in the SIP, the RTC is requesting communication with our transportation conformity experts to discuss such constraints and offer assistance where needed. Your attention to this issue is appreciated and we look forward to your response. If you have any questions, please contact Michael Morris at (817) 695-9241 or Chris Klaus at (817) 695-9286.

Sincerely,

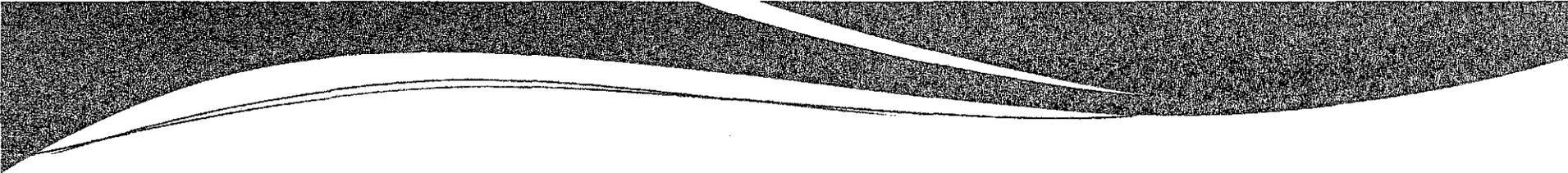


Ron Natinsky
Chair, Regional Transportation Council
Councilmember, City of Dallas

MV:bw

cc: The Honorable Mark Burroughs, Chair, North Texas Clean Air Steering Committee; Mayor,
City of Denton;
Michael Morris, P.E., Director of Transportation, NCTCOG
Chris Klaus, Senior Program Manager, NCTCOG

0714-07

A decorative graphic consisting of a dark, textured horizontal band with a white wavy line running through it, positioned at the top of the page.

OGBA Public Input Meeting

Feb 11, 2010

Mandate Vapor Recovery in Flower Mound

Alok Bhaskar

VOC Emissions from Storage Tanks Batteries

- U.S. EPA estimates that these batteries also emit 7,000 tons per year of HAPs, and more than 22,000 tons per year of VOCs. Each of these pollutants can have significant environmental and health effects.
- The HAPs emitted by the oil and gas industries include benzene, toluene, ethyl benzene, and xylene (known collectively as BTEX compounds), plus n-hexane. These pollutants have a range of carcinogenic and toxic effects on humans. VOCs contribute significantly to ozone formation and thus, to both human health and environmental degradation

500 ft EPA emission radius & 1/2 mile emergency radius around Bunn Gas Well



2000 ft emission radius & 1/2 mile emergency radius around Hilliard Gas well 1H



TCEQ – Permit by Rule

- (1) **Permit by Rule (PBR)**—owners or operators of an oil or condensate tank or tank battery may qualify for PBR 106.352, contained in 30 TAC Chapter 106, Subchapter O. Other related equipment at oil and gas sites covered by this PBR may include heaters, dehydration units, tank vents including flash, process fugitives, and loading operations. Operators often also claim PBR 106.512 for engines and turbines used for oil and gas compression, and PBR 106.492 for flares, which control process and emission event releases. Emissions from all related equipment under PBR must be less than 25 tons per year (tpy) of volatile organic compounds (VOCs), particulate matter (PM10), and sulfur dioxide (SO₂); and less than 250 tpy each of nitrogen oxide (NO_x) and carbon monoxide (CO).

PBR 106.352 form



Title 30 Texas Administrative Code § 106.352 Permit By Rule (PBR) Checklist Oil and Gas Production Facilities

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.352 (30 TAC § 106.352) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at www.tceq.state.tx.us/nav/permits/air_permits.html

Does FM check each site with actual year round testing for aggregate emissions of 25 Tons/ Yr?

CHECK THE MOST APPROPRIATE ANSWER		
	Check the type of facilities covered by this registration (check all that are applicable): <input type="checkbox"/> oil or gas production facility <input type="checkbox"/> carbon dioxide separation facility <input type="checkbox"/> oil or gas pipeline facility	
	The facilities at the site include (check all that apply): <input type="checkbox"/> one or more tanks <input type="checkbox"/> separators <input type="checkbox"/> dehydration units <input type="checkbox"/> free water knockouts <input type="checkbox"/> gunbarrels <input type="checkbox"/> heater treaters <input type="checkbox"/> natural gas liquids recovery units <input type="checkbox"/> gas sweetening and other gas conditioning facilities <input type="checkbox"/> sulfur recovery units	<input type="checkbox"/> YES <input type="checkbox"/> NO
	Will gas sweetening, sulfur recovery, or other gas conditioning facilities only condition gas that contains less than two (2) long tons per day of sulfur compounds as sulfur?	<input type="checkbox"/> YES <input type="checkbox"/> NO
1	Do all compressors and flares fully meet the requirements of 30 TAC § 106.512 and 30 TAC § 106.492, respectively? Attach data showing how the exemptions are met. Checklists are available.	<input type="checkbox"/> YES <input type="checkbox"/> NO
2	Are total emissions from all facilities, including fugitives and loading emissions, less than 25 tpy SO ₂ , VOC, or 250 tpy of CO or NO _x ?	<input type="checkbox"/> YES <input type="checkbox"/> NO
	Have you attached calculations and other data, such as a gas analysis, showing that the emissions limits of the general rule are met?	<input type="checkbox"/> YES <input type="checkbox"/> NO
3	If the facility handles sour gas, is it located at least 1/4 mile 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? Attach a scaled map.	<input type="checkbox"/> YES <input type="checkbox"/> NO
4	Are total emissions of sulfur compounds, excluding sulfur oxides, less than 4.0 pounds per hour? Attach calculations.	<input type="checkbox"/> YES <input type="checkbox"/> NO
	Does the height of each vent emitting sulfur compounds meet or exceed the minimum vent height stated in 30 TAC § 106.352? List stack height: _____	<input type="checkbox"/> YES <input type="checkbox"/> NO

PRINT

A Town has the right to enforce checks on self authorization for public health & safety.

Costs should be borne by the Gas companies or added as part of yearly renewal/ application fee.

Why Mandate VRU on new Permits in our Ordinances?

- Drillers claim exemption under the Permit By Rule. Collectively, the sheer number of individual drilling sites claiming this exemption is in violation of the Texas Railroad Commission's statutory roles 1, 3 & 4 that prevent pollution and waste of our resources, as well as provide public safety.
- VRU eliminate 90% of emissions
- Per TCEQ, at this time, VRU's are an option and encouraged on PBR sites to reduce emissions or used as needed to ensure a site's emissions are protective of public health and welfare. VRU's are also being considered as one of several Best Available Control Technology (BACT) control options for tanks with a potential of 10 tons per year or more of VOC emissions under the standard permit.
- TCEQ is revising the rules governing vapor recovery units, potential adoption tentatively scheduled for May 2011.

~~Existing & New Facilities- Enforce PBR 100.552~~

compliance (What should FM ordinances enforce)

- ***Install independent 24 Hr recording monitors*** on each facility to prove that total emissions from all facilities, including fugitives and loading emissions, less than 25 Tons/Yr SO₂, VOC, or 250 tpy of CO or NO_x?
- Free VOC blood baseline testing for concerned citizens for self-regulators to know the public has proof if they are not doing their job.
- FM Oil & Gas Inspector should get copies of calculations from Gas companies submitted for PBR compliance and compare with 24 Hr yearly monitoring results.
- Mandate yearly PBR Compliance certification from FM Town.
- If the facility handles sour gas, is it located at least 1/4 mile from any recreational area, residence? (Confirm compliance as per PBR)

Wikipedia Sour Gas definition: Sour gas is natural gas or any other gas containing significant amounts of hydrogen sulfide (H₂S). Natural gas is usually considered sour if there are more than 5.7 milligrams of H₂S per cubic meter of natural gas, which is equivalent to approximately 4 ppm by volume. On the other hand, natural gas that does not contain significant amounts of hydrogen sulfide is called "sweet gas.")

- If the Sour gas contains H₂S, RRC will permit an operator to "Flare" a well to burn off "Sour Gas". Permission should be sought before flaring and Town should measure emissions before Flaring.
- Measure all emissions for compliance on well heads for H₂S and near loading/unloading point of Tanks for VOC's.

Cannot Comply / Fail PBR Compliance

- Violations - Heavy Penalties and enforce Install Vapor Recovery Units
- Existing or New VRU - Pays for itself – See EPA's study
<http://www.epa.gov/oaqps/pubs/502b47029.pdf>
- Its economical for the gas companies to install VRU instead of paying for the 24 Hr monitoring or heavy penalties or resident blood tests.
- Profitability of O & G companies are high even in depressed natural gas prices for capital expenditure on VRU's.

Comment 0714-13 AD Storage Tank:

P 18

19 MR. KLAUS: On behalf of the Texas Clean --
20 North Texas Clean Air Steering Committee, please accept
21 the following comments relating to the Attainment
22 Demonstration and Reasonable Further Progress State
23 Implementation Plan Revisions for the 1997 Eight-Hour
24 Ozone Standard Non-Attainment Area, including
25 corresponding supplements. The Steering Committee was

19

P 19

1 formed and its members are appointed by the North
2 Central Texas Council Governments Executive Board. The
3 Committee's purpose is to work in partnership with the
4 TCEQ and the Environmental Protection Agency in the
5 development of ozone SIPS and to support their
6 implementation once approved. I've included a committee
7 roster as Attachment 1.

8 Oil and gas operations. Over the last
9 six-plus years, gas exploration activities in the
10 Barnett Shale have escalated, with a significant amount
11 of operations now occurring in highly urbanized areas.
12 The Barnett Shale's eastern area happens to reside in
13 the western portion of the Dallas-Fort Worth
14 non-attainment area, where the region's highest levels
15 of ozone are being recorded (namely at monitors at
16 Denton Airport, Eagle Mountain Lake, Keller and
17 Grapevine). These monitors will be critical in
18 determining future attainment of the ozone standard.
19 Due to these facts, the Steering Committee formed an Oil
20 and Gas Task Force, I've also attached the roster, to
21 become educated about industry practices and, as

22 appropriate, to assist the Steering Committee in
23 recommending potential emission reduction measures for
24 the Dallas-Fort Worth SIP. On May 25th of this year,
25 the Task Force took action recommending oil and gas SIP
P 20

1 measures for the Steering Committee to consider and
2 forward to TCEQ. Attachment 3 contains that letter
3 dated May 27th by the Steering Committee summarizing
4 these measures for incorporation into the SIP.

5 As identified in the above-referenced
6 letter, the Steering Committee maintains its position
7 that TCEQ should officially formalize in the DFW SIP
8 what has been identified as best practices of the oil
9 and gas industry and which are already being employed by
10 a large percentage of the industry, including: Green
11 Completions, Vapor Recovery Units, Plunger Lifts,
12 Low-Bleed Pneumatic Valves.

13 As a follow-up to questions raised by the
14 Task Force members, TCEQ provided an estimated 2012 oil
15 and gas emissions by category in the DFW area attached
16 as Attachment 4. It should be noted that three of the
17 top five oil and gas categories that are recommended as
18 formalized SIP control measures contribute 94.1 tons per
19 day out of a total of 114.1 tons per day of oil volatile
20 organic compounds.

21 Review of the SIP proposals and supplements
22 identified that the Commission is proposing to implement
23 the Houston area condensating tank and crude oil storage
24 tank rule in the Dallas-Fort Worth non-attainment area,
25 requiring 95 percent control of VOC flash emissions
p. 21

1 applicable to those tanks emitting over 25 tons per year
2 of VOCs. The Steering Committee welcomes this rule but
3 recommends that the Permit By Rule threshold be reduced
4 from 25 tons per year to 15 tons per year. This
5 recommendation is supported by information provided by
6 TCEQ staff, included as Attachment 5, Table 3, that 8.8
7 tons per day more VOC emission reductions can be
8 obtained at a PBR of 15 tons per year while not being
9 cost prohibitive to the industry as most of these vapors
10 would be collected and brought back to market for sale.

11 The request to formalize the above best
12 practices rules and strengthen the condensate and crude
13 oil tank rule in the SIP is made to better insure that
14 federal reasonable further progress requirements
15 regarding VOCs can be achieved and that the
16 reclassification and future consideration SIPs can
17 demonstrate attainment. This would also provide a
18 contingency in the 2012 reasonable further progress if
19 the existing calculations change and an uncoverable
20 shortfall surfaces. In addition, such -- such
21 initiatives would guarantee an equal playing field for
22 all oil and gas companies operating in the DFW area. As
23 a secondary benefit beyond ozone reductions, such
24 initiatives would aid in reduction of emissions, such as

25 benzene and formaldehyde, that are being reported at the
p. 22

1 local level and are known to cause unwarranted and
2 unnecessary health impacts.

3 Lastly, the Steering Committee continues to
4 advocate that the Commission and its staff review
5 existing regulations to insure that they are adequate to
6 achieve their intended purpose and to meet today's
7 standards.

Comment 0714-21PH (Rule)

7 VIRGINIA SIMONSON: Good evening. My
8 name is Virginia Simonson, S-I-M-O-N-S-O-N. I'm
9 speaking in regard to rule project number
10 2010-025-115-EN on VOC Storage Rule Revisions.

11 Regarding vapor recovery systems on
12 petroleum storage tanks is the least you can do to
13 address the DFW nonattainment status. This small step
14 doesn't improve our chances much for meeting Federal
15 Clean Air Standards in the future, but it is better than
16 doing nothing.

17 I'm actually here tonight to ask you to
18 go further and implement the recommendations of the
19 North Central Texas Council of Governments.
20 Specifically, I request that you make the Houston area
21 Condensate and Storage Tank Rule applicable in our area
22 and mandate -- and mandate 95 percent control of VOC
23 flash emissions to sources with over 15 tons per year
24 VOC emissions.

25 Further, I ask that you mandate the use

21

1 of green completions, vapor recovery units, plunger
2 lifts and low-lead pneumatic valves in our nonattainment
3 areas.

20 ALOK BHASKAR: Good evening. Alok
21 Bhaskar. Bhaskar, B-h-a-s-k-a-r.
22 THE REPORTER: Excuse me. Say that
23 again.
24 BRIDGET BOHAC: You're talking too fast.
25 ALOF BHASKAR: B as in boy, H-A-S-K-A-R.

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1 All right. I'm speaking to rule number
2 2010-25-105 on VOC's storage rule revisions. EPA
3 estimates that tank batteries emits 22,000 tons per year
4 of emissions. And a significant amount of these
5 emissions is coming from the 15,000 gas wells in Barnett
6 Shale here in Texas.

7 I believe that TCEQ is encourgaging these
8 emissions by not enforcing and verifying emissions
9 compliance. TCEQ had made these compliance rules so
10 easy for companies, but for the common man and the town,
11 it's so difficult to understand.

12 I was trying to do research on how the
13 emissions are being controlled by TCEQ, and found that,
14 okay, for the gas station you have vapor recovery, but,
15 you know, for -- for gas wells, there's nothing. And so
16 I looked into the TCEQ Web site and was trying to find
17 what exactly TCEQ is doing. The entire Web site is so
18 hard to understand, you know. It's -- it's like, oh,
19 what are the emissions, how do we control it, how -- how

20 do gas companies apply for emissions on those gas wells?
21 Do they have to take a yearly approval or -- or
22 compliance? It is so difficult to understand for the
23 common man and for the town staff.

24 I spoke to my town staff. So I spoke to
25 my town staff, the oil and gas inspector, and asked

50

1 them, you know, how are we controlling the emissions.
2 And he said, no, we don't know about it. He said, TCEQ
3 is doing that. He said, so you guys are not controlling
4 the emissions and you are not letting the town control
5 the emissions. Everything is all done by TCEQ.

6 So here's what I found, how TCEQ is
7 helping companies to make this compliance, you know,
8 more effective.

9 I believe the companies, the gas
10 companies, through a PBR, Permit By Rule 106.352, they
11 can claim exemption. All they have to do is sign on a
12 single piece of paper compliance, couple of check boxes,
13 there are 3 or 4 check boxes that says that the total
14 emissions of all facilities is less than 35,000 per year
15 of SO₂, VOC, and 250 tons per year of CO₂, NO₂. And
16 they just attach some theoretical calculations. It's
17 just a piece of paper, I believe; they just submit it to
18 you guys and that's it.

19 So collectively, I believe the sheer

20 number of contributing sites of all the gas well around
21 claiming this exemption is in violation of TCEQ
22 statutory rules 1, 3 and 4 that prevent pollution and
23 waste of our resources as well as provide public safety.

24 The entire emissions of all these gas
25 well Web sites, I don't think you know TCEQ is

51

1 effectively considering them. It's just a theoretical
2 calculation. That's it. I -- I do not believe that
3 TCEQ is, you know, checking emissions, actual emissions
4 from those sites. Are you guys really checking it?

5 There was a new item I remember, like for
6 some violation in Fort Worth, a gas flare was found
7 emitting about 350 tons per year compared to 25 tons
8 that it was there.

9 So imagine if, you know, if TCEQ is
10 actually really testing, all the gas companies are
11 really, you know, testing the emissions, it is going to
12 come up more than 25 tons per year, and this is what is
13 contributing to our ozone over here, and we need to
14 control that.

15 So -- so -- so the solution is -- is very
16 simple as a lot of people have suggested here, is to
17 make vapor recovery mandatory for all the existing gas
18 wells. And -- and -- and it's a -- it's a no-brainer, I
19 guess. Everyone knows that vapor recovery can -- can --

20 and can control 90 percent of the emissions. There are
21 companies who can -- who have vapor recovery solutions
22 that can even, work with (unintelligible) liquid
23 handling things. So there are companies that do that as
24 well, so it's not that there are no solutions. There
25 are solutions available in the market and that are very

52

1 cost effective. The (unintelligible) is very less. So
2 I don't know why they're not doing it.

3 So in addition to vapor recovery, I have
4 a couple of other suggestions to make. I guess, TCEQ --

5 BRIDGET BOHAC: One minute.

6 ALOF BHASKAR: Yeah.

7 TCEQ should also verify from on-site
8 monitoring on all these gas wells how much emissions is
9 being actually generated versus the submissions they
10 have theoretically submitted to TCEQ (unintelligible).
11 All the copies of the PBR submissions and the testing
12 and everything that is done by the company should be
13 publicly available and should be shared with the town.
14 The town don't have anything at all. Nobody knows
15 anything. So basically there is a big gap in what
16 exactly is being submitted and what is being emitted.
17 And all the emissions all go in the air. You got to
18 control it.

19 Thank you.

Tracking No. 0715-02

From: [REDACTED]
To: [REDACTED]
Date: 7/15/2011 9:59 AM
Subject: 2010-016-115-EN

07/15/2011 10:05 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

In your exemption criteria for the DFW area, 115.111(d)(8) Exemptions, storage tanks or tank batteries storing condensate with a throughput exceeding 1,500 barrels per year are exempt from the control requirements in 115.112(f)(4) if the owner demonstrates that uncontrolled emissions from individual storage tank or from tanks in a tank battery, are less than 25 tons per year. At most salt water disposal wells (SWDs), produced water and condensate are intermixed when received and difficult to define a quantity of condensate received. The majority of water received is produced water. At SWDs, the thruput of produced water is enormous. Does the fact that the condensate and produced water are intermingled when received allow an exemption, or does the facility have to verify a true vapor pressure less than 1.5 pisa or perform emission testing to determine that the aggregate emissions for a tank battery are less than 25 tons to be exempted. These would be the only two exemptions that would apply to our facility as none of our tanks have primary, secondary secondary seals or floating roofs.

Tracking No. 0718-02

From: [REDACTED]
To: [REDACTED]
Date: 7/18/2011 7:35 AM
Subject: 2010-016-115-EN

07/18/2011 07:41 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

Section 115.119 (c)(4), Compliance Schedules requires that owner/operators of each storage tank with a storage capacity less than 210,000 gallons storing crude oil and condensate "prior to custody transfer" shall comply with these requirements no later than 12/1/2012. Does this also apply to owner/operators who store crude oil and/or condensate "after custody transfer"? That is, how does this effect injection well locations with tank batteries which receive commingled condensate and produced water and the owner/operator has no way of determining the amount of commingled condensate with the produced water?

Section 115.111(a)(2), you allow an exemption thru 12/1/12 for crude oil or condensate "prior to custody" transfer for the DFW area. In Section 115.111(d)(8), you allow an exemption for the DFW for installing controls only on condensate storage, but you don't include the term "prior to custody transfer". Is section 115.111(d)(8)intended to bring injection well tank battery locations under the jurisdiction of this rule since "crude oil"

and "prior to custody transfer" have been removed? Can you please clarify your intent as it relates to injection well locations in the DFW area?

Tracking No. 0718-03

From: [REDACTED]
To: [REDACTED]
Date: 7/18/2011 7:19 AM
Subject: 2010-016-115-EN

07/18/2011 07:25 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

In section 115.111 (d) (8), it is discussed that in order to be exempt from controls on VOC storage, the owner/operator must demonstrate aggregated emissions from a tank battery or tank is less than 25 tons per year on a "rolling 12-month basis". In this instance of "rolling 12-month basis", is it interpreted to mean that the owner/operator of a tank or tank battery will be mandated to perform analysis on a monthly basis in order to get an aggregate 12 month rolling total VOC emission?

Tracking No. 0721-01

From: [REDACTED]
To: [REDACTED]
Date: 7/21/2011 10:22 AM
Subject: 2010-016-115-EN

07/21/2011 10:29 AM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mary
Last Name: Logue
Company/Organization:

[REDACTED]

Phone Number:
Fax Number:

Rule: ~~2010-016-115-EN~~ **Corrected Rule Reference 2010-025-115-EN**

Comments:

In the definitions section 115.110(b)(11), definition for storage tank, is a frac tank considered a container in respect to this definition?

15 **CYRUS REED:** Hello. Good afternoon. My
16 name is Cyrus Reed. I'm **Conservation Director with the**
17 **Lone Star Chapter of the Sierra Club.** I'll be making
18 some very general comments and issues we'd like to be
19 addressed today as oral comments, and we'll be
20 submitting formal comments and trying to incorporate
21 both comments from our local regional group in Dallas as
22 well, and kind of submit them as one.

23 So this is just really a preview and some --
24 some high level comments, and then you'll -- you'll get
25 the details later as we read the documents even more

4

1 carefully.

2 So I -- I do want to recognize -- I know
3 that -- that -- that hundreds of hours of work have been
4 put into staff time in preparing both the proposed rules
5 and these revisions to the SIP. We recognize that.

6 We have a general comment that we are
7 concerned that the proposed revisions to the SIP will
8 not allow us to come into compliance with the SIP.
9 And -- and evidence of that is just simply the readings
10 this year have been higher than -- than were
11 anticipated. And I know that your document still states
12 that you believe you can meet, you know, the 3-year
13 average that's required by -- by next year. But we have
14 serious concerns that we can't.

15 And at that point, you may want to consider
16 whether there are additional measures that we need to do
17 now to -- to meet compliance, or perhaps look at the
18 very real possibility that we need to declare Dallas
19 more of a severe ozone area, and give us additional time
20 so that we can really make wholesale changes and reduce
21 emissions in both NOx and VOC's.

22 Let me now mention some particular concerns
23 I have. And I'll admit off the bat that I have not read
24 everything, you know, word for word. So to the extent
25 that I say things that are covered, I'll make sure that

5

1 our written comments we read it more carefully.

2 But one concern I had -- another hat I have is I do a
3 lot of legislative work. And as you know, part of your
4 weight of evidence is dependent upon funding provided
5 through legislative appropriations for the TERP and
6 LIRAP programs. And TERP, as you know, has been --
7 there were some cuts that were made indeed in this year
8 to meet some of those 5 and 10 percent reduction
9 requirements by the legislature to meet, you know,
10 the -- the -- the budget.

11 But more importantly, the overall funding

12 levels were reduced from \$114 million a year to \$57
13 million a year. That's statewide, but a good chunk of
14 that money would go to Dallas. And then there were some
15 other changes in the TERP program such as required
16 spending on clean fleets, required spending on the
17 ambient monitoring in the Barnett Shale area, and
18 required spending on natural gas infrastructure in
19 vehicles.

20 Some of those programs may lead to
21 reductions. But our sense is they're not as cost
22 effective as the basic diesel reduction plan. And so
23 we're -- we want to make sure that your weight of
24 evidence section that depends on some of those
25 reductions takes into account these changes.

6

1 And there are similar issues with -- with
2 LIRAP funding, obviously where LIRAP was reduced from 50
3 million a year to 5 million year, and how will this
4 impact compliance with the I/M program? Where would you
5 identify vehicles that are out of compliance if those
6 funding sources aren't available for the Dallas area?

7 So we want to make sure -- and if you've
8 already done that, I apologize. I didn't see it, but I
9 didn't read it that carefully. But we want to make sure
10 that those issues are addressed in your weight of
11 evidence section. And frankly, we may want to consider
12 either changes right now where we can give some of these
13 grants to things like idling reduction technology which
14 may get you more bang for the buck in an immediate
15 sense, or other measures that we can do now in the 2012
16 period to reduce VOC's and NOx.

17 And we certainly, through other means, will
18 be asking folks and political leadership to look at
19 emergency allocation of some additional TERP grants if
20 -- if we -- if it's true and we feel it's true that
21 you're going to need additional money out of those
22 accounts to -- to comply with clean air rules. So those
23 are some things we can look at.

24 And, of course, long-term we're going to
25 have to look at the whole TERP program and how we make

7

1 sure we get the best bang for the buck in reducing
2 emissions. So that'd be my one -- one comment is sort
3 of the TERP and LIRAP issue.

4 Another would be what I'll call the outside
5 emissions. So you guys do a great job of -- of looking
6 at and allocating all the emissions within Dallas/Fort
7 Worth. We've always felt like you're undercounting the
8 background emissions, things like power plants in
9 northeast Texas and their impact on Dallas. And we'll
10 have some very specific comments about that.

11 And then, this is a longstanding
12 disagreement between Sierra Club and many others, and
13 the agency, in the way that we don't feel like you do
14 the photochemical modeling necessary to look at new
15 proposed plants and their impacts on nonattainment
16 areas. And we would like to see that addressed, the
17 fact that there are some new plants that are likely to
18 come online or might come online, and what impact that
19 might have on the Dallas/Fort Worth area.
20 Of course, we do have some new EPA
21 regulations that are in the news a lot that could also
22 impact Dallas/Fort Worth and -- and potentially for the
23 better. So we would like -- we'll have some comments on
24 that, and we'd like that addressed as well.
25 You guys, just a few days ago, had a change

8

1 in the idling rule, which, in our view, potentially
2 increases emissions in the Dallas/Fort Worth area
3 because of those changes. Again, I haven't read the
4 documents. I know it just happened. But we may want to
5 consider the impact of that on -- on your reductions.
6 Then there's -- there's the big -- the big
7 issue of natural gas fracking. Your evidence -- your
8 RFP shows VOC's actually increasing over this period.
9 The way you're getting around that is using a method
10 which we would disagree with, which is saying well, we
11 can increase VOC emissions because we're getting more
12 NOx reductions than we need to get.
13 And I've read the EPA guidance on this. I'm
14 not sure that's in the spirit of their guidance that you
15 could allow actual increases in VOC's. And a lot of
16 those increases in VOC's are coming from fracking. And
17 some of that fracking is short-term and may go away, but
18 some of it is going to continue into these years.
19 And so we want to make sure, first of all,
20 that the -- the great inventory work you're doing in the
21 Barnett Shale -- and I know you've referenced it in the
22 rule on storage tanks -- but is actually referenced in
23 the SIP, and that we're getting the information from
24 that inventory reflected accurately in the SIP.
25 There have been some even more recent

9

1 analysis like the Fort Worth Natural Gas Air Quality
2 Study final report. And people might agree or disagree
3 with what's in the report, but it does have a lot of
4 good data, and it does suggest that emissions are going
5 to go up in 2012 and 2013, and probably decrease after
6 that. So we'd like to make sure that you're using all
7 the data you have.
8 The storage tank rule, while it's a good
9 first step, we wonder if you've looked at what would the

10 impact be of decreasing the requirement so it's not just
11 25 tons per year but looking at 10 or 5, and what the
12 impact of that would be and considering whether
13 additional controls are going to be needed.

14 Because, at least according to this Fort
15 Worth study -- and again, they only looked at certain
16 places in the -- in the Fort Worth area, they only found
17 a couple of storage tanks that were over 25 tons per
18 year. The vast majority of them were at much lower
19 levels. So if we're not getting those kind of
20 reductions from other storage tanks, the rule may not
21 have the impact we want it to have.

22 So there -- there are other things,
23 obviously, you can do. The -- the vapor recovery
24 equipment for all emission sources, not just the 25 tons
25 per year, but 5 tons per year. Consider additional --

10

1 you know, you have new emission requirements under your
2 new PBR that was implemented in February. We may --
3 we're going to suggest you go back and look at existing
4 facilities and what can be done to reduce emissions
5 there.

6 What might make it easier to really analyze
7 this is if we could make all the numbers you have and
8 anticipated reduction, if we could have those
9 spreadsheets available where people can really analyze
10 them, it would be easier to -- to -- to see if the
11 crunching of the numbers works, or what additional
12 scenarios you might look at.

13 The other issue, sort of a weight of
14 evidence issue I wanted to bring up is the weight that
15 you might give energy efficiency and new building codes
16 as they're implemented which could actually reduce
17 emissions, there's been a longstanding problem in how do
18 you actually account for emission reductions from energy
19 efficiency.

20 My understanding is the EPA just came out
21 with some new guidance. I'll look into it a little bit,
22 and we'll probably have some comments on it. But we may
23 want to give -- there may be the potential that we could
24 pick up some reductions because of building codes and
25 other energy efficiency programs in the Dallas/Fort

11

1 Worth area. And -- and we'd like that reflected.

2 I'll just end by saying that this -- this
3 Fort Worth Natural Gas Air Quality Study, and a lot of
4 my Sierra Club friends up in the Fort Worth area don't
5 like this study cause they think it undercounts
6 pollution. But it does have some recommendations,
7 things like vapor recovery units on storage tanks,
8 three-way catalysts and/or catalytic oxidizer and

9 compressor stations, electric compressor engines, low
10 bleed or no bleed pneumatic valve control areas.
11 I know some of these will be handled by the
12 new PBR and the new storage tank rules, but we have a
13 lot of existing facilities which continue to pollute in
14 that area. And we're going to be making comments that
15 the SIP should address some of those issues. So those
16 -- those are my main comments.

Tracking No. 0725-02

From: [REDACTED]
To: [REDACTED]
Date: 7/25/2011 3:17 PM
Subject: 2010-025-115-EN
Attachments: TCEQ Project No. 2010-025-115-EN.pdf

07/25/2011 03:28 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Veronica
Last Name: Nasser
Company/Organization: REM Technology, Inc.

[REDACTED]

Fax Number:

Rule: 2010-025-115-EN

Comments:

Texas Register Team - MC 205
General Law Division
Office of Legal Services
TCEQ
P.O. Box 13087
Austin, TX 78711-3087

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

The docket makes reference to control devices capable of attaining 95% VOC control and make reference to Vapor Recovery Units and Flares as being capable of meeting the proposed regulation.

I, Veronica Nasser, on behalf of REM Technology Inc., wish to inform the Texas Commission on Environmental Quality on an alternate method of combusting VOCs with very high efficiency, at an economical cost. The technique involves introducing the normally vented VOCs, (without re-compression), into the air intake of a carbureted reciprocating internal combustion engine, RICE, using natural gas fuel. This process of Slipstreaming the VOCs into the engine air intake would combust the VOCs as engine fuel. The combustion efficiency of these engines is known to be in excess of 99.5% for the combustion process. In addition these engines are equipped with non-selective catalytic converters, NSCRs, or oxidation catalysts that are very effective in removing any remaining VOCs in the engine exhaust. This Slipstreaming method does not alter the engine exhaust for NOx, CO, VOCs, etc.

This method for consuming VOCs from storage tanks, natural gas compressor packing glands and other sources has been demonstrated for Texas oil and gas customers as a technically sound and cost effective method of eliminating VOCs.

The control system for directing these VOCs to the engine intake ensures the operation is safe and provides an alternate routing of the VOCs in case of engine outages or a VOC flow rate that is in excess of the limits imposed by the need for high engine reliability.

The system installed cost, depending on engine configuration, runs from \$16,000 to \$25,000 and is cost effective for owners of natural gas engines because the VOCs added to the intake air displaces some of the normal natural gas fuel needed to operate the engines and therefore reduces engine fuel costs for the owners and operators.

The associated electronic control system for the VOCs contains an electronic data-log to provide the necessary storage records to demonstrate compliance with the proposed regulation.

REM Technology presented this Slipstreaming method to the TCEQ on July 6th, 2011 in Austin Texas and would be pleased to present any additional information or evidence that the technology meets and exceeds the requirements of the proposed rule regarding VOC reduction.

For further information please see the contact details below.

Veronica Nasser
REM Technology Inc.



www.remtechnology.com

July 25, 2011

Texas Register Team - MC 205
General Law Division
Office of Legal Services
TCEQ
P.O. Box 13087
Austin, TX 78711-3087

Subject: Chapter 115, Control of Air Pollution from Volatile Organic Compounds
Chapter 115 Volatile Organic Compounds (VOC) Storage Rule Revisions
Project No.: 20110-025-115-EN

The docket makes reference to control devices capable of attaining 95% VOC control and make reference to Vapor Recovery Units and Flares as being capable of meeting the proposed regulation.

I, Veronica Nasser, on behalf of REM Technology Inc., wish to inform the Texas Commission on Environmental Quality on an alternate method of combusting VOCs with very high efficiency, at an economical cost. The technique involves introducing the normally vented VOCs, (without re-compression), into the air intake of a carbureted reciprocating internal combustion engine, RICE, using natural gas fuel. This process of Slipstreaming the VOCs into the engine air intake would combust the VOCs as engine fuel. The combustion efficiency of these engines is known to be in excess of 99.5% for the combustion process. In addition these engines are equipped with non-selective catalytic converters, NSCRs, or oxidation catalysts that are very effective in removing any remaining VOCs in the engine exhaust. This Slipstreaming method does not alter the engine exhaust for NO_x, CO, VOCs, etc.

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added to the intake air displaces some of the normal natural gas fuel needed to operate the engines and therefore reduces engine fuel costs for the owners and operators.

The associated electronic control system for the VOCs contains an electronic data-log to provide the necessary storage records to demonstrate compliance with the proposed regulation.

REM Technology presented this SlipStreaming method to the TCEQ on July 6th, 2011 in Austin Texas and would be pleased to present any additional information or evidence that the technology meets and exceeds the requirements of the proposed rule regarding VOC reduction.

For further information please see the contact details below.

Veronica Nasser
REM Technology Inc.

[REDACTED]
[REDACTED]
[REDACTED]

www.remtechnology.com

Tracking No. 0727-01

07/27/2011 04:55 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Michael

Last Name: Strickland

Company/Organization: Emission Reduction Systems

E-mail Address: [REDACTED]

Street Address: P.O. Box 12068

City: Odessa

State: TX

Zip Code: 79768

Phone Number:

Fax Number:

Rule: 2010-025-115-EN

Comments:

Please consider adding Test Method 21 as an approved method for testing tank battery compliance.

Currently it is accepted in Permit By Rule for LDAR programs. If and when the operator participated in LDAR it should be written into the new revised rules for VOC Storage.

Thank You

Mike Strickland



8729-01

MARY HORN
Denton County Judge

July 29, 201

Jamie Zech
MC 206
Air Quality Division
Chief Engineer's Office
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

RE: Project No. 2010-022-SIP-NR and Project No. 2010-023-SIP-NR

Enclosed is the resolution approved by the Commissioners Court of Denton County today requesting the TCEQ's assistance in reviewing existing regulations, making changes in our nonattainment area to bring it up to the standards of the Houston area, and formalizing best practices of the oil and gas industry.

This letter is written on behalf of the North Texas Clean Air Steering Committee (NTCASC) and its Oil and Gas Task Force. NTCASC was formed and its members are appointed by the Executive Board of the North Central Texas Council of Governments. The Committee's purpose is to work in partnership with the Texas Commission on Environmental Quality and the Environmental Protection Agency in the development of ozone State Implementation Plans and to support their implementation once approved.

The Oil and Gas Task Force was created to examine the role that emissions from this industry might be contributing to ozone formation in the Dallas-Fort Worth Nonattainment Area. Through presentations by local, State, and federal regulators and from the industry, it is recognized that there are many existing regulations in force and that the industry, in general, has adopted practices that are designed to reduce nitrogen oxides (NOx) and volatile organic compound (VOC) emissions. Examples include:

State and Federal Regulations

- Dallas-Fort Worth 8-Hour Ozone Nonattainment Area Minor Sources Rule (30 TAC Chapter 117)
- Permit By Rule for Oil & Gas Handling and Production Facilities (30 TAC 106.352)
- New Source Performance Standards (40 CFR Part 60)
 - || Subpart KKK – Equipment Leaks of VOC from Onshore Natural Gas Processing Plants
 - || Subpart LLL – Standards of Performance for Onshore Natural Gas Processing: SO2 Emissions
 - || Subpart JJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
- National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63)
 - || Subpart HH – Natural Gas Production Facilities
 - || Subpart HHH – Natural Gas Transmission and Storage Facilities
 - || Subpart ZZZZ – Reciprocating Internal Combustion Engines
- On-road Engine Standards (40 CFR 86)
- Non-road Engine Standards (40 CFR 89)

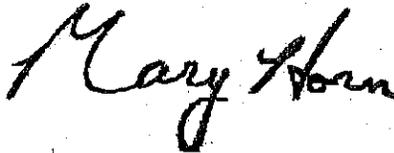
Industry Best Practices

- Green Completion – Process used to recover gas that would otherwise be vented or flared during the completion phase of a natural gas well.
- Vapor Recovery Units – Equipment installed on condensate storage tanks that capture rather than vent vapors.
- Plunger Lifts – System using gas pressure buildup in a well to lift a column of accumulated fluid out of the well to allow expected gas production.
- Low-Bleed Pneumatic Valves – Devices that regulate gas flow and pressure.

Due to the existing gas exploration activities, plus those expected to continue for many more years in highly urbanized areas, we request that the Commission and its staff review existing regulations to be sure that they are adequate to achieve their intended purpose. We further request the Commission considers making the Houston area condensate and crude oil storage tank rule (30 TAC Chapter 115, Subchapter B, Division 1) applicable in our nonattainment area, requiring 95 percent control of VOC flash emissions applicable to those over 15 tons per year (tpy) VOC emissions. Our final request is that the Commission formalizes what has been identified as best practices of the oil and gas industry which are already being employed by a very large percentage of the industry.

These requests are made with the intention that federal requirements of Reasonable Further Progress regarding VOCs can be achieved and better assure that the reclassification and future reconsideration State Implementation Plans can demonstrate attainment.

Sincerely,



Mary Horn
Denton County Judge

cc: North Texas Clean Air Steering Committee

3.A

Denton County Commissioners Court

Jun 28, 2011

Date 11-0447

Court Order Number

The Order:

Approval of resolution to Texas Commission on Environmental Quality (TCEQ) regarding North Central Texas Clean Air Steering Committee and Oil and Gas Task Force, and any appropriate action, County Judge

Motion by Marchant seconded by Coleman

County Judge	Yes	<input checked="" type="checkbox"/>
Mary Horn	Abstain	<input type="checkbox"/>
	No	<input type="checkbox"/>
	Absent	<input type="checkbox"/>

<u>Commissioner Pct No 1</u>	Yes	<input checked="" type="checkbox"/>
Hugh Coleman	Abstain	<input type="checkbox"/>
	No	<input type="checkbox"/>
	Absent	<input type="checkbox"/>

<u>Commissioner Pct No 2</u>	Yes	<input checked="" type="checkbox"/>
Ron Marchant	Abstain	<input type="checkbox"/>
	No	<input type="checkbox"/>
	Absent	<input type="checkbox"/>

<u>Commissioner Pct No 3</u>	Yes	<input checked="" type="checkbox"/>
Bobble J. Mitchell	Abstain	<input type="checkbox"/>
	No	<input type="checkbox"/>
	Absent	<input type="checkbox"/>

<u>Commissioner Pct No 4</u>	Yes	<input checked="" type="checkbox"/>
Andy Eads	Abstain	<input type="checkbox"/>
	No	<input type="checkbox"/>
	Absent	<input type="checkbox"/>

Motion Carried 5-0-0

Other Action: Pulled from Consent No Action Postponed

BY ORDER OF THE COMMISSIONERS COURT: ATTEST:

Mary Horn
Presiding Officer



Bobble J. Mitchell, County Clerk
Officio Clerk of the
Commissioners Court of
Denton County, Texas

APPROVED AS TO FORM:

John T. Eldred
Assistant District Attorney

[Signature]
Deputy County Clerk

6

Resolution

WHEREAS, the North Texas Clean Air Steering Committee (NTCASC) and its Oil and Gas Task Force was formed and its members appointed by the Executive Board of the North Central Texas Council of Governments; and

WHEREAS, the NTCASC's purpose is to work in partnership with the Texas Commission on Environmental Quality and the Environmental Protection Agency in the development of ozone State Implementation Plans and to support their implementation once approved; and

WHEREAS, the Oil and Gas Task Force was created to examine the role that emissions from this industry might be contributing to ozone formation in the Dallas-Fort Worth Nonattainment Area; and

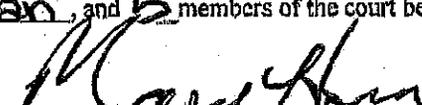
WHEREAS, through presentations by local, State, and federal regulators and from the industry, it is recognized that there are many existing regulations in force and that the industry, in general, has adopted practices that are designed to reduce nitrogen oxides (NOx) and volatile organic compound (VOC) emissions; and

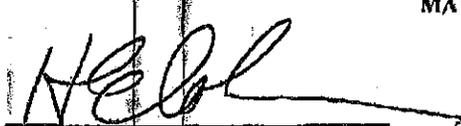
WHEREAS, some existing and future gas exploration activities are in highly urbanized areas.

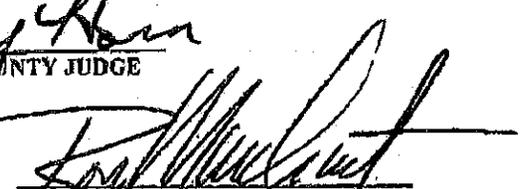
NOW, THEREFORE BE IT RESOLVED, that the Denton County Commissioners Court does hereby approve Judge Horn sending the attached letter and request that

- 1) the Commission and its staff review existing regulations to be sure that they are adequate to achieve their intended purpose
- 2) the Commission considers making the Houston area condensate and crude oil storage tank rule (30 TAC Chapter 115, Subchapter B, Division 1) applicable in our nonattainment area, requiring 95 percent control of VOC flash emissions applicable to those over 15 tons per year (tpy) VOC emissions; and
- 3) the Commission formalizes what has been identified as best practices of the oil and gas industry which are already being employed by a very large percentage of the industry.

DONE IN OPEN COURT, this the 29th day of June, 2011 upon motion by Comm. Marchant seconded, by Comm. Coleman, and 5 members of the court being present and voting "aye".

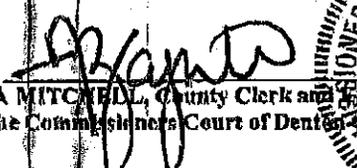

MARY HORN, COUNTY JUDGE


HUGH COLEMAN COMMISSIONER
PRECINCT 1


RON MARCHANT, COMMISSIONER
PRECINCT 2


BOBBIE J. MITCHELL, COMMISSIONER
PRECINCT 3


ANDY EADS, COMMISSIONER
PRECINCT 4

ATTEST: 
CYNTHIA MITCHELL, County Clerk and Ex-Officio
Clerk of the Commissioners Court of Denton County, Texas



3a
WKS

Clean Up Dallas-Fort Worths Air!_0805-01.txt

From: Barbara Tudhope [REDACTED]
To: <jamie.zech@tceq.texas.gov>
Date: 8/5/2011 7:04 AM
Subject: Clean Up Dallas-Fort Worth's Air!

Aug 5, 2011

Ms. Jamie Zech
P.O. Box 13087 - MC 206, Air Quality Division
Austin, TX 78711-3087

Dear Ms. Zech,

Under Project No. 2010-022-SIP-NR, the TCEQ is considering minor revisions to the State Implementation Plan to help Dallas meet the 1997 standard for one-hour ozone levels, while under Project No. 2010-023-SIP-NR, TCEQ makes claims that Reasonable Further Progress (RFP) will occur to bring Dallas-Fort Worth into compliance with the old ozone standard.

However, the proposed SIP revisions and RFP are misguided and short-sighted, will not bring Dallas into compliance with the old ozone standard, and will not make sufficient progress toward bringing Dallas into compliance with the new standard currently being considered by EPA.

Instead, TCEQ should take additional steps to cut NOX and VOC emissions now, and also consider declaring Dallas a severe non-attainment area so that citizens and leaders can get to work on a much more ambitious plan.

Please consider additional measures to clean the air in Dallas. The TCEQ should also admit Dallas has a problem, recommend that it be named a severe non-attainment area, and get to work on cleaning up emissions from cars, trucks, oil and gas facilities, cement plants, and coal power plants.

The Dallas area has already hit levels of 90 parts per billion of ozone for the fourth-highest reading this year at Keller, meaning the area is out of compliance.

The proposed SIP revisions only add two additional measures proposed through other rules to require some VOC reductions, while assuming that reductions in nitrogen oxides will offset emission increases in

volatile organic compounds. Indeed, according to the RFP, emissions of volatile organic compounds would actually increase from 472 tons per day to 520 tons per day of VOCs by 2012. Not only is TCEQ assuming that it is allowed to "swap" increases in VOCs for NOX reductions, but it is ignoring other weight-of-evidence factors, such as the reduction in funding for LIRAP and TERP, which will impact expected reductions from cars and trucks.

Among the steps TCEQ should consider are additional measures to reduce emissions from oil and gas facilities. While TCEQ is considering adoption of rules for large storage tanks that emit more than 25 TPY per year, most storage tanks are much smaller and VOC capture technology should be required on all storage tanks that emit more than 5 or 10 TPY.

In addition to storage tanks, TCEQ should examine the recent proposal by the EPA to require a suite of highly cost-effective regulations that would reduce harmful air pollution from the oil and natural gas industry. Among the common-sense measures proposed by EPA that TCEQ could adopt now as part of the SIP revisions are:

- * Require Green Completions of new hydraulically fractured natural gas wells and re-completions of existing natural gas wells that are fractured or refractured.
- * Require Centrifugal compressors be equipped with dry seal systems.
- * Require that owners/operators of reciprocating compressors would have to replace rod packing systems every 26,000 hours of operation.
- * Require VOC emission limits for pneumatic controllers.
- * Require that Condensate and crude oil storage tanks with a throughput of at least one barrel per day of condensate or 20 barrels per day of crude oil (equivalent to about six tons of VOC emissions per year) must reduce VOC emissions by 95 percent.
- * Require that natural gas processing plants strengthen the leak detection and repair requirements that apply to these plants to reduce VOC emissions.

In addition to requirements on oil and gas plants, TCEQ must accurately assess the impact of budget cuts on the TERP and LIRAP, which provide grants to clean up emissions from trucks, construction equipment, and passenger cars in its weight of evidence section. One possible use of

TERP money would be to use TERP funding for idle reduction technology.

In addition, TCEQ does not adequately take into account the impact of emissions from power plants outside of the Dallas-Fort Worth Non-Attainment Area, and fails to consider the potential impact of emissions from newly permitted power plants outside the Dallas area. With EPA recently adopting a new cross-state rule that could require major emission cuts at coal plants, TCEQ should, either as part of the SIP or as a separate rule-making, implement the EPA rule and require cuts at major power plants such as Big Brown, Monticello, and Martin Lake, all of which impact the Dallas-Fort Worth Area.

Moreover, the Dallas SIP should address emissions from cement kilns. For example, they could require a pilot-test of Selective Catalytic Reduction (SCR) technology on one or more of the Midlothian cement plants. SCR has been proven to remove over 90% of the smog-forming pollution from kilns.

Finally, we believe that TCEQ should use the new guidance from EPA on use of energy efficiency in the State Implementation Plan and look at what existing and additional energy efficiency measures have occurred or may occur to get credit.

Sincerely,
Barbara Tudhope

[REDACTED]

Sincerely,

Barbara Tudhope

[REDACTED]

Tracking No. 0805-201

08/05/2011 12:27 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Cyrus

Last Name: Reed

Company/Organization: Lone Star Chapter, Sierra Club

E-mail Address: [REDACTED]

Street Address: 1202 San Antonio

City: Austin

State: TX

Zip Code: 78751

Phone Number: 512-740-4086

Fax Number:

Rule: 2010-025-115-EN

Comments:

Dear TCEQ,

While the Lone Star Chapter of the Sierra Club supports the need for additional controls on VOC at storage tanks that can release harmful VOCs into the atmosphere, leading to ozone formation as well as potential health impacts locally, we believe the proposal is not rigorous enough. Specifically, the proposed rule contains a number of exemptions, the most important of which is the exemption on any storage tanks with less than 25 TPY of VOCs. Instead, we suggest TCEQ study the existing proposal by the EPA, which would require that Condensate and crude oil storage tanks with a throughput of at least 1 barrel per day of condensate or 20 barrels per day of crude oil (equivalent to about 6 tons of VOC emissions per year) must reduce VOC emissions by 95 percent. We suggest TCEQ carefully coordinate with the upcoming EPA rule and consider adopting a more rigorous suite of emissions controls on storage tanks, as well as other devices associated with the oil and gas industry. At the very least, TCEQ should expand the present rulemaking to cover storage tanks with more than 5 TPY. A recent study of Fort Worth air quality found that required controls on storage tanks emitting more than 25 TPY covered only a handful of storage tanks and that far greater emissions reductions would result from requiring such controls on smaller tanks.

Thank you,

Cyrus Reed
Conservation Director

August 8, 2011

Barnett Shale Energy Education Council
777 Taylor St., Suite 900
Fort Worth, TX 76102

Via Facsimile (512) 239-4808
and U.S. Mail First Class
Charlotte Horn
MC 205
Office of Legal Services
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: **Chapter 115 Volatile Organic Compounds Storage Rule Revisions, Rule Project No. 2010-025-115-EN**

Dear Ms. Horn:

The Barnett Shale Energy Education Council ("BSEEC") appreciates the opportunity to submit comments on TCEQ's proposed revisions to the Chapter 115 Volatile Organic Compounds (VOC) storage rules. BSEEC is a non-profit educational organization with member companies that account for approximately 85% of Barnett Shale natural gas production in the nine-county non-attainment area. BSEEC members include Chesapeake Energy, Dale Resources, Devon Energy, EOG Resources, Encana Natural Gas, XTO Energy, Newark Energy/Beacon E&P, Pioneer Resources, Quicksilver Resources, Titan Operating, Western Production and Vantage Resources.

Our expanded comments are attached and summarized below.

The proposed rulemaking results from EPA's January 2011 decision to reclassify the nine-county¹ Dallas-Fort Worth (DFW) area as a "serious" nonattainment area under the eight-hour ozone National Ambient Air Quality Standard (NAAQS). That reclassification triggers the need for TCEQ to submit a state implementation plan (SIP) revision to EPA by January 2012 that incorporates all reasonably available control measures, including all reasonably available control technology (RACT), for sources of relevant pollutants. The current rulemaking addresses RACT for oil and condensate storage tanks and proposes controls that, in TCEQ's view, would result in VOC reductions that would be used to demonstrate reasonable further progress toward the attainment of the 1997 eight-hour ozone NAAQS in the DFW area. BSEEC members operate condensate storage tanks in the DFW area (although only a limited number in the dry gas

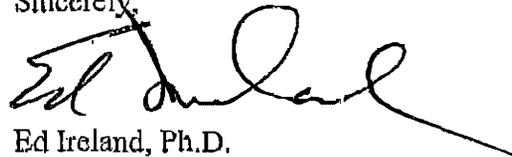
¹ Those counties are Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant.

production areas – TCEQ should have an exact count from the Barnett Shale Special Inventory) and thus would be directly affected by the proposals here under consideration.

It is apparent that the basis for the current proposal is TCEQ's belief that substantial amounts of VOC emissions are emitted from condensate storage tanks in the DFW NAA. TCEQ has cited certain studies and findings as support for its assumption as to the level of VOC emissions from condensate storage tanks, both in the context of this rulemaking and in other contexts. As explained in the attached comments, TCEQ's basis for this assumption rests solely on the "HARC H51C" VOC flash emissions factor of 33 lb/bbl. This factor is based on faulty data and is being applied by TCEQ for all condensate production regardless of the separator letdown pressure at the site or whether the flash emissions are being controlled. This in turn has led to an unrealistic and substantial increase in TCEQ's statewide VOC emissions inventory from the oil and gas sector. TCEQ now has much more accurate data from the Barnett Shale Special Inventory which should demonstrate that, in reality, VOC emissions from condensate storage tanks in the Barnett Shale production area are much less than previous "top-down" desktop studies have suggested. The recent City of Ft. Worth ERG Study provides additional evidence that prior studies, such as the present TCEQ inventory and, in particular, the January 26, 2009 Armendariz report "Emissions from Natural Gas Production in the Barnett Shale Area and Opportunities for Cost Effective Improvements", have overestimated VOC emissions from condensate storage tanks by multiple factors. Unfortunately, emissions estimates from these desktop studies have been taken as gospel by some groups, which has led to public calls for additional VOC controls at small oil and gas production facilities where only small amounts of VOC are presently being emitted.

In short, BSEEC urges TCEQ to ensure that there is a sound basis for any new controls that are imposed, and to ensure that any new controls are truly needed. Please let me know if you have any questions on the attached comments.

Sincerely,



Ed Ireland, Ph.D.
Executive Director

Attachments: (1) BSEEC Comments on Proposed Rulemaking Rule Project No. 2010-025-115-EN; (2) Environ "Review and Analysis of HARC Condensate Production VOC Emissions Factor" with (3) "Attachment A: HARC H51C Report Site Data"

**BSEEC Comments on Proposed Rulemaking
Rule Project No. 2010-025-115-EN**

- I. The November 2010 ERG study for estimating emissions from oil and gas production equipment is the basis for TCEQ proposing additional controls on oil and gas condensate storage tanks. This study overstates statewide emissions of VOC from oil and gas production sources. Emissions of VOC are grossly overstated for those oil and gas operations located in counties within the DFW NAA where natural gas with little or no VOC content is mostly produced.
- A. Table 3-11 of the proposed rulemaking lists VOC emissions for the 2006 base year as 72.1 tpd with 40.6 tpd as VOC emissions from condensate tanks. Projected 2012 total VOC emissions are 113 tpy in 2012. The 40.6 tpd 2006 estimate of VOC emissions from condensate storage tanks is demonstratively wrong.

On page 4-28 of the 2010 ERG report, it states that "Emissions from oil and condensate storage tanks were calculated using the methodology and emission factor developed in the 2009 TERC study "VOC Emissions From Oil and Condensate Storage Tanks" (TERC, 2009). These emission factors were multiplied by county-specific oil and gas production data obtained from the TRC. The calculations assume that venting emissions are uncontrolled by flares or vapor recovery units." (Emphasis added). Table 4-15 on page 4-29 lists the VOC emission factor as 33 lb/bbl. This emissions factor has come to be known as the "HARC H51C emissions factor" and has been used in multiple places by TCEQ despite the fact that it is based on a faulty study. Please see Appendix A, which was part of earlier comments made to TCEQ regarding the proposed VOC Flash Emissions Guidance document. Appendix A is a general technical critique of the HARC study. Also, please see the attached May 16, 2011 Environ memorandum "Review and Analysis of HARC H51C Condensate Production VOC Emission Factor." This memorandum is a review of the HARC study results based on statistical analysis of the data.

It is worth noting here that the January 26, 2009 report "Emissions from Natural Gas Production in the Barnett Shale Area and Opportunities for Cost Effective Improvements", prepared by Dr. Al Armendariz for Ramon Alvarez with the Environmental Defense Fund, also relied on the HARC study for estimating VOC flash emissions from oil and gas activities in a 21-county Barnett Shale area. To calculate VOC emissions from condensate production during the summer months, Dr. Armendariz relied on a VOC emissions factor of 48 lb/bbl of condensate throughput that was derived from the north Texas well site data in the 2009 HARC study. Use of this erroneous emissions factor resulted in a projected 2009 estimate of VOC emissions from condensate storage of 146 tpd for the peak summer months. This was an increase of 116 tpd or almost 400% over the projected 2009 annual VOC emissions of 30 tpd calculated as an annual average. This result made no sense from a technical standpoint as the higher storage temperature of condensate during summer months significantly affects only the working and breathing emissions from condensate storage tanks, which are typically insignificant compared to VOC flash emissions from condensate (the amount of VOC flash emissions

is mostly dependent on the API gravity of the condensate and the separator pressure that the condensate is being let down from). Nonetheless, the oil and gas industry was falsely accused of projected VOC emissions of 146 tpd (53,290 tpy) of VOC emissions, just from condensate storage. Other errors in the Armendariz report led to a total projected 2009 VOC emissions estimate of 255 tpd (93,000 tpy), which most everyone now understands is an absurd number.

Unfortunately, this faulty emissions factor has now also been used by the EPA in proposed NSPS rulemaking to suggest that 1 BOPD of condensate production, regardless of the separator pressure that the condensate is let down to atmospheric storage from, emits over 5 TPY of VOC and should require controls.

- B. The 21.5 tpd estimate of VOC emissions from pneumatic devices is demonstratively wrong.

The 2010 ERG report (page 4-43 to 45) relies on the methodology used in the 2008 CENRAP study (Bar-Ilan, et al., 2008) to estimate VOC emissions from pneumatic devices. The CENRAP study assumes all sites had pneumatics with high bleed rates and based those rates on Natural Gas STAR data (13.6 – 31 scf/hr). The Barnett Shale production facilities are relatively new and low bleed pneumatics are the norm. In addition, many companies are using best management practice (BMP) and replacing existing high bleed pneumatics with low bleed or no bleed devices. Also, the 2008 CENRAP study assumed a VOC content of 10 wt% to 15 wt% for onshore gas production. This high VOC content is not representative of gas production in the core area of the Barnett Shale, especially in the dry gas production areas of the counties in the DFW NAA.

To their credit, TCEQ seems to have recognized that the VOC emissions inventory for pneumatic devices is much too high for counties in the DFW NAA and is seeking additional information from operators via a supplemental Barnett Shale Special Inventory request.

- C. While not directly relative to the proposed ozone SIP revision, we note that estimated statewide inventory of n-hexane, benzene, toluene, ethylbenzene and xylene (BTEX) emissions are also overestimated since they are based on the erroneous VOC emissions estimates and a possible error on the speciated HAP content of vapor emitted during loading of condensate.
1. In the 2010 ERG report, Table 4-15 on page 4-29 lists the HAP emission factors for condensate storage. These are based on the VOC emissions factor of 33 lb/bbl and storage tank vapor sampling data from the 2009 TERC (HARC) study. The vapor analysis of vapors from storage tanks appear to be reasonable other than the one noted exception (see Appendix A). However, the faulty VOC EF of 33 lb/bbl should not be used for HAP emissions inventory.

2. The methodology used in the 2010 ERG report for estimating HAP emissions from oil and condensate loading is described on pages 4-30 to 4-35. The study uses the AP-42 Chapter 5.2 methodology which is widely accepted by industry and agencies. However, a possible error was made in determining the speciated HAP content of vapor emitted during truck loading. The study uses an analysis of vapor from storage tanks from the 2009 TERC (HARC) study to speciate the VOC emissions estimated from use of the AP-42 loading loss equation. This supposedly gives the mass HAP/VOC ratio factors shown in Table 4-17 on page 4-34 of the 2010 ERG report: 0.28 for benzene, 0.48 for toluene, 0.027 for ethylbenzene, and 0.21 for xylenes. These ratios appear to be in error as they should most likely be percentages; i.e., mass HAP/VOC ratios for vapors emitted during the loading of condensate would typically be no more than 0.04 for n-hexane (which should be listed as a HAP in the inventory), 0.002 for benzene, 0.003 for toluene, 0.0002 for ethylbenzene and 0.002 for xylenes. It is not known if the actual emissions inventory was based on the ratios as shown in Table 4-17 or on correct values.
- D. TCEQ has accurate VOC emissions data from the Barnett Shale Special Inventory which should demonstrate how much the November 2010 ERG study overestimates VOC emissions from counties in the DFW NAA.

Data collected from seven of the largest independent producers in the Barnett Shale (Chesapeake Energy, Devon Energy, EOG Resources, Encana Natural Gas, Quicksilver Resources, XTO Energy and Pioneer Resources) indicates that emissions of VOC from oil and gas production equipment within the 9-county DFW NAA average 0.7 tpy per well. (Note that many well pad sites contain multiple wells; therefore, VOC emissions from a single well pad site could be multiples of 0.7 tpy). Extrapolating this average value to all 10,700 wells in the DFW NAA gives a total VOC inventory of approximately 7,500 tpy or 21 tpd. This is less than one-third of the 2006 base year inventory.

The recently released ERG study of emissions from oil and gas activities in the City of Ft. Worth verifies these low VOC emissions numbers. In that study, total VOC emissions were estimated to be 929 tpy from 388 sites with a total of 1,140 wells. That is an average of 2.4 tpy per site and 0.8 tpy per well. The average VOC emissions from a well pad with no compressor engine located on site was estimated to be 0.07 tpy. Average VOC emissions from a well pad with a compressor engine(s) (usually a small 175 to 215 Hp rich-burn engine) were estimated to be 2 tpy.

- E. Part of the reason that the present VOC inventory for oil and gas production equipment in the DFW NAA is overestimated is that the substantial use of best management practices (BMPs) by most operators is not considered. Operators in the Barnett Shale typically practice BMPs, such as low or no bleed pneumatics, vapor recovery units where technologically and economically feasible, flares, etc to control VOC emissions. These may not be considered in some top down emissions inventory estimates, but can achieve substantial VOC emissions reductions of 90% to 99%. These types of controls are required to keep large sites below the 25 tpy threshold if an operator chooses to permit the site under the TCEQ Permit by Rule, which is typically the case for well pad sites. In

addition, a 3-way NSCR catalyst is typically used on rich-burn engines operated in the DFW NAA to control emissions of NO_x and an oxidation catalyst is often used on the large lean-burn engines to control emissions of formaldehyde (to stay below major source thresholds for HAP emissions). These engine catalytic controls also reduce VOC emissions by 50% to 90% depending on the specific application.

- II. TCEQ should update the VOC emissions inventory for oil and gas production equipment in the 9-county DFW NAA before even considering additional mandatory controls on operators.

Based on the emissions estimates given above, there is little VOC reduction that can be obtained from mandatory controls on VOC emissions from condensate storage tanks located in the 9-county DFW NAA. This is because the vast majority of production in this area is dry natural gas with little to no VOC content. Therefore, there is little condensate storage in the area. In fact, the vast majority of storage tanks present on well pads in this area are produced water storage tanks, which emit very little to no VOC.

Note that the Texas Railroad Commission may show some condensate production from gas wells in the area that does not really exist. This is because the TRC allocates condensate recovered by salt water injection operators back to the wells where the produced water was generated. Since salt water injection operators have no way to determine which of the many wells that they service produced the "skim" condensate, it is often allocated to all wells contracted for water disposal by a salt water disposal operator. For dry gas wells with little or no VOC, this produced water does not contain any significant amount of condensate. There can be some "skim" condensate in the water produced at a wet gas well such as those in Wise, western Denton and Parker Counties.

- III. In any ozone SIP rulemaking, TCEQ should include a section on the reactivity of the VOC species typically emitted by the various sectors. The public should be informed that not all VOCs are equal when ozone formation is the central theme. A December 2004 paper by TCEQ highlights the reactivity of different VOC species:¹

Looking at the VOC part of the [ozone] equation, not all VOCs are created equal – some VOCs make ozone much more effectively than others. We can define reactivity as the potential of a given compound to make ozone.

This paper cites the Maximum Incremental Reactivity (MIR) scale which measures the maximum amount of ozone that can be formed by adding a particular VOC into NO_x-laden air. The vast majority of VOC emissions from oil and gas production equipment are propane, butanes and pentanes, which have lower reactivity. In the MIR scale, it is notable that propane is at the bottom and that some VOC species are more than 20 times more effective than propane at forming ozone. In contrast, VOC emissions from on-road vehicles contain multiple compounds with a high reactivity index.

¹ *Emissions Modeling of Specific Highly Reactive Volatile Organic Compounds (HRVOC) in the Houston-Galveston-Brazoria Ozone Nonattainment Area*. R. Thomas et al. (TCEQ). December 2004.

IV. The EPA just released proposed NSPS revisions for the oil and gas production sector. The proposed rules contain standards for VOC emissions from oil and condensate storage tanks. Although the proposed standards are subject to change after public comments are received, TCEQ should consider the proposed new standards and evaluate if a new NSPS standard would make adoption of new SIP requirements on condensate storage tanks in the DFW NAA area a moot point.

ENVIRON

May 18, 2011

Mr. Grover Campbell
Manager Regulatory Affairs – Air Regulations
Chesapeake Energy Corporation
Oklahoma City, OK 73154-0496

Re: Review and Analysis of HARC H51C Condensate Production VOC Emission Factor

Dear Mr. Campbell:

As requested by Chesapeake Energy Corporation ("Chesapeake"), ENVIRON has performed a technical review of the October 31, 2006, report prepared by URS Corporation ("URS") entitled "VOC Emissions From Oil and Condensate Storage Tanks" (hereafter referred to as the "HARC H51C Report").¹ Following is a summary of ENVIRON's review specifically related to the derivation of the 33.3 lb VOC/bbl emission factor.

As presented within the HARC H51C Report, average VOC emission factors were derived from emission tests conducted on 21 tank batteries.² Figure 1 shows the relationship between the estimated VOC emission factor and production rate for these 22 sites.³ As shown, 9 test sites had condensate production of less than 5 bbl/day.⁴

Derived tank battery-specific VOC emission factors ranged from 0.7 lb/bbl to 215.1 lb/bbl. Figure 1 presents the relationship between condensate production and estimated VOC emission factor for the 21 condensate storage tank batteries used by URS in the derivation of the VOC emissions as a function of condensate production emission factor.

For this data set, the mean VOC emission factor was 33.3 lb/bbl with a standard deviation of 53.3 lb/bbl.⁵ As can be seen from Figure 1, there are two sites with much higher VOC emission factors compared to the other sites. These two sites are denoted with red diamonds. The emission factors and condensate production rates for these two sites are:

- 215.1 lb/bbl at a production rate of 1 bbl/day, and
- 145.1 lb/bbl at a production rate of 2 bbl/day.

¹ <http://files.harc.edu/Projects/AirQuality/Projects/H051C/H051CFinalReport.pdf>

² Results from testing conducted at a 22nd site, Tank Battery 26 with a derived emission factor of 1,218 lb/bbl, was discarded from the analysis with the reason given that the vent gas flow rate measurement was taken during non-representative conditions. Per the HARC H-51C Report, for Tank Battery 26, 97 percent of the measured vent gas was released during the first 8 hours of the 24-hour sampling period. The report attributed this condition to fracking at an adjacent well.

³ Detailed HARC H-51C data is presented in Attachment A of this review.

⁴ Based on our review of the report, it is our understanding that production rates were not measured during testing. Rather, URS requested and obtained production estimates from operators at a later date.

⁵ The standard deviation, which is the variation around the mean, is approximately 1.6 times the mean for this data set, indicating high variability in the data. When the standard deviation exceeds the mean, it can imply that the data set is either too small to accurately determine the true mean value and/or there may not be a strong relationship between the two variables considered. Caution should be exercised when using a mean value derived from this data set.

Mr. Grover Campbell
Chesapeake Energy

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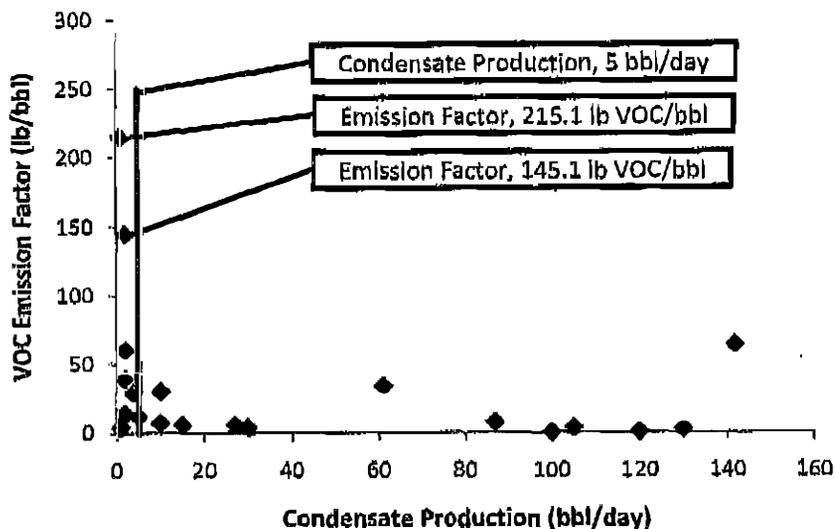


Figure 1. VOC Emission Factor as a Function of Condensate Production, Excluding Tank Battery 26
(Derived from HARC H51C Report)

To put these values into context:

- Condensate production of 1 bbl/day is equal to approximately 22.4 teaspoons per minute of condensate production. In other words, a fast drip.
- A production rate of 5 bbl/day is equal to about 18.7 fluid ounces per minute. At that rate, on average, it would take about 39 seconds to fill a 12 ounce soft drink can.
- A typical condensate storage tank is 12 feet in diameter with a cross-sectional area of approximately 113 ft². Adding 5 barrels to a tank of this size will raise the liquid level in the tank approximately 3 inches.
- Assuming a condensate specific gravity of 0.70, a barrel of condensate weighs approximately 245 lbs. An emission rate of 215.1 lb/bbl means that, on a mass basis, nearly as much VOC is being emitted as is being collected and recovered. Note that VOC already excludes emissions of methane and ethane.

Based on ENVIRON's experiences in managing tank testing programs as well as observations provided by natural gas liquids producers, making accurate measurements of condensate production at very low production levels is problematic.

Presented as Figure 2 is a "box-and-whisker" plot of the 21 data points used in deriving the 33.3 lb/bbl VOC emission factor. The box-and-whisker plot is a useful way of depicting observations graphically and also to identify outliers. The lower and upper limits of the central gray box represent the 25th and 75th percentiles, also known as the lower and upper quartiles of the data. The thin white band within the gray box is the median of the data. The red diamond is the mean of the data. The 'whiskers' (short horizontal end cap lines) represents the lower and the upper extreme quartiles. The red circles represent data points that are at least 3 times the difference between the upper and lower quartiles (also called the intra-quartile range) above (or below) the median. Statistically, these red circles are "outside outliers." "Inside outliers are data points that

Mr. Grover Campbell
Chesapeake Energy

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are more than 1.5 times but less than 3.0 times the inter-quartile range above (or below) the median.

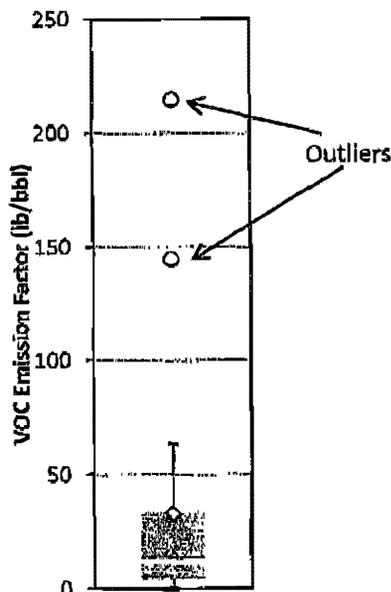


Figure 2. Box-and-Whisker Plot for All Data Points Used in Deriving 33.3 lb/bbl Emission Factor
(Derived from HARC H51C Report)

The two red circles in Figure 2 representing 215.1 lb VOC/bbl and 145.1 lb VOC/bbl emission factors for Tank Batteries 25 and 17, respectively, are outside outliers and, most likely, should be excluded from the analysis.

If the outside outliers identified in Figure 2 are excluded from the data set, the average VOC emission factor is 17.9 lb/bbl with a standard deviation of 19.5 lb /bbl. By excluding these two outliers, the standard deviation becomes smaller relative to the mean: 1.1 times the mean versus 1.6 times the mean when these two data points are not excluded. Therefore, the data shows better agreement when these two data points are excluded.

As noted, it is difficult to obtain accurate measurements of condensate production at low levels. If 5 bbl/day is used as the threshold for making reasonably accurate measurements of condensate production, then eight of the sites used in deriving the 33.3 lb/bbl emission factor should be excluded from the analysis. Figure 3 presents the relationship between VOC emission factor and condensate production for the 13 sites with measured production rates greater than or equal to 5 bbl/day.

The mean VOC emission factor for this data set is 13.8 lb VOC/bbl with a standard deviation of 18.3 lb VOC/bbl (1.3 times the mean). While showing less variability than the data set presented in Figure 1, the data shown in Figure 3 does demonstrate variability due to the three points shown as red diamonds.

Mr. Grover Campbell
Chesapeake Energy

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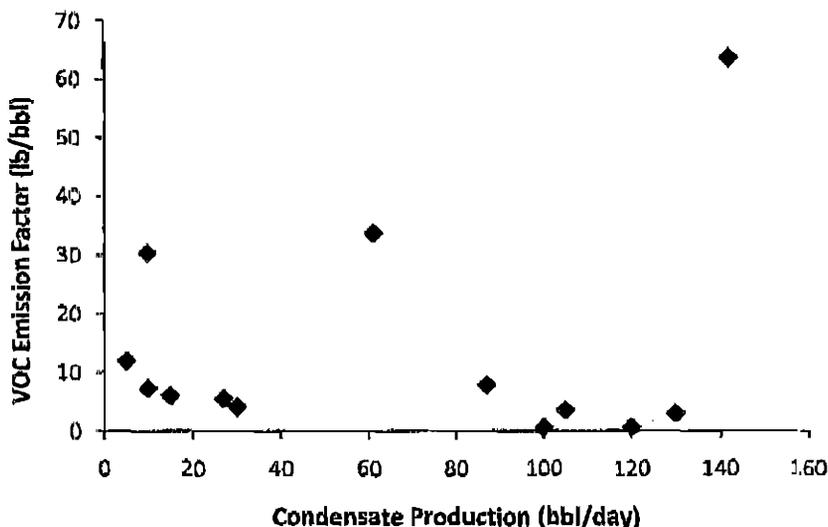


Figure 3. VOC Emission Factor as a Function of Condensate Production, Tank Batteries with Production \geq 5 bbl/day
(Derived from HARC H51C Report)

Figure 4 is a box-and-whisker plot for derived VOC emission factors for 13 tank battery sites with condensate production greater than or equal to 5 bbl/day. As explained earlier in this summary, the box-and-whisker plot is a useful way of identifying outliers. The red circle in Figure 4 is an outside outlier. This represents the derived VOC emission factor for Tank Battery 32. The red stars in Figure 4 are inside outliers. The two stars represent the derived VOC emission factors for Tank Batteries 20 and 29.

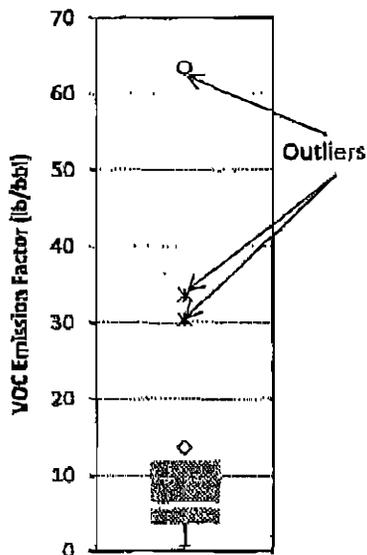


Figure 4. Box-and-Whisker Plot for Derived VOC Emission Factors, Tank Batteries with Production \geq 5 bbl/day
(Derived from HARC H51C Report)

Mr. Grover Campbell
Chesapeake Energy

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If the one site identified as an outside outlier in Figure 4 is excluded from the data set, the average VOC emission factor is 9.6 lb/bbl with a standard deviation of 11.0 lb /bbl. By excluding this one data point, the standard deviation becomes smaller relative to the mean: 1.1 times the mean versus 1.3 times the mean when this data point is not excluded. Therefore, the data shows better agreement when this data point is excluded.

If, in addition to the one outside outlier, the two inside outliers are excluded from the analysis, the average VOC emission factor is 5.1 lb/bbl with a standard deviation of 3.5 lb /bbl. By excluding these three points, the standard deviation becomes smaller relative to the mean: 0.7 times the mean versus 1.1 times the mean when just the outside outlier is excluded.

Note that, in this statistical analysis, the lowest derived emission factors – Tank Batteries 4 and 5 at 0.78 and 0.67 lb VOC/bbl, respectively – are not outliers. Thus, it is would not be appropriate to exclude them from the analysis.

A standard deviation lower than the mean indicates that the data are closely grouped around the mean. Assuming a "normal" distribution, 68% of the tank battery sites would have a VOC emission factor within one standard deviation of the mean and 95% of the tank battery sites would have a VOC emission factor within two standard deviations of the mean. Only the last data set considered exhibits a "normal" distribution.⁶

Table 1 presents a statistical analysis of various datasets presented in this review.

Dataset No.	Number of Tank Battery Sites	Condensate Production (bbl/day)	Mean VOC Emission Factor (lb VOC/bbl)	Standard Deviation (lb VOC/bbl)
1b ^a	21	All	33.3	53.3
1c ^b	19	All	17.9	19.5
3a	13	≥ 5	13.8	18.3
3b ^c	12	≥ 5	9.6	11.0
3b ^d	10	≥ 5	5.1	3.5

^a Original HARC H51C data set.
^b Original data set excluding the two outside outliers.
^c Condensate production ≥ 5 bbl/day, excluding the one outside outlier.
^d Condensate production ≥ 5 bbl/day, excluding the one outside and two inside outliers.

For comparative purposes, the Colorado Department of Public Health and Environment ("CDPHE") recommends VOC emission factors that range from 3.0 lb VOC/bbl to 13.7 lb VOC/bbl, for condensate storage tanks, depending on the location of the facility.^{7,8}

⁶ This data set consists of 10 tank batteries: 2, 3, 4, 5, 6, 15, 18, 23, 28 and 30.

⁷ <http://www.cdphe.state.co.us/ap/sbap/SBAPoilcastankguidance.pdf>

⁸ CDPHE recommends that these emissions factors should only be used if the total uncontrolled VOC emissions due to condensate tanks at the site are less than 80 tons per year. CDPHE recommends site-specific sampling and analysis to estimate emissions for sites having uncontrolled VOC emissions greater than 80 tons per year.

Mr. Grover Campbell
Chesapeake Energy

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It should be noted that of the 21 tank batteries used in deriving the 33.3 lb VOC/bbl emission factor, 10 of the sites were operating at a separator discharge pressure of approximately 200 pounds per square inch ("psi"), one was operating at a discharge pressure of approximately 121 psi, and the remaining 10 sites were all operating at pressures of less than 50 psi. Instead of deriving a single emission factor, in ENVIRON's opinion, it may have been more appropriate to derive two emission factors: one for "high pressure" separation and one for "low pressure" separation.

Using the 3b dataset (condensate production \geq 5 bbl/day, excluding the one outlier and two inside outliers), derived emission factors for "high pressure" separators (operating at approximately 200 psi or greater) and "low pressure" separators (operating at less than 50 psi) are as follows.

- "High Pressure" Separators:
 - Data points = 3
 - Mean VOC Emission Factor = 16.6 lb/bbl
 - Standard Deviation = 12.2 lb/bbl
- "Low Pressure" Separators:
 - Data points = 7
 - Mean VOC Emission Factor = 4.0 lb/bbl
 - Standard Deviation = 2.5 lb/bbl

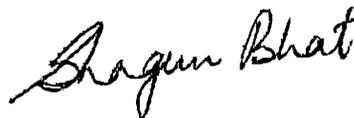
While these data subsets most likely have an insufficient number of test data points to accurately derive emission factors (especially for the high pressure separator subset), it is interesting to note that these subsets show better data correlation than do any of the larger datasets. For the low pressure separator data subset, the standard deviation is 0.6 times the mean. As previously noted, for the 3b dataset as a whole, the standard deviation is 0.7 times the mean.

Please let us know if you have any questions.

Best Regards,



Steven H. Ramsey, P.E., BCEE
Principal Consultant



Shagun Bhat, PhD
Senior Associate

**Attachment A:
HARC H51C Report Site Data**

Attachment A
(Derived from HARC H-51C Report)

Tank Battery Sites

Tank Battery	County	Area	Separator Discharge Pressure (psi)	API Gravity	Condensate Production (bbt/day)	Derived VOC Emission Factor (lb/bbl)
2	Montgomery	Houston-Galveston-Brazoria	41	42	105	3.65
3	Montgomery	Houston-Galveston-Brazoria	38	41	87	7.92
4	Montgomery	Houston-Galveston-Brazoria	34	40	120	0.78
5	Montgomery	Houston-Galveston-Brazoria	46	43	100	0.67
6	Montgomery	Houston-Galveston-Brazoria	33	39	130	2.96
13	Denton	Dallas-Fort Worth	~200	61	2	39.23
14	Denton	Dallas-Fort Worth	~200	59	4	29.51
15	Denton	Dallas-Fort Worth	~200	61	5	11.99
16	Denton	Dallas-Fort Worth	~200	61	2	60.58
17	Denton	Dallas-Fort Worth	~200	58	2	145.11
18	Denton	Dallas-Fort Worth	~200	58	10	7.34
19	Denton	Dallas-Fort Worth	~200	58	2	13.16
20	Denton	Dallas-Fort Worth	~200	59	10	30.43
23	Parker	Dallas-Fort Worth	39	48	27	5.56
24	Parker	Dallas-Fort Worth	36	41	1	4.22
25	Denton	Dallas-Fort Worth	~200	58	1	215.08
27	Denton	Dallas-Fort Worth	~200	59	2	14.39
28	Brazoria	Houston-Galveston-Brazoria	38	46	30	4.17
29	Brazoria	Houston-Galveston-Brazoria	41	42	61	33.68
30	Brazoria	Houston-Galveston-Brazoria	36	42	15	6.11
32	Galveston	Houston-Galveston-Brazoria	121	48	142	63.49

Appendix A

Evaluation of "VOC Emissions from Oil and Condensate Storage Tanks - Final Report" (2006 HARC Report)

The 2006 HARC Report has been cited by TCEQ in the context of under reporting of VOC emissions from storage tanks by the oil and gas industry. The report used an average VOC emissions factor of 33 lb/bbl of condensate to calculate an estimate of total VOC emissions from storage tanks for the East Texas Region. For Denton County only the results from the report give a VOC emissions factor of 48 lb/bbl. We believe that the methodology used in the report to arrive at these two emission factors is flawed. We are also concerned that these inaccurate numbers may be used in VOC emissions inventory estimates for future nonattainment areas. Therefore, we offer the following analysis to demonstrate why the results from the 2006 HARC Report for VOC emissions from condensate storage are unreliable and should be revised or discarded. We would welcome the opportunity to discuss this analysis with TCEQ, especially since a second VOC emissions report is already in the works for release in 2009.

- A. It is obvious from looking at the reported measurements for tank battery #25 that gross errors in measurements occurred. Both the reported vent gas MW of 89 and the VOC fraction of 0.99 are impossible values for gas flashed from condensate at a natural gas production site. The calculated VOC flash emissions factor of 215 lb/bbl would require that 82% of the condensate flashed when reduced in pressure from 200 psig. This is simply not possible at this separator pressure. At a minimum, the TCEQ should reject this data point and recalculate the average VOC flash emissions factor from the remaining 20 tank batteries. Recalculation would give a factor of 24.2 lb/bbl, a reduction of 27% from the one reported.
- B. For tank battery #17, the calculated VOC flash emissions factor of 145 lb/bbl would require that 55% of the condensate flashed when reduced in pressure from 200 psig. This is simply not possible at this separator pressure. Since the other measured data for the vented gas (MW of 36.6 and VOC fraction of 0.65) are reasonable numbers, the error is most likely due to the low condensate production rate of 2 BOPD used in the calculations. The TCEQ should reject this data point and recalculate the average VOC flash emissions factor from the remaining 19 tank batteries. Recalculation would give a factor of 17.8 lb/bbl, a reduction of 53% from the one reported.
- C. The report lists data for 10 condensate tank batteries (in Montgomery, Parker, and Brazoria Counties) with a range of separator pressures from 33 to 46 psig and with a range of API gravity from 39° to 48°. The test results for tank battery #29 (33.7 lb/bbl), tank battery #4 (0.78 lb/bbl), and tank battery #5 (0.67 lb/bbl) appear to be statistical "outliers." Since there are no obvious data errors and the condensate flow rates are high, a statistical analysis of the data would have to be conducted to determine if any of these three test results are "outliers" that should be discarded. We have no specific recommendation on that point.

- D. In general, the researchers did not follow their own Experimental Design, which was somewhat deficient to begin with.

On page 2 of Section B1 (Experimental Design), it is stated that "VOC emission rates will be measured by sampling the tank vent gas for compositional analysis and measuring the vent gas flow rate. Measurements of separator gas vented to the atmosphere will also be made. The concentration of each C1-C6 gas component in the sample, plus benzene, toluene, ethyl benzene, xylene (BTEX) and other C6+ VOC will be multiplied by the flow rate (averaged over 24-hours) to produce measurements of mass emission rates for each of the reported gas constituents and other C6+ VOC in units of pounds per hour. The mass emission rates will then be divided by the number of barrels produced during the 24-hour flow measurement period to produce emission factors in units of pounds per barrel. Critical measurements for this approach include the following:

- Vent gas composition;
- Vent gas flow rate; and
- Oil or condensate production rate"

Further down on the same page, when discussing selection of well sites to be tested, one of the stated criteria is that "The oil or condensate production rate is at least 2 barrels per day."

Lastly, Section B5 (Quality Control) states "The greatest source of uncertainty in the calculated emission factors is likely to be the estimation of oil or condensate produced over the sampling period. The accuracy of the emission factors derived from these tests will be limited to how accurately the production volumes can be determined during the sampling episode. While such production information is readily available on a monthly or annual basis from the Texas Railroad Commission, accurate production data over a 24-hour period is generally not available (emphasis added), and will have to be estimated from reading the tank level gauges (if present), manually gauging the tank level, or from production meters at the site if available. The specific methods and instruments used to estimate daily throughput will be recorded in the field sampling log; however, the sensitivities of these devices to oil or condensate throughput over 24-hours is unknown."

1. We agree that the critical measurements for this study were the vent gas composition, vent gas flow rate, and oil or condensate production rate.
2. We do not agree that obtaining data from a well site that is only producing 2 barrels of condensate per day is appropriate when the goal is to calculate a VOC emissions number in lb/bbl based on a 24-hr test period. Using emissions data based on this low amount of production lends itself to large sampling errors that can result in large variability in reported numbers (which is exactly what occurred). In addition, on page 1 of Section B2 (Sampling and Measurement Methods), it is stated that "The liquid production rates will be

determined during the test period either by reading the level gage on the tanks (if present at the site), or by manually gauging the tanks. The manual tank readings will be adjusted to account for any unloading of the tanks into tank trucks during the test."

The smallest capacity storage tank found in the report was 300 barrels. Even if one assumes a tank height of 20 feet (most likely the height would be 12 feet), the storage capacity of the tank would be around 15 bbl per foot. To gauge a 24-hr production rate of 2 barrels would mean taking two measurements to obtain a difference of about 1 ½ inches. For a tank height of 12 feet, measurement of a difference of 1 inch would be necessary. In addition, all of the sites had at least two tanks. Therefore, to measure 2 barrels of production would take two measurements to obtain a difference of 1/2 to 3/4 of an inch. It is easy to see that this technique would lead to large errors in condensate production rate, and in fact, it appears that the researchers abandoned this concept at some point (see Item 5).

3. We believe that the researchers used proper techniques for obtaining vent gas compositions and have no reason to question that data, other than the obvious errors for tank battery #25 previously mentioned.
 4. We believe that the researchers used proper techniques for measuring vent gas flow rate, using a Fox Model 10A Flow Meter, although some of those measurements may be questionable due to the low rates attempted to be measured from test sites with low condensate production.
 5. Our greatest concern is with the methodology used to come up with condensate production rates for the 24-hr test periods. Evidently, the researchers rightly determined that an accurate measurement of condensate production during the test periods from tank gauging was not possible based on the concerns expressed in Item 2. It appears that in place of measured condensate production, the researchers substituted 2005 daily average condensate production numbers for each tested site obtained from the RRC database (footnote "f" for Table 3-3 on page 3-4 "Daily average condensate production for 2005 from www.rrc.state.tx.us/interactive_data.html"). Using daily average condensate production numbers from a historical database, for which only monthly and yearly totals are reported, to calculate a VOC emissions factor from actual 24-hr test data for a specific tank battery can introduce large errors in the calculation of the flash VOC emissions factor as evidenced by the results from tank battery #17.
- E. We believe this flawed methodology renders the results of the report meaningless and urge TCEQ not to rely on them for any inventory analysis or as the basis against use of the VBE method for estimating flash VOC emissions. If an average flash VOC emissions factor must be used by TCEQ until a more rigorous study can be made, then that factor should be 17.8 lb/bbl as discussed in Item B above. Another option

would be to exclude any tank battery that used a BOPD of 2 or less. This would give an average VOC flash emissions factor of 14.9 lb/bbl. Either of these factors is more in line with the results from the CDPHE study (page 1-2 of the 2006 HARC Report), which gave a range of 10.0 to 13.7 lb/bbl for different condensate producing regions.

In addition, TCEQ must keep in mind that this factor represents "uncontrolled storage tank emissions because no account was made of vent controls that exist at an unknown number of tank batteries in East Texas". (Page ES-2 of 2006 HARC Report).

- F. We urge TCEQ to check the results of the 2006 HARC Report for condensate tank batteries against data provided from industry for actual sites that used process simulator programs, E&P Tanks, or the GOR method with a flash gas analysis and condensate analysis. TCEQ should have access to site specific data with a wide variety of separator pressures and API gravities. We believe such a comparison will show that the reported average VOC flash emissions factor of 56.6 (lb/bbl) for Denton County are out of line with values calculated from actual site data using methodologies that are known to be fairly accurate. When added to the two battery sites for Parker County, the report gives an erroneous average VOC flash emissions factor of 48.0 lb/bbl for counties in the DFW nonattainment area. Unfortunately, this factor has already been used in another draft report dealing with VOC emissions in the DFW nonattainment area (see Emissions from Natural Gas Production in the Barnett Shale Area and Opportunities for Cost Effective Improvements, Peer-Review Draft September 30, 2008, by Dr. Al Armendariz, Ph.D.)
- G. We gather from the language at the top of page 8 that TCEQ has commissioned or will commission another study on VOC flash emissions from oil and condensate storage tanks that is scheduled for completion in 2009. We request that TCEQ allow industry and/or a third party consultant to review the proposed testing procedures and proposed procedure for obtaining accurate condensate production rates for the sites to be tested. Otherwise, it is likely that the same errors produced by the 2006 HARC Report will be repeated.

The most critical issue is the method used to measure actual condensate production during a test period. We believe that to calculate an accurate VOC flash emissions factor in lb/bbl requires total condensate production of at least 10 barrels during the test period. Therefore, any test site should be one with either a high condensate production rate (≥ 10 BOPD) or the test period must be extended to 48-hr or longer to obtain data from at least 10 barrels of production. The condensate production should either be measured directly with the use of a liquid meter or from a minimum tank gauging measurement of 4 inches. This is needed to give a reasonably accurate condensate production number.

TCEQ may want to consider whether a testing program that proposes to provide actual VOC emissions from multiple test sites (i.e., tries to measure the condensate rate or uses a historical condensate production rate) is really necessary and worth

the expense. An option would be to test a large number of production sites by (1) collecting applicable site data such as separator temperature and pressure, storage tank temperature, condensate API gravity, etc, (2) obtain a sample (or multiple samples over a set time period) of the low pressure oil (condensate) prior to flashing for a GOR analysis with an extended gas analysis of the flash gas. This data can then be used to obtain a VOC flash factor in lb/bbl for each tested site. The most critical item would be proper collection of the condensate sample. Historical production numbers can then be used to generate a VOC flash emissions rate for the site if that information is needed. This method does away with the potential for large errors due to measurement of low condensate production rates or the use of historical information for calculating a VOC flash emissions factor. It should also be much less costly than a project that requires actual measurement of flash gas and condensate flow rates.

Barnett Shale Energy Education Council

facsimile transmittal

To: **Charlotte Horn** Fax: **512-239-4808**
From: **Ed Ireland** Date: **8/8/2011**
Re: **Chapter 115 Volatile Organic Compounds Storage Rule Revisions, Rule Project** Pages: **21 including cover page**
No. 2010-0250-115-EN

Cc:

Urgent For review Please comment Please reply Please recycle

Please find BSEEC's comments attached. If there are any problems, please call [REDACTED]

Thank you,

Ed Ireland

Tracking No. 0808-27

08/08/2011 03:04 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Don

Last Name: Lewis

Company/Organization: Duggins Wren Mann & Romero, LLP



Rule: 2010-025-115-EN

Comments:



Texas Pipeline Association

Patrick J. Nugent
Executive Director

August 8, 2011

***Via Facsimile (512) 239-4808
and U.S. Mail First Class***

Charlotte Horn
MC 205
Office of Legal Services
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: **Chapter 115 Volatile Organic Compounds Storage Rule Revisions, Rule Project No. 2010-025-115-EN**

Dear Ms. Horn:

The Texas Pipeline Association (“TPA”) appreciates the opportunity to submit comments on TCEQ’s proposed revisions to the Chapter 115 Volatile Organic Compounds (VOC) storage rules. TPA is an organization representing over 30 members who gather, process, treat, and transport natural gas and hazardous liquids materials through intrastate pipelines in Texas.

The proposed rulemaking results from EPA’s January 2011 decision to reclassify the nine-county¹ Dallas-Fort Worth (DFW) area as a “serious” nonattainment area under the eight-hour ozone National Ambient Air Quality Standard (NAAQS). That reclassification triggers the need for TCEQ to submit a state implementation plan (SIP) revision to EPA by January 2012 that incorporates all reasonably available control measures, including all reasonably available control technology (RACT), for sources of relevant pollutants. The current rulemaking addresses RACT for VOC storage and proposes controls that, in TCEQ’s view, would result in VOC reductions that would be used to demonstrate reasonable further progress toward the attainment of the 1997 eight-hour ozone NAAQS in the DFW area. The 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. Many TPA members operate storage tanks in the DFW area and thus would be directly affected by the proposals here under consideration.

¹ Those counties are Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant.

1. The need for increased controls on VOC emissions has not been demonstrated through the use of reliable data. It is apparent that the basis for the current proposal is TCEQ's belief that substantial amounts of VOC emissions, which are ozone precursors, are going unreported or underreported, such that increased controls on storage tanks are needed in order to demonstrate reasonable further progress in attaining the ozone NAAQS. TCEQ has cited certain studies and findings as support for its assumption as to the level of unreported and underreported VOC emissions, both in the context of this rulemaking and in other contexts. TPA has serious questions as to the validity of TCEQ's assumptions concerning the extent of unreported and underreported VOC emissions.

For example, TCEQ recently referred to aerial surveys conducted in 2005 and 2007 during which the GasFindIR system reportedly identified underreported or unreported VOC emissions from "landed" storage tanks, barges, and gas and oilfield storage tanks. These projects resulted in the development of a HARC VOC flash emissions factor of 33 lb/bbl that, in TPA's view, is based on faulty data and is being applied by TCEQ for all condensate production regardless of the separator letdown pressure at the site or whether the flash emissions are being controlled. This in turn has led to an unrealistic and substantial increase in VOC emissions inventory from the oil and gas sector, which in all likelihood is partially responsible for TCEQ's decision to propose the stringent controls here under consideration.

Indeed, TCEQ states that its decision to impose additional controls is supported by the findings in TCEQ Report 2010-43, yet the authors of that report, Environ International Corporation, called into question the propriety of using the 33 lb/bbl factor. Environ expressed no confidence in the validity of the 33 lb/bbl factor, stating that the use of that factor was required by the work order under which Environ was operating. TCEQ Report 2010-43 at 53. Environ went on to implicitly question the accuracy of the 33 lb/bbl factor, noting the serious concerns that exist as to its accuracy, particularly the fact that the results could have been skewed toward unrealistically high emissions rates because so many of the tested sites produced small amounts of condensate. *Id.* Environ recognized the concerns that had been expressed regarding "the potential error in measurement via tank gauging for sites producing small amounts of condensate," and pointed out that "a number of the test sites with high emission rates had production of less than 10 bbl/day of condensate during the time of the testing." *Id.* Environ also noted that the emission factors used by the State of Colorado for condensate tanks were substantially lower than 33 lb/bbl, and also that information provided by members of the industry support the use of emission factors averaging 5.8 lb/bbl, rather than 33 lb/bbl. *Id.* at 54-55.²

Furthermore, TCEQ indicates that a basis for the proposal of additional controls on storage tanks is data reported in the November 2010 Eastern Research Group (ERG) study. This study should not be the basis for any additional controls on VOC emissions because it greatly overstates statewide emissions of VOC from oil and gas production sources. TCEQ reports

² Please see the comments filed by the Barnett Shale Energy Education Council for a further discussion of why the 33 lb/bbl factor is clearly flawed and results in falsely exaggerated emissions estimates. Rather than basing rulemakings on artificially inflated emissions estimates, TCEQ should consult data recently collected during the Barnett Shale Special Inventory process. That data showed that the total VOC inventory in the DFW area could be expected to amount to far less than the estimates reached in reports cited by TCEQ.

ERG's estimate that VOC emissions for the 2006 base year were 72.1 tpd, with 40.6 tpd being VOC emissions from condensate tanks.³ The 40.6 tpd 2006 estimate of VOC emissions from condensate storage tanks is far too high. First, that estimate results from the use of the clearly erroneous 33 lb/bbl factor.⁴ Second, that estimate was reached through use of an unfounded assumption: that venting emissions are uncontrolled by flares or vapor recovery units. Flawed data such as this should not inform TCEQ's rulemaking.⁵

In addition, TCEQ appears not to have fully considered the widespread use by operators in the DFW area of best management practices to control and reduce VOC emissions, meaning that the marginal benefit of additional controls would be minimal. Among the best management practices used by companies in the area are low or no bleed pneumatics, vapor recovery units, flares, three-way NSCR catalysts for use on rich-burn engines, and oxidation catalysts for use on large lean-burn engines.

TPA urges TCEQ to ensure that there is a sound basis for any new controls that are imposed, to ensure that any new controls are truly needed, and to ensure that the environmental benefit of any new controls would not be outweighed by the cost of installing and maintaining them. We note that TCEQ's explanation and justification for the proposed rules states that "additional VOC emission reductions *are anticipated to be necessary* to meet the RFP requirements in the DFW area" and that "additional VOC reductions *may be needed* for the RFP SIP revision." Preamble 5, 79 (emphasis added). TPA respectfully submits that speculation such as this should not form the basis for the imposition of onerous and expensive additional controls, especially in this time of economic difficulty.

2. Regulatory efforts to attain the ozone NAAQS should not focus on VOC emissions. Not only are TCEQ's underlying assumptions questionable, as discussed above, but in addition it is our understanding that in the DFW area nitrogen oxide emissions have been the pollutant of concern in the formation of ozone, rather than VOC emissions. Photochemical modeling in the DFW nonattainment area has shown that ozone is much more responsive to NOx emissions than to VOC emissions, meaning that reducing NOx emissions is far more effective in controlling ozone than reducing VOC emissions. This was confirmed in a 2006 TCEQ presentation, wherein a TCEQ representative stated: "The control of ozone is more responsive to NOx reductions than to VOC reductions – a 20% NOx reduction is more effective than a 50% VOC reduction". TCEQ, "DFW Modeling Update," Brian Foster, Environmental Trade Fair, May 10, 2006 at 18.

This conclusion is also supported by various studies conducted across the country. For example, one study found the export of ozone from the urban atmosphere was more sensitive to NOx emissions than to VOC emissions. Duncan, B., and Chameides, W., (1998), Effects of

³ See Table 3-11, "Dallas-Fort Worth Attainment Demonstration SIP Revision for the 1997 Eight-Hour Ozone Standard Nonattainment Area," Project Number 2010-022-SIP-NR (June 8, 2011).

⁴ Pring, B. et al., Characterization of oil and gas production equipment and develop [sic] a methodology to estimate statewide emissions (November 24, 2010) at 4-28, 29.

⁵ Id. at 4-28.

urban emission control strategies on the export of ozone and ozone precursors from the urban atmosphere to the troposphere, J. Geophys. Res., 103(D21), 28159-28179. Another study confirmed that ozone formation was more sensitive to NO_x than to VOC over much of the country. Duncan, B., et al, The sensitivity of U.S. surface ozone formation to NO_x and VOCs as viewed from space, Presented at the 8th Annual CMAS Conference, Chapel Hill, NC, October 19-21, 2009, at 4.

3. Tighter controls in the DFW area will not result in substantial VOC reductions in any event. The great majority of the natural gas produced in the DFW area is dry gas, with little or no VOC content. There is little condensate storage in the area; the great majority of storage tanks in the area contain produced water, which emit little or no VOC. This being so, the imposition of stricter controls in the DFW area will result in very minor reductions of VOC emissions. The burden of installing and maintaining these controls is likely to greatly outweigh any resulting environmental benefit.

For all of the above reasons, TCEQ should revisit the justification for the increased VOC controls, especially any justification that stems from the use of the inflated 33 lb/bbl factor, to ensure that the controls being proposed are actually necessary and actually justified as part of the agency's effort to achieve the ozone NAAQS. Caution on TCEQ's part is especially warranted given EPA's recent proposal of NSPS revisions for emission sources in the oil and gas industry. Those proposed rules include standards for VOC emissions from storage tanks. TCEQ should review those proposed new rules to determine whether the proposed NSPS standards would render moot the VOC storage rules now under consideration by TCEQ. In any event, TCEQ should ensure that regulated parties are not subject to conflicting federal and state rules on the subject of VOC storage emissions.

4. The economic feasibility of the proposed controls has not been demonstrated. TCEQ's executive summary states: "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." TPA disagrees that the fact that the controls have been installed on some facilities in some counties constitutes a global demonstration of economic feasibility. A more useful and realistic definition of "economic feasibility" would be one that takes into account the cost of the proposed measures balanced against the potential benefit of and need for them. TCEQ seems to downplay the fiscal impact of this rulemaking by stating that some of the proposed new requirements "should ensure that tank owners or operators are recovering additional product, the sale of which is expected to help offset the costs of the vapor recovery units." If it is the case that a substantial amount of product would be recovered through the proposed controls, such that the controls would pay for themselves, then companies can be expected to implement those technologies on their own, without the need for regulatory imperatives. The fact is that the fiscal impact on regulated entities would be substantial and a company's ability to recover the cost of the control is speculation. TCEQ itself acknowledges that the proposed rules will require storage tank owners in the DFW area to install a control device such as a vapor recovery unit or flare, at a cost of up to \$110,000 for a VRU and up to \$60,000 for a flare. Unnecessary economic burdens should not be imposed upon businesses without adequate justification.

5. The technological feasibility of the proposed controls has not been demonstrated. TCEQ also asserts that the technological feasibility of the proposed controls has been demonstrated by a study conducted by TCEQ in 2010 (TCEQ Project 2010-43). TCEQ notes that the study found that all sources in the HGB area that are required to install controls capable of maintaining at least 90 percent VOC control efficiency on their tank batteries chose a vapor recovery unit, a flare, or both types of control devices. According to TCEQ, a source's choice to install these technologies when controls were required in the HGB area is proof of the technological feasibility of those technologies. TPA believes, however, that the study does not lend support to TCEQ's proposal as claimed. In that study, 316 HGB sources reported their control status, but only 109 – only about 1/3 – reported having employed any controls at all. Such a small sampling should not be taken as any sort of proof as to the technological or economic feasibility of the controls proposed by TCEQ in this rulemaking. It is unknown what the remaining 207 sources would have done had they chosen to install controls. (In addition, the fact that 2/3 of the reporting sources did not install controls suggests that TCEQ is incorrect to claim that such controls would pay for themselves – if that were true, then it is difficult to imagine why the great majority of companies chose not to install them.)

6. The need to impose additional controls on minor sources has not been demonstrated. TCEQ acknowledges that the proposed 25 tons per year (tpy) applicability threshold for the installation of these VOC controls in the DFW area is below the major source threshold, which is 50 tpy. It is inappropriate to subject minor sources to the proposed requirements without a demonstrated need for the additional emissions reduction from sources below major source levels. As discussed herein, such a need has not been demonstrated.

7. The deadline for compliance is too short. TCEQ states: "If the rulemaking is adopted, the commission anticipates that affected sources in these counties will have sufficient time to make other changes, if necessary." TCEQ is proposing a compliance deadline of December 1, 2012, meaning that affected sources would have to order and install controls by that date. It would not be possible for many companies to meet this deadline because of the extent of new controls that would have to be put in place to comply with the proposed rules. TPA submits that the proposed controls, if adopted, would require a substantial amount of testing and alteration in many cases, and that more time to comply would be needed. Moreover, as indicated above, EPA is proceeding with a rulemaking that may result in rules that are different from those being proposed by TCEQ. TCEQ's schedule for adoption and implementation of TCEQ's rules should allow enough time to ensure that TCEQ's rules do not conflict with EPA's rules so that companies are not faced with confusing and contradictory sets of regulations on the same subject matter.

We hope that these comments are helpful. Please let us know if you have any questions or concerns.

Sincerely,


Patrick J. Nugent
Executive Director

Tracking No. 0808-29

08/08/2011 03:32 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Mari

Last Name: Ruckel

Company/Organization: Texas Oil and Gas Association

[REDACTED]

Fax Number:

Rule: 2010-025-115-EN

Comments:



TEXAS OIL & GAS ASSOCIATION

August 8, 2011

J. Roe Buckley
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Charlotte Horn
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Texas Commission on Environmental Quality
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Austin, Texas 78711-3087

Submitted via Electronic Mail to <http://www.tceq.texas.gov/rules/ecomments.html/>

Re: Rule Project No. 2010-025-115-EN. Chapter 115 Volatile Organic Compounds (VOC) Storage Rule Revisions Reduction in VOC emissions from VOC storage in the Dallas-Fort Worth area and updates in other affected areas.

Dear Ms. Horn:

Texas Oil and Gas Association (TxOGA) is the largest and oldest petroleum organization in Texas, representing over 4,000 members. The membership of TxOGA produces in excess of 90 percent of Texas' crude oil and natural gas, operates nearly 100 percent of the state's refining capacity, and is responsible for the vast majority of the state's pipelines. According to the most recent data, the oil and gas industry employs 315,000 Texans, providing payroll and benefits of over \$30 billion in Texas alone. In addition, large associated capital investments by the oil and gas industry generates significant secondary economic benefits for Texas. TxOGA member companies produce a quarter of the nation's oil, a third of its natural gas and account for one-fourth of the U.S. refining capacity.

TxOGA appreciates the opportunity to submit comments on the proposed Chapter 115 Volatile Organic Compounds (VOC) storage rule revisions for reductions in emissions from VOC storage in the Dallas-Fort Worth area and other affected areas. Attached are our comments and recommendations.

Should you have any questions, please contact me at mruckel@txoga.org or 512/478-6631.

Sincerely,

Mari V. Ruckel
Director of Regulatory Affairs

Enclosures

Comments on Proposed Revisions to the Chapter 115 Volatile Organic Compounds (VOC) Storage Rule

August 8, 2011

§115.110 Applicability and Definitions

While the following definition for Pipeline Breakout Station is currently in the existing rules for Houston-Galveston-Brazoria areas, we note that the definition only includes crude oil. There are many pipeline breakout stations in refined product service. We believe the definition should be corrected to include refined products pipeline breakout stations and suggest the following language:

*(5) Pipeline breakout station--A facility along a pipeline containing storage vessels used to relieve surges or receive and store crude oil, ~~or~~ condensate, **or refined products (such as gasoline, distillates, etc.)** from the pipeline for reinjection into the pipeline and continued transportation by pipeline or to other facilities.*

§115.115 Monitoring Requirements

The monitoring requirements do not include an option for carbon canisters (drums or vessels) that are not regenerated on-site. The definition of "carbon adsorption system" (§101.1 (10)) is limited to regenerative systems. However the definition of "carbon adsorber" (§101.1 (9)) does incorporate carbon that is not regenerated on-site. We suggest adding the term "carbon absorber", and recommend the following language:

§115.115 (a) (3)

(3) For a carbon adsorption system **or carbon adsorber**, the owner or operator shall:

(B) switch the vent gas flow to fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorption system **or carbon adsorber**.

§115.117 Approved Test Methods

Method 21 should be included as an approved test method.

Test Method 21 (40 CFR Part 60, Appendix A) for determining VOC leaks.

§115.118 Recordkeeping Requirements

The recordkeeping requirements do not include an option for carbon canisters (drums or vessels) that are not regenerated on-site. The definition of "carbon adsorption system" (§101.1 (10)) is limited to regenerative systems. However the definition of "carbon adsorber" (§101.1 (9)) does incorporate carbon that is not regenerated on-site. We suggest adding the term "carbon absorber", and recommend the following language:

§115.118 (a) (4) (C)

(C) For a carbon adsorption system *or carbon adsorber*, the owner or operator shall:

(ii) record the date and time of each switch between carbon containers if the carbon adsorption system *or carbon adsorber* is switched according to §115.115(a)(3)(B) of this title.

§115.119 Compliance Schedules

The rule needs to allow for time to implement new monitoring requirements in §115.115. It is proposed that the timing is consistent with the compliance schedule already in the proposed rule.

(e) The owner or operator of each storage tank in which any VOC is placed, stored, or held in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall comply with §115.112(e), **§115.115**, and §115.116 of this title no later than December 1, 2012.

Tracking No. 0808-31

08/08/2011 04:53 PM

This email is a confirmation of the comment that was submitted for the referenced rulemaking.

First Name: Wendi

Last Name: Hammond

Company/Organization:

[REDACTED]

Phone Number:

Fax Number:

Rule: 2010-023-SIP-NR

Comments:

LAW OFFICE OF WENDI HAMMOND

January 5, 2011

VIA eComments

Attn: Jamie Zech

Air Quality Division, MC 206

TCEQ Chief Engineer's Office

P.O. Box 13087

Austin, TX 78711-3087

RE: **Project No. 2010-022-SIP-NR** (Dallas-Fort Worth Attainment Demonstration SIP revision) and
Project No. 2010-023-SIP-NR (Dallas-Fort Worth Reasonable Further Progress SIP revision)

Dear Mr. Zech:

On behalf of COPPs for Clean Air, KIDS for Clean Air, my family and myself, I am submitting for TCEQ's consideration the enclosed comments regarding the above named and numbered matters.

Thank you for your attention to this matter. If you have any questions, feel free to contact me.

Sincerely,


Wendi Hammond

Encls.

Comments on

**Project No. 2010-022-SIP-NR
Dallas-Fort Worth Attainment Demonstration SIP revision**

and

**Project No. 2010-023-SIP-NR
Dallas-Fort Worth Reasonable Further Progress SIP revision**

Submitted by:
COPPs for Clean Air
KIDS for Clean Air
Jason, Wendi and Jonas Hammond

Commenters strongly support efforts to improve air quality in Texas; however, TCEQ's proposed state implementation plan (SIP) revisions do not go far enough for the Dallas-Fort Worth (DFW) area to actually reach attainment. As noted below, the proposed SIP revision fails to meet minimum requirements of the federal Clean Air Act and EPA rules.

Existing Factual Data Proves the Attainment Demonstration SIP Revision and the Reasonable Further Progress SIP Revision Are Meaningless

By failing to propose significant cuts in smog forming emissions that will result in the DFW area actually reaching attainment of the ozone standard, TCEQ once again wastes precious taxpayer money by proposing SIP revisions that are nothing more than a paper exercise in futility.

TCEQ knowingly paints a misleading and blatantly false rosy picture of the ozone problem that has plagued the DFW area for decades. For example, the TCEQ attempts to establish a promising Air Quality trend in the DFW area by failing to report accurate data for the Keller (C17) monitor. Specifically, the Attainment Demonstration report states that "Keller (C17) would need to record a fourth-highest eight-hour ozone concentration of 80 ppb or higher in 2010 to violate the NAAQS."¹ However, TCEQ already had the actual 2010 monitoring data for Keller (C17), which is 85 ppb and resulted in a 2010 design value of 86 ppb. TCEQ had been aware for almost a year that the monitor violated the NAAQS in 2010 – TCEQ staff even informed the Photochemical Modeling Technical Committee of this fact on August 31, 2010. Yet disturbingly, TCEQ oddly failed to acknowledge this damaging fact in its written attainment demonstration and reasonable further progress proposals submitted for the current public comment period.

Moreover, 2011 monitoring data paints an even more damaging scenario. As of the writing of this public comment, Keller (C17) monitor has a fourth-highest eight-hour ozone concentration of 90 ppb. This means the monitor would need in 2012 a fourth-highest eight-hour ozone

¹ Revisions to the State of Texas Air Quality Implementation Plan for the Control of Ozone Air Pollution; Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area Proposal; Dallas-Fort Worth Attainment Demonstration SIP Revision for the 1997 Eight-Hour Ozone Standard Nonattainment Area; Project Number 2010-022-SIO-NR; June 8, 2011, p. 5-12.

concentration of no more than 77 ppb for the DFW area to reach attainment – a practicable improbability considering the monitor has never registered a fourth-highest concentration lower than 84 ppb. Therefore, TCEQ is already on notice that the DFW area will fail to meet the June 5, 2013 attainment deadline -- barring an extraordinarily freaky cool, wet and windy summer that has never occurred before.

Data Must Be Reevaluated to Determine Why TCEQ Is Always Wrong

TCEQ has never timely met an attainment deadline, and the public wants to know why. TCEQ's past failures and a current review of publicly available data raises numerous concerns about TCEQ's review and analysis conducted for these SIP revisions; and therefore, TCEQ should reevaluate the ozone data to ensure that the review is proper and complies with all state and federal legal requirements. Examples of these concerns include, but are not limited to, the following:

- The public is unable to ascertain whether the correct air monitoring data has been used in the attainment demonstration. If air monitoring data has been excluded, the public is unable to ascertain why and if such an exclusion is legally compliant. For example, data presented to the Photochemical Modeling Technical Committee (PMTTC) on August 31, 2010 contains information contradicted by TCEQ's website for Eight-Hour Ozone High Value Days for 2006 as of December 31. The chart summary of the Extended June 2006 episode inaccurately reflects the number of ozone monitors exceeding the 84 ppb standard.² Specifically, June 12th air data shows 5 monitors exceeding, but the summary only depicts 4; June 14th air data shows 6 monitors exceeding, but the summary only depicts 5; June 18th air data shows 8 monitors exceeding, but the summary only depicts 5; June 27th air data shows 3 monitors exceeding, but the summary only shows 2; and June 30th air data shows 6 monitors exceeding, but the summary only shows 5.
- Data utilized in the modeling episode is not readily available for public review during the comment period. For example, air quality modeling files provided on TCEQ's website is not in a format readily accessible to the public. See, <http://www.tceq.texas.gov/airquality/airmod/data/dfw8h2>. Unlike prior SIP demonstrations and Reasonable Further Progress demonstrations, the public is unable to review the details such as the emission inventory input (e.g., point source emissions within Texas but outside the DFW nonattainment area) and other data. Rather TCEQ provides the public with only summarized information and expects the public to trust TCEQ's summary – an undeserved trust considering TCEQ's past failings.
- The public is unable to determine whether TCEQ accounted for all ozone precursor emissions associated with the Barnett Shale Oil & Gas emissions. For example, prior TCEQ modeling episode presentations discuss considerations such as Railroad Commission production data, condensate tank VOCs, compressor NOx, and the like.

² See Attachment A: SIP Timeline and Modeling Episode, Doug Boyer powerpoint presentation August 31, 2010, p. 13. Available at http://www.tceq.texas.gov/assets/public/implementation/air/am/committees/pmt_dfw/20100831/20100831_PMTTC_SIP_Timeline.pdf

However, other emission sources are not discussed and may not have been considered in the Base Case, Baseline Case or Future Case. For example, studies suggest that each gas well completion (i.e., initial drilling phase plus the first fracturing job) requires approximately 1150 truck trips. Hydraulic fracture water for each well requires approximately 400 – 600 tankard truck trips. Hydraulic fracture sand requires approximately 20-25 truck trips. Flowback water removal requires approximately 200 – 300 truckloads. Also, if any evaporation sprayers or flowback pits exists, emissions from these sources need to be considered as well.

- The proposed SIP revisions only add two additional measures proposed through other rules to require some VOC reductions, while assuming that reductions in nitrogen oxides will offset emission increases in volatile organic compounds. Indeed, according to the RFP, emissions of volatile organic compounds would actually increase from 472 tons per day to 520 tons per day of VOCs by 2012. Not only is TCEQ assuming that it is allowed to "swap" increases in VOCs for NOX reductions, but it is ignoring other weight-of-evidence factors, such as the reduction in funding for LIRAP and TERP, which will impact expected reductions from cars and trucks.
- TCEQ does not adequately take into account the impact of emissions from power plants outside of the Dallas-Fort Worth Non-Attainment Area, and fails to consider the potential impact of emissions from newly permitted power plants outside the Dallas area.

Suggestions for Improving the Proposed SIP Revisions

TCEQ should take a series of additional steps for cleaning up the air. Furthermore, TCEQ must address the concerns identified above, and the public must be afforded another opportunity to review all of the information relied upon for the SIP revisions and to provide public comment.

An example of potential additional steps include further reducing emissions from oil and gas facilities. While TCEQ is considering adoption of rules for large storage tanks that emit more than 25 TPY per year, most storage tanks are much smaller and VOC capture technology should be required on all storage tanks that emit more than 5 or 10 TPY.

In addition to storage tanks, TCEQ should examine the recent proposal by the EPA to require a suite of highly cost-effective regulations that would reduce harmful air pollution from the oil and natural gas industry. Among the common-sense measures proposed by EPA that TCEQ could adopt now as part of the SIP revisions are:

- Require Green Completions of new hydraulically fractured natural gas wells and re-completions of existing natural gas wells that are fractured or refractured.
- Require Centrifugal compressors be equipped with dry seal systems.
- Require that owners/operators of reciprocating compressors would have to replace rod packing systems every 26,000 hours of operation.

- Require VOC emission limits for pneumatic controllers.
- Require that Condensate and crude oil storage tanks with a throughput of at least one barrel per day of condensate or 20 barrels per day of crude oil (equivalent to about six tons of VOC emissions per year) must reduce VOC emissions by 95 percent.
- Require that natural gas processing plants strengthen the leak detection and repair requirements that apply to these plants to reduce VOC emissions.

In addition to requirements on oil and gas plants, TCEQ must accurately assess the impact of budget cuts on the TERP and LIRAP, which provide grants to clean up emissions from trucks, construction equipment, and passenger cars in its weight of evidence section. One possible use of TERP money would be to use TERP funding for idle reduction technology.

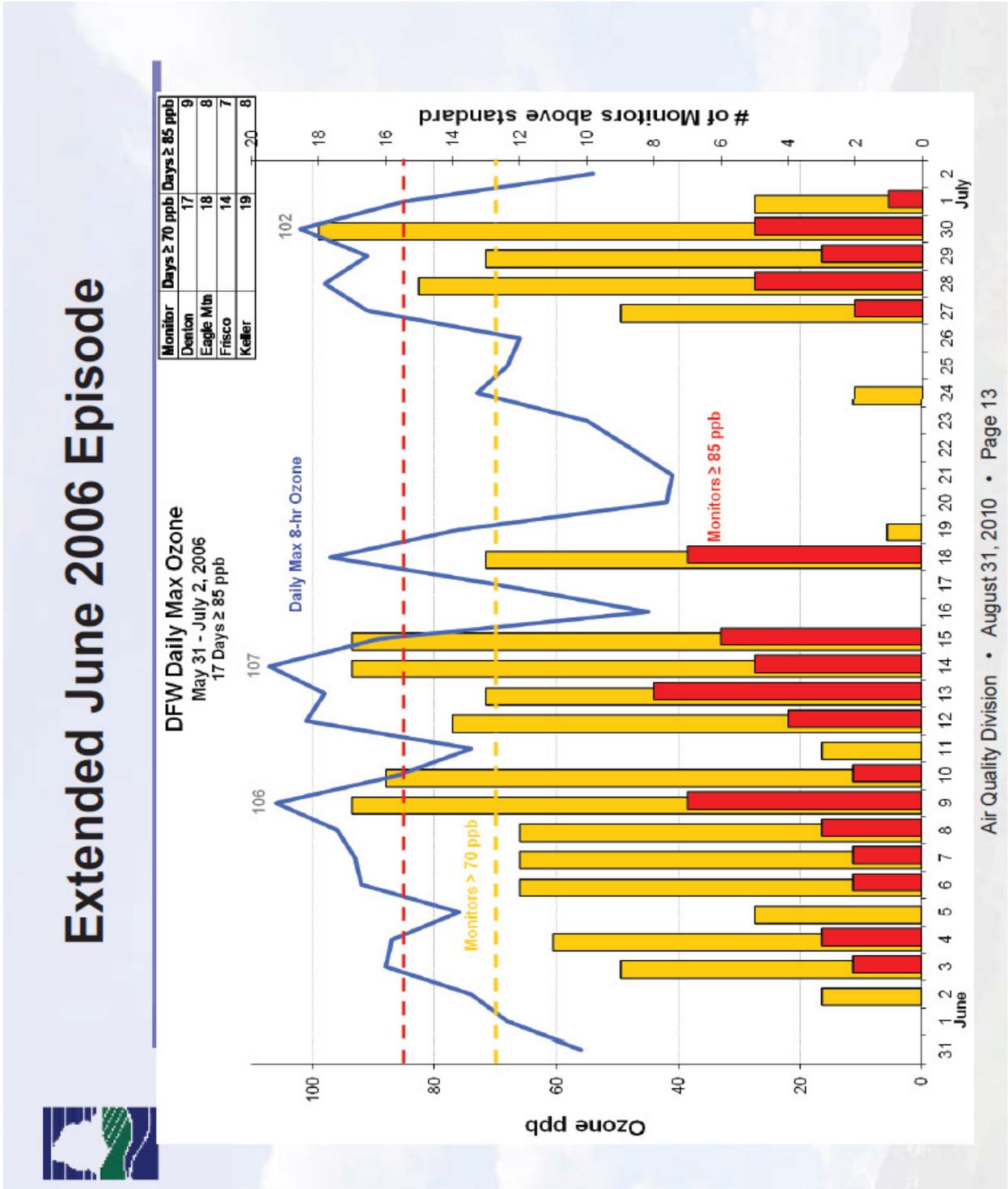
Furthermore, TCEQ must take into account the impact of emissions from power plants outside of the Dallas-Fort Worth Non-Attainment Area and located within Texas. Since EPA recently adopted a new cross-state rule that could require major emission cuts at coal plants, TCEQ should, either as part of the SIP or as a separate rule-making, implement the EPA rule and require cuts at major power plants such as Big Brown, Monticello, and Martin Lake, all of which impact the Dallas-Fort Worth Area.

Also, the Dallas SIP should address emissions from cement kilns. For example, they could require a pilot-test of Selective Catalytic Reduction (SCR) technology on one or more of the Midlothian cement plants. SCR has been proven to remove over 90% of the smog-forming pollution from kilns.

TCEQ should use the new guidance from EPA on use of energy efficiency in the State Implementation Plan and look at what existing and additional energy efficiency measures have occurred or may occur to get credit.

Attachment A: SIP Timeline and Modeling Episode, Doug Boyer's powerpoint presentation August 31, 2010, p. 13.

http://www.tceq.texas.gov/assets/public/implementation/air/am/committees/pmt_dfw/20100831/20100831_PMTC_SIP_Timeline.pdf



Tracking No. 0808-33

From: Michael Parrish

To: Schubert, Ray

CC: Anderson, Lindley; Goodin, Chance; Meiller, Vincent; Spencer, Joyce; ...

Date: 8/8/2011 5:43 PM

Subject: Chapter 115 Comment - EPA

Attachments: [EPA.pdf](#)

Attached



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

AUG 08 2011

Ms. Charlotte Horn
Texas Register Team
Office of Legal Services, MC 205
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

Dear Ms. Horn:

Thank you for the opportunity to submit comments on revisions proposed to the Texas Commission on Environmental Quality State Implementation Plan (SIP). These revisions are:

- a) Chapter 115 VOC Storage Tank Rule Amendments
Rule Project No. 2010-025-115-EN
- b) Chapter 115 CTG RACT Rule Amendments
Rule Project No. 2010-016-115-EN
- c) DFW SIP Attainment Demonstration Revision (including photochemical modeling, weight of evidence, RACT, RACM, an MVEB, and a contingency plan) Rule Project No. 2010-022-SIP-NR
- d) DFW SIP Reasonable Further Progress Revision
Rule Project No. 2010-023-SIP-NR
- e) HGB RACT Analysis Update SIP Revision
Rule Project No. 2010-028-SIP-NR
- f) DFW Attainment Demonstration and Reasonable Further Progress (RFP) SIP Revision Supplements

These SIP revisions are important for Texas' plan to address ozone air quality problems in the state. We appreciate the efforts of the State in developing these SIP revisions.

Our detailed comments on the proposed rules are included as an enclosure to this letter. Please contact me or my staff if you have any questions. For questions about our comments on the DFW SIP proposals, please contact Ms. Carrie Paige at 214-665-6521. Please direct questions about comments on the VOC storage tank rules, CTG RACT rules, or the DFW or HGB RACT analysis to Ms. Ellen Belk at 214-665-2164.

Sincerely yours,

Guy Donaldson, Chief
Air Planning Section (6PD-L)

Enclosure

Cc: Lola Brown, MC 206
Michael Parrish, MC 205
Jamie Zeck, MC 206

Detailed Comments

Control of VOC Emissions from Storage and Transfer Operations for the Eight-Hour Ozone Standard (Rule Project No. 2010-025-115-EN)

The amendments in this proposed rule would apply to nonattainment and near nonattainment areas, and would change VOC control requirements in 30 TAC Chapter 115, Subchapter B, Division 1, Storage of Volatile Organic Compounds. These revisions would require a more stringent level of control for VOC storage in the Dallas – Fort Worth 1997 eight hour ozone nonattainment area. In addition, this proposed rulemaking would clarify rule requirements and allow for the use of alternative control options for affected owners or operators in the following areas: HGB 1997 8-hour ozone nonattainment area, Beaumont-Port Arthur area, and in Arkansas, Bexar, Calhoun, El Paso, Gregg, Matagorda, Nueces, San Patricio, Travis, and Victoria Counties. Our comments on this rulemaking project are as follows:

1. EPA Region 6 is supportive of TCEQ's efforts to expand controls for additional VOC emissions in the DFW area. Also, EPA appreciates the decision made by TCEQ requiring 95% control in 115.112(f)(3)(A).
2. Please confirm that this new rule includes all of the components needed for enforcement purposes. As explained in the preamble, "... the compliance date for new requirements in the DFW area will be December 1, 2012". However, if compliance with the new requirements would necessitate emptying and degassing the tank, compliance would not be required until the next time the tank is emptied or degassed but no later than December 1, 2021. In particular, please explain how existing reporting requirements are sufficient for inspectors to be able to verify the most recent time that a vessel was emptied or degassed and, if necessary, add additional reporting requirements which provide for the enforceability of this rule.
3. With respect to any credit which may be taken for reductions from this rule in the reasonable further progress plan or attainment plan, please explain how the reductions were calculated. In particular, please explain how the credit has been appropriately prorated to reflect that many storage tanks may not be controlled until after the deadline for RFP or attainment because of the extended period allowed for compliance.

Detailed Comments

Control of VOC Emissions for Eight Control Techniques Guideline (CTG) Categories. (Rule Project No. 2010-016-115-EN)

The amendments in this proposed rule would change VOC control requirements in 30 TAC Chapter 115 Subchapter E, Solvent-Using Processes for eight Control Techniques Guidelines (CTG) categories issued in 2006, 2007, and 2008. The CTG categories included in this proposal are: Flexible Packaging Printing Materials; Industrial Cleaning Solvents; Large Appliance Coatings; Metal Furniture Coatings; Paper, Film, and Foil Coatings; Auto and Light-Duty Truck Assembly Coatings; Miscellaneous Industrial Adhesives; and Miscellaneous Metal and Plastic Parts Coatings. Our comments on this rulemaking project are as follows:

1. Compliance Dates

Please consider whether these rule revisions should be enhanced to require compliance where possible by the beginning of the ozone season, March 1, 2013. The rules as proposed make a distinction between owners and operators becoming subject to the requirements and complying with the requirements, allowing an additional 60 days for compliance after becoming subject.

For example, as indicated in proposed Division 3: Flexible Packaging Printing Materials 115.439(d), "The owner or operator of a flexible package printing line in the Dallas-Fort Worth and Houston-Galveston-Brazoria areas that becomes subject to the requirements of this division after March 1, 2013, shall comply with the requirements in this division no later than 60 days after becoming subject."

Given this, please consider modifying the rule to require compliance with these regulations no later than March 1, 2013.

Also, please use similar modifications in other compliance sections which are similarly worded, such as: §115.459(b), and §115.469(b).

2. Reasonably Available Control Technology (RACT) Requirements.

Absent the requisite demonstration, EPA will not be able to approve portions of the proposed rules. This is because the proposed rules replace emissions limits previously adopted as RACT with less stringent emissions limits. A demonstration from the State showing that the SIP-approved limits are no longer RACT, will be required for EPA's approval.

EPA's interpretation of the applicable provisions of the CAA is contained in the memorandum titled "Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories" dated March 17, 2011. This memo is included as an appendix at the end of our comments. The memo states that "for situations in which a

State has previously determined that more stringent applicability thresholds and/or control levels are RACT for one or more sources in a source category and the sources have complied with those requirements, then those existing controls should be considered RACT for such sources. Further, "if a state chooses to revise more stringent rules that are already in the approved SIP, so that those rules reflect the less-stringent recommended limits in the new CTGs, there are additional considerations . . . The state would need to first demonstrate that the SIP approved control requirements are not reasonably available considering technological and economic feasibility, consistent with EPA's definition of RACT." Sources have been complying with these limits in some cases for 20 years or more. Texas should explain how it is no longer RACT for these sources to continue to comply with the old limits.

Therefore absent a demonstration portions of the following proposed Division 5 rules may not be approvable these include: Surface Coating Processes §115.453 and Control Requirements. Specifically, EPA anticipates not being able to approve some of the revisions proposed for Large Appliances, Metal Furniture, Miscellaneous Metal Parts and Products, Miscellaneous Plastic Parts and Products, and possibly other sections, including portions of the following:

- Division 5: Surface Coating Processes §115.453 Control Requirements:
 - §115.453(1)(A) Large Appliances
 - §115.453(1)(B) Metal Furniture
 - §115.453(1)(C) Miscellaneous Metal Parts and Products
 - §115.453(1)(D) Miscellaneous Plastic Parts and Products

3. Director's Discretion

The proposed §115.454(b) provides for alternate control requirements approved by the executive director:

§115.454(b) For any surface coating process or processes at a specific property, the executive director may approve requirements different from those in §115.453(a)(1)(A) of this title (relating to Control Requirements) based upon the executive director's determination that such requirements will result in the lowest emission rate that is technologically and economically reasonable. When the executive director makes such a determination, the executive director shall specify the date or dates by which such different requirements must be met and shall specify any requirements to be met in the interim. If the emissions resulting from such different requirements equal or exceed 25 tons a year for a property, the determinations for that property must be reviewed every five years. Executive director approval does not necessarily constitute satisfaction of all federal requirements nor eliminate the need for approval by the United States Environmental Protection Agency in cases where specified criteria for determining equivalency have not been clearly identified in applicable sections of this chapter.

The rule should be revised to make clear that any alternative requirements to §115.453(a)(1)(A), approved by the executive director under §115.454(b) would need to be submitted as a site specific SIP revision for approval by EPA to ensure it meets the requirements for enforceability and public hearings.

4. **Division 5: Control Requirements for Surface Coating Processes. Title.**

It would be helpful to readily distinguish the rules in this division from those in Division 2. The proposed title for this new Division 5, “Control Requirements for Surface Coating Processes”, seems very similar to Division 2, “Surface Coating Processes”.

Dallas-Fort Worth Attainment Demonstration State Implementation Plan Revision
for the 1997 Eight-Hour Ozone Standard Nonattainment Area

The proposed DFW attainment demonstration SIP revision contains Federal Clean Air Act required SIP elements, including a photochemical modeling analysis, a weight of evidence analysis, a RACT analysis, a reasonably available control measures analysis, a motor vehicle emissions budget (MVEB) for 2012, and a contingency plan. This proposed revision includes concurrent rulemakings to update control requirements for certain coatings operations, in response to recommended RACT requirements in CTG documents issued by the EPA and VOC storage tank rule revisions to update existing and provide new control measures for the DFW area. This proposed revision also includes an on-road emissions supplement to the proposed attainment demonstration SIP.

1. Reasonably Available Control Technology (RACT) Requirements:

Absent a proper demonstration EPA will not be able to approve portions of the proposed rules because the revised limits replace emissions limits previously adopted as RACT with less stringent emissions limits. Without a demonstration from the State that the SIP-approved limits are no longer RACT, considering technological and economic feasibility, the proposed rule will not be approvable. EPA's interpretation of the applicable requirements of the CAA is provided in the memorandum entitled, "Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories" dated March 17, 2011. This memo is included as an appendix at the end of our comments. In general, for situations in which a State has previously determined that more stringent applicability thresholds and/or control levels are RACT for one or more sources in a source category and the sources have complied with those requirements, then those existing controls should be considered RACT for such sources. ... If a state chooses to revise more stringent rules that are already in the approved SIP, so that those rules reflect the less-stringent recommended limits in the new CTGs, there are additional considerations.... The state would need to first demonstrate that the SIP approved control requirements are not reasonably available considering technological and economic feasibility, consistent with EPA's definition of RACT."

Therefore, the portions of proposed Division 5 rules which are not approvable without a RACT demonstration include: Surface Coating Processes §115.453 Control Requirements. Specifically, EPA anticipates not being able to approve some of the revisions proposed for Large Appliances, Metal Furniture, Miscellaneous Metal Parts and Products, Miscellaneous Plastic Parts and Products, and possibly other sections, including portions of the following:

Division 5: Surface Coating Processes §115.453 Control Requirements:

§115.453(1)(A) Large Appliances

§115.453(1)(B) Metal Furniture

§115.453(1)(C) Miscellaneous Metal Parts and Products

§115.453(1)(D) Miscellaneous Plastic Parts and Products

2. Motor Vehicle Emission Budgets (MVEBs) and use of the Motor Vehicle Emission Simulator (MOVES) emission modeling system:

EPA Region 6 appreciates the work done by TCEQ and the NCTCOG to incorporate an approximation of MOVES mobile modeling outputs into the proposed attainment demonstration and RFP SIPs for the DFW area. MOVES is EPA's approved model for use in SIP submissions and transportation conformity analyses, because it represents the Agency's most current assessment of on-road mobile source emissions (75 FR 9411).

As noted in the proposed attainment demonstration SIP Revision, Section 3.7.6.3 (Expected Changes to SIP Revision Adoption with MOVES), "[w]hether MOBILE6.2 or MOVES is used for on-road emissions inventory development, the DFW area is anticipated to attain the 1997 eight-hour ozone NAAQS by the June 15, 2013 deadline". It is encouraging to see that the area is predicted to attain the standard by the deadline when on-road emissions are estimated using MOVES. Consistent with EPA's guidance for the use of MOVES in the development of SIPs and conformity determinations, Texas should proceed with finalizing attainment demonstration and RFP SIPs using the MOVES emissions modeling results. This would include establishing MOVES-based MVEBs for the DFW area.

The Supplement to the proposed attainment demonstration incorporates the use of the MOVES2010a emission modeling system. MOVES2010a incorporates new car and light truck energy and greenhouse gas rates and a number of other improvements. Unless substantial work with MOVES has been done, the TCEQ should use MOVES2010a and take full advantage of the improvements incorporated in this version.

Modeling/Weight of Evidence

The State has proposed, based on a technical demonstration including modeling and other evidence that the Dallas/Fort Worth areas will attain the 1997 ozone standard by the end of the 2012 ozone season. Based on the current monitoring data and the limited reductions that will happen between now in 2012, however, it seems unlikely that the area will attain. We note that the 2008 and 2009 years and even 2010 had higher wind speeds than normal that resulted in conditions less conducive to ozone formation. The 2011 period has been slightly above normal so far, as it has been very hot, but has had some low wind days and higher wind days. We note that based on the preliminary data that the area's current design value is 88 ppb, short of the 84 ppb goal. To attain by 2012 will require a significant reduction from current monitored levels.

The discussion of ozone design value monitors on page 5-12 and Table 5-4 is not current and does not reflect ozone data for 2010. This information should be updated to include current data.

Evaluation of the model performance data and source apportionment indicates that the model may be oversensitive to low-level NOx reductions. We note that the kv-200 patch

to induce more vertical mixing may be resulting in better performance in the base case, but also making the model overly sensitive to low-level NO_x reductions as the atmosphere may not be mixing as rapidly as the patch is indicating. This may compensate for emission estimation errors in the base, thus resulting in better model performance but also over-predicting the benefit of NO_x reductions. Comparison of baseline modeling and model performance using the MOVES and MOBILE6.2 emission inventories should provide useful information on the model's sensitivity to changes in low-level NO_x emissions.

We also noted that the modeling seems to project significant reductions in ozone levels due to out-of-state emission reductions. We think there may be some error in the magnitude of reductions being projected and request that TCEQ do comparisons with reductions expected with the new Cross State Air Pollution Reduction Rule. A model sensitivity run may help understand if this is part of the discrepancies of the model system.

The calculated RRF values used to project the 2012 DV shown on Table 3-26 range from 0.786 to 0.832, indicating a significant reduction in predicted ozone concentrations over a relatively short period of time. We note that the retrospective analysis (Table 3-24) shows observed RRFs from 1999 to 2006 range from 0.872 to 0.966. In calculation of RRFs, there is some concern that a cut-off of 70 ppb may be too low for determination of which days to include in the RRF calculation. Additional analysis of the sensitivity of the RRF calculation to using a higher cut-off value and including fewer days in the calculation, as well as an evaluation of the day-to-day variability of the RRFs and meteorology on those days, should be provided. Furthermore, evaluation of the sensitivity of RRF values to cell array size should be included, supporting TCEQ's choice of a 3x3 grid cell array about each monitor.

3. General

Throughout the submittal, we notice references to 2010 ozone data as preliminary. Please provide current ozone values in the final submittals.

We are pleased to see improvements to the area source emissions inventories, although the improvements indicate increased emissions from oil and gas activities in the area.

Regarding the discussion on the Clean Fuel Fleet (CFF) requirement, the state should review the CFF equivalency demonstration submitted by the TCEQ for the Beaumont/Port Arthur area, which was approved on October 20, 2010 (75 FR 64675). Since the CFF must be addressed in the DFW SIP, a similar equivalency demonstration is a reasonable option for consideration in the DFW area.

Regarding the discussion on gasoline vapor recovery and the removal of Stage II requirements on pages 4-6 and 4-7, please note that Stage II refueling requirements apply in serious, severe and extreme ozone nonattainment areas, provided the EPA has not yet

found that onboard refueling vapor recovery (ORVR) is in widespread use in the motor vehicle fleet and waived the section 182(b)(3) requirement.¹ Should the EPA finalize the rule as proposed at 76 FR 41731, then Parker, Johnson, Ellis, Kaufman and Rockwall counties would not be required to implement Stage II vapor recovery, nor would the state have to submit a demonstration that ORVR is in widespread use in these counties.

Regarding RACM, as indicated in Appendix G of the state's submittal, in order to advance attainment by one year (i.e., by June 15, 2012), the state would have to implement any additional control measures needed for attainment by the beginning of the 2011 ozone season, which has already passed. Thus, at this time, EPA believes there is insufficient time to implement additional controls that would advance attainment. However, Section 172(c)(1) of the Act requires SIPs to provide for the implementation of all RACM as "expeditiously as practicable" and for attainment of the standard. Therefore, and in light of the preliminary and increasing ozone design values (DVs) in the area, we encourage the state to provide a more robust RACM analysis that includes the magnitude of emissions reductions that would advance the attainment date at the monitors with the highest future DVs. Finally, we encourage the State to explore new technologies and pilot test new strategies to further reduce ozone in the DFW area.

All nine counties in the serious ozone nonattainment area must meet the requirements specified under section 182(c) of the CAA. We have accounted for all but three of these requirements; please specify where the state's rules address how Parker, Johnson, Ellis, Kaufman and Rockwall counties meet the de minimis rule (section 182(c)(6)), the special rules for modification of sources (section 182(c)(7) and (8)), and the increased offset ratio of 1.2 to 1 (section 182(c)(10)).

In the On-road Emissions Supplement to the Proposed DFW Attainment Demonstration, the sentence at the bottom of page 2 appears to be unfinished. We suspect it would direct the reader to Tables 2-3 and 2-4. Please confirm by finishing the sentence.

The state has submitted two recent revisions to Chapter 117 for:

- 1) low-temperature drying ovens at 117.403(a)(12); and
- 2) biogas fired lean-burn engines.

Please confirm that emission increases from these revisions have been captured in the attainment modeling.

¹ On July 15, 2011 (76 FR 41731), the EPA proposed criteria for determining whether ORVR is in widespread use for purposes of controlling motor vehicle refueling emissions throughout the motor vehicle fleet. Based on the proposed criteria, the EPA is proposing to determine that June 30, 2013 will be the date when widespread use will occur and the Stage II waiver will be effective.

Dallas-Fort Worth Reasonable Further Progress State Implementation Plan Revision
for the 1997 Eight-Hour Ozone Standard

The proposed DFW RFP SIP revision contains an analysis of the DFW serious ozone nonattainment area's progress toward attainment of the 1997 eight-hour ozone standard. RFP requirements include annual incremental reductions in ozone precursor emissions (NO_x and VOC) out to an area's attainment year, reductions in ozone precursor emissions as contingency measures for designated milestone years and for the attainment year, and updated RFP MVEBs for an area's milestone years. This proposed SIP revision would incorporate a concurrently proposed revision to Chapter 115 that would reduce VOC emissions from affected sources in the DFW area. (We are providing comments on the proposed revisions to Chapter 115 under Rule Project No. 2010-025-115-EN elsewhere.)

1. The Supplement to the RFP indicates that the state is considering using the emissions reductions earned through the TERP to successfully demonstrate RFP for 2011, which we fully support.

2. The state's modeling analysis demonstrates that reducing NO_x emissions in the DFW area is more effective in reducing the area's 8-hour ozone design value than reducing VOC emissions, thus substitution of creditable NO_x emissions reductions is allowable in this RFP.² For the 2012 milestone year, the proposed VOC emissions reductions fall short of meeting the VOC target by 9.79% to 13.82%, depending on which transportation model is used. The NO_x emissions reductions must therefore provide an excess of the same percentage as the VOC shortfall (9.79% to 13.82%) to compensate for the VOC shortfall and maintain the increment of RFP of 3% and this is provided. We show the calculations below, using the emission levels provided in the state's proposal and supplement. Lines 6-8 are not included in the state's submittals, but are required to demonstrate consistency with RFP and the EPA's NO_x Substitution Guidance.

² See EPA's NO_x Substitution Guidance, December 1993. In addition, on August 5, 1994, we issued "Clarification of Policy for Nitrogen Oxides (NO_x) Substitution," Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards.

NOx emissions reductions needed to balance VOC shortfall, in tpd unless otherwise noted.

Description	NOx	VOC
Using Mobile6.2 model		
1. 2012 Target emissions levels	393.59	463.25
2. 2012 Forecast/Projected emissions levels	324.28	517.11
3. Excess (shortfall) [(line 1) – (line 2)]	69.31	(53.86)
4. Amount for contingency measure (3% of 2012 ABY) ³	15.43 (3%)	0%
5. Excess (shortfall) [(line 3) – (line 4)]	53.88	(53.86)
6. Percent of shortfall from VOC target		11.63%
7. 11.63% of NOx target (to cover 11.63% VOC shortfall)	45.77 (11.63%)	
8. Adjusted excess in NOx reductions [(line 5) – (line 7)]	8.11	
Using MOVES model		
1. 2012 Target emissions levels	500.21	445.89
2. 2012 Forecast/Projected emissions levels	398.81	507.50
3. Excess (shortfall) [(line 1) – (line 2)]	101.40	(61.61)
4. Amount for contingency measure (3% of 2012 ABY) ⁴	19.43 (3%)	0%
5. Excess (shortfall) [(line 3) – (line 4)]	81.97	(61.61)
6. Percent of shortfall from VOC target		13.82%
7. 13.82% of NOx target (to cover 13.82% VOC shortfall)	69.13 (13.82%)	
8. Adjusted excess in NOx reductions [(line 5) – (line 7)]	12.84	
Using MOVES2010a model		
1. 2012 Target emissions levels	481.78	471.95
2. 2012 Forecast/Projected emissions levels	379.09	518.14
3. Excess (shortfall) [(line 1) – (line 2)]	102.69	(46.19)
4. Amount for contingency measure (3% of 2012 ABY) ⁵	18.91 (3%)	0%
5. Excess (shortfall) [(line 3) – (line 4)]	83.78	(46.19)
6. Percent of shortfall from VOC target		9.79%
7. 8.91% of NOx target (to cover 9.79% VOC shortfall)	47.17 (9.79%)	
8. Adjusted excess in NOx reductions [(line 5) – (line 7)]	36.61	

For the Mobile6.2 and both of the MOVES models, the percent of excess in NOx emissions reductions is greater than the percent of shortfall in VOC emissions reductions and provides the area with the required average of 3% per year in emissions reductions. However, the state will need to adjust the amount of “excess reductions from 2012 RFP demonstration” in the tables that show how the state satisfies the 3% emissions reductions that are required for contingency measures, should the area fail to attain the 1997 ozone standard by June 15, 2013.

3. One of the creditable reduction strategies used in the calculation of the total 2011-2012 control reductions is “Storage tank rule 95 control/25 limit.” See Appendix 1, sheet 43. The VOC emissions reductions provided for this strategy is 14.37 tpd. On sheet 44 of Appendix 1, we see

³ Per the state’s proposal, the 2012 adjusted base year (ABY) emissions inventory for NOx, using the Mobile6.2 model, is 514.47 tpd.

⁴ Per the state’s proposal, the 2012 ABY emissions inventory for NOx, using the MOVES model, is 647.80 tpd

⁵ Per the state’s proposal, the 2012 ABY emissions inventory for NOx, using MOVES2010a, is 630.46 tpd

the creditable reduction strategies used in the calculation for the 2012-2013 contingency measures. Again the "Storage tank rule 95 control/25 limit" is listed as one of the control strategies, but the total VOC emissions reductions for this strategy is 0.00. Please confirm that the credit for emissions reductions has been appropriately prorated for 2011-2012 and 2012-2013, to reflect the extended period allowed for compliance with this rule.

4. Please review the tables throughout the proposed submittal (including Appendices and Supplements) for mathematical errors. We found several errors, for example: Table 3-1 in Chapter 3, the sum at step 5D is 105.44 but the table reads 106.96; step 6 shows an error in subtraction; Table 4-29 shows an error in addition; etc.

Detailed Comments

The proposed HGB SIP revision provides a RACT analysis update in response to (CTG) documents that have not yet been included in the HGB Attainment Demonstration (AD) SIP Revision for the 1997 8-hour ozone standard and incorporate concurrently proposed CTG-related rulemaking for the HGB area. SIP Project No. 2010-028-SIP-NR. Our comments on this rulemaking project are as follows:

1. Reasonably Available Control Technology (RACT) Requirements.

The EPA will not be able to approve portions of the proposed rules which replace emissions limits previously adopted as RACT with less stringent emissions limits without a demonstration from the State that the SIP-approved limits are no longer RACT, considering technological and economic feasibility, as explained further below. The EPA's interpretation of the applicable requirements of the CAA is provided in the memorandum entitled, "Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories" dated March 17, 2011. This memo is included as an appendix at the end of our comments. In general, for situations in which a State has previously determined that more stringent applicability thresholds and/or control levels are RACT for one or more sources in a source category and the sources have complied with those requirements, then those existing controls should be considered RACT for such sources. ... If a state choose to revise more stringent rules that are already in the approved SIP, so that those rules reflect the less-stringent recommended limits in the new CTGs, there are additional considerations . . . The state would need to first demonstrate that the SIP approved control requirements are not reasonably available considering technological and economic feasibility, consistent with the EPA's definition of RACT."

Therefore, the portions of proposed to Division 5 rules which may not be approvable include: Surface Coating Processes §115.453 Control Requirements. Specifically, EPA anticipates not being able to approve some of the revisions proposed for Large Appliances, Metal Furniture, Miscellaneous Metal Parts and Products, Miscellaneous Plastic Parts and Products, and possibly other sections, including portions of the following:

- Division 5: Surface Coating Processes §115.453 Control Requirements:
 - §115.453(1)(A) Large Appliances
 - §115.453(1)(B) Metal Furniture
 - §115.453(1)(C) Miscellaneous Metal Parts and Products
 - §115.453(1)(D) Miscellaneous Plastic Parts and Products

Appendix

Attached Memorandum: "Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories", dated March 17, 2011 from Scott Mathias to Regional Air Division Directors. (3 pages)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

MAR 17 2011

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Approving SIP Revisions Addressing VOC RACT Requirements for Certain Coatings Categories

FROM: Scott Mathias, Interim Director *Scott Mathias*
Air Quality Policy Division (6539-01)

TO: Regional Air Division Directors

The Office of Air Quality Planning and Standards has received requests from Regional Offices for guidance on approving State Implementation Plan (SIP) revisions resulting from newly-issued Control Techniques Guidelines (CTGs) documents. These CTGs provide recommendations to inform state determinations as to what constitutes reasonably available control technology (RACT). In some cases, the newly-issued CTGs contain recommended emission limits that are less stringent than limits recommended in older CTGs covering the same industry, and may be less stringent than limits already adopted into SIPs based on the older CTGs. This is the case for industries covered by CTGs pertaining to Large Appliance Coatings, Metal Furniture Coatings, and Miscellaneous Metal and Plastic Parts Coatings.

The U. S. Environmental Protection Agency (EPA) issued new CTGs for these categories in 2007 and 2008, under authority of Clean Air Act (CAA) section 183(e), to address volatile organic compound (VOC) emissions from categories of consumer and commercial products. They replace similar CTGs issued by EPA in 1977 and 1978. The new CTGs recommend more stringent limits for general use coatings, but also include new recommendations for several "specialty use" categories that are less stringent than the general use limits established in the 1970s guidelines.

States are required to submit a SIP revision in response to any newly-issued CTGs.¹ If an existing SIP contains requirements that are not less stringent than the applicability thresholds and/or coating operations limits recommended in new CTGs, the state may choose to submit as a SIP revision a certification that the existing SIP meets RACT requirements.

¹ CAA section 182(b)(2) requires Moderate and above ozone nonattainment areas to revise SIPs when a new CTG is issued by EPA after 1990. EPA is required to set a SIP submission deadline with the issuance of each CTG. For CTGs we have issued in the past several years, we have specified a submission deadline of one year after the CTG was issued (See 72 FR 57215 Oct 9, 2007 and 73 FR 5848 Oct 7, 2008).

We anticipate that EPA Regional Offices would be able to approve the RACT determinations in these circumstances. We note that EPA's recommendations in CTGs are generally treated as "presumptive" RACT and states may demonstrate that other limits are RACT for one or more sources within the source category addressed by the CTG. Where a state has previously determined that more stringent applicability thresholds and/or control levels are RACT for one or more sources in a source category and the sources have complied with those requirements, then those existing controls should be considered RACT for such sources.

If a state chooses to revise more stringent rules that are already in the approved SIP, so that those rules reflect the less-stringent recommended limits in the new CTGs, there are additional considerations that must be factored into any EPA decision to approve the SIP revision. The state would need to first demonstrate that the SIP-approved control requirements are not reasonably available considering technological and economic feasibility, consistent with EPA's definition of RACT. *See* 44 FR 53762 (September 17, 1979). In addition, in order to comply with the SIP approval conditions of CAA section 110(l), the state would need to demonstrate that the revision to the SIP would not interfere with attainment of, or reasonable further progress toward attainment of, the National Ambient Air Quality Standards, nor interfere with any other applicable requirement of the CAA. This would be demonstrated if the stricter limits on general use coatings provide sufficient emission reductions to entirely offset any emission increase caused by adopting the less stringent limits for specialty coatings. Alternatively, the state could adopt supplemental measures that achieve additional emission reductions from another source category in another industry to offset the increased emissions from the specialty coatings. In general, if a proposed SIP revision achieves the same or greater emission reductions as the approved SIP within the same timeframe as provided under the existing plan, the Regional Office should be able to determine that the SIP revision is consistent with the approval conditions of CAA section 110(l).

The public dockets for the Large Appliance Coatings and the Metal Furniture Coatings CTGs contain information that states may find helpful in determining the reductions that can be achieved by adopting the new general use category CTG limits for these industries. According to the docketed information, the estimated reductions from the new CTGs are 30 to 35 percent greater than from the older CTGs. *See* documents EPA-HQ-OAR-2007-0329-0009 and EPA-HQ-OAR-2007-0334-0010 in dockets EPA-HQ-OAR-2007-0329 and EPA-HQ-OAR-2007-0334, respectively. The increase in emissions reductions in any specific nonattainment area may vary depending on the volume usage distribution among the general and specialty categories in that area. The dockets for the new CTGs do not contain area-specific analyses of potential emissions reductions. Generally, if a state believes the volume usage distribution among the general and specialty categories in the docket is representative of the distribution in the nonattainment area, we believe that if a state undertakes wholesale adoption of the new categorical limits in a specific CTG, the state may rely on the assessments in the docket to demonstrate that the range of new limits will result in an overall reduction in emissions from the collection of covered coatings. However, if a state adopts some specialty category limits, but not all of the new categorical limits, or determines that it has a different volume usage distribution among categories, the state may need to do an area-specific assessment of whether tighter restrictions for some coatings, coupled with

less stringent restrictions on other coatings would provide overall equal or greater emissions reductions than the set of rules based on the recommendations in the 1970s guidelines.

If you have further questions on SIP-related issues you should contact Butch Stackhouse at (919) 541-5208. If you have further technical questions on the topics covered in this memorandum you should contact Kaye Whitfield at (919) 541-2509.

cc: Robin Dunkins, SPPD
Kimber Scavo, AQP
David Orlin, OGC
Sara Schneeberg, OGC