UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Phone 800-227-8917
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Ref. 8P-AR

JUL 21 2006

MEMORANDUM

SUBJECT: Review of the June 30, 2006 Progress Report for the Denver 8-hour Ozone Early Action Compact (EAC)

FROM: Richard Long
Director
Air and Radiation Program
Region 8

TO: Barbara Driscoll
Geographic Strategies Group
OAQPS/AQPD

We have reviewed the State's June 30, 2006 Denver EAC milestone report (copy attached) and are satisfied with the State's progress as it continues to implement the provisions of the approved EAC SIP (ref. 70 FR 48652, August 19, 2005).

We note that the State's milestone report indicates concern with increased oil and gas facilities' emissions and compliance issues. The State has already initiated efforts to address these issues with the submittal of an action plan to EPA, dated June 2, 2006 (copy attached), for these sources and with the ongoing development of further regulatory measures to achieve greater emission reductions. These regulatory measures involve revisions to Colorado's Regulation No. 7, for the control of volatile organic compounds or VOCs, which specify additional requirements for oil and gas facilities and are scheduled for proposal before the Colorado Air Quality Control Commission (AQCC) at their August 17, 2006 meeting. Final action by the AQCC on these Regulation No. 7 revisions is scheduled for November 16, 2006. We continue to assist the State by reviewing draft regulatory language and participating in stakeholder meetings regarding these issues.

Should you have any questions, please contact Tim Russ of my staff at (303) 312-6479.

Attachments

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8P - AR
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Tim ____
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REGIONAL AIR QUALITY COUNCIL

Colorado Department of Public Health and Environment

June 30, 2006

MEMORANDUM

TO: Signatories to the Early Action Compact for Ozone for the Front Range Metropolitan Area

Regional Air Quality Council
Jim Scherer, Chairman

Air Quality Control Commission
Robert E. Brady, Jr., Chairman

Colorado Department of Public Health and Environment
Dennis E. Ellis, Executive Director

Colorado Department of Transportation
Thomas Norton, Executive Director

Denver Regional Council of Governments
Nancy N. Sharpe, Chairman

U.S. Environmental Protection Agency, Region 8
Robert E. Roberts, Regional Administrator

Elbert County, Board of County Commissioners
Stephen F. Stutz, Chair

Larimer County, Board of County Commissioners
Kathay Rennels, Chair

Morgan County, Board of County Commissioners
Michael Harms, Chair

Weld County, Board of County Commissioners
Rob Masden, Chair

IN RE: Ozone Early Action Compact/Ozone Action Plan Progress Report of June 30, 2006

In accordance with the terms of the Early Action Compact for the Colorado Front Range Ozone Control area, the enclosed report provides updates to the EPA regarding the Ozone Action Plan

for the Colorado counties of Denver, Boulder, Adams, Arapahoe, Broomfield, Douglas, Jefferson, Larimer and Weld. Included among progress items are:

1. The Air Pollution Control Division's Compliance Action Plan, submitted to EPA Region 8 June 2, 2006 for the oil & gas industry sector, and relevant compliance actions to date.

2. Colorado stakeholder meetings April 19, June 8 and June 28, 2006, to discuss oil and gas compliance issues, updated VOC emissions projections and proposed revisions to Air quality Control Regulation No. 7.

3. A brief discussion of additional control regulations under development for the EAC area and the state, to be proposed for rulemaking to the Colorado Air Quality Control Commission in August 2006 (hearing would be in November, 2006).

4. Passage of Colorado H.B. 1302, which allows for revisions to the state vehicle inspection and maintenance program (AQCC Regulation Number 11), providing the integrity of the Ozone Action Plan is preserved.

Ken Lloyd, Executive Director
Regional Air Quality Council

Margie Perkins, Director
Air Pollution Control Division

cc: Doug Lempke, Air Quality Control Commission
Mike Silverstein, Air Pollution Control Division
Lisa Silva, Air Pollution Control Division
Ann Skinner, Colorado Department of Transportation
Jeff May, Denver Regional Council of Governments
Dick Long, EPA Region 8
Tim Russ, EPA Region 8
Jerry Dilley, RAQC

Ozone Early Action Compact
Denver Metro Area
June 30, 2006 Progress Report

Introduction

In December 2002 state and local agencies in the Denver area entered into an Ozone Early Action Compact (EAC) with the Environmental Protection Agency (EPA). The Compact is a Memorandum of Agreement between the Regional Air Quality Council (RAQC), the Colorado Department of Public Health and Environment (CDPHE), the Air Quality Control Commission (AQCC), the Denver Regional Council of Governments (DRCOG), the Colorado Department of Transportation (CDOT), and EPA Region 8. The EAC was amended in 2004 with additional signatories for Elbert, Larimer, Morgan and Weld Counties, areas potentially affected by ozone nonattainment.

The Compact entails a commitment to develop and implement an Ozone Action Plan in return for deferring any potential non-attainment designation for the EPA's 8-hour ozone standard. The EAC outlines several planning milestones (including progress reports every 6 months) that must be met, culminating in attainment of the 8-hour standard by December 2007. The June 30, 2004 Progress Report was prepared demonstrating that an Ozone Action Plan, emission control regulations, and supporting documentation had been completed and adopted by the State authority, the Colorado AQCC. The adopted plan and regulations were subsequently reviewed and approved by the Colorado State Legislature and the bill approving the plan and regulations was signed into law by the Governor of Colorado in May 2004.

The December 31, 2004 Progress Report addressed the disposition of comments received from the EPA in August 2004 regarding recommendations for revisions to emission control regulation, Air Quality Regulation No.7, to provide clarity and ensure approvability of the Ozone Action Plan, and a necessary change to the Ambient Air Quality Standards regulation to define the 8-hour ozone control area.

The June 30, 2005 Progress Report addressed progress towards implementation of Ozone Action Plan control strategies, the Denver Metro area's voluntary response to the 8-hour ozone issue and planning activities in the North Front Range to ensure cooperation in terms of possible Conformity issues and coordination of voluntary control programs, if necessary.

The December 31, 2005 Progress Report addressed progress towards completion of milestones, the Denver Metro area's voluntary response in summer 2005 to the 8-hour ozone issue and planning activities for 2006 and the activities and report of the Multi-Jurisdictional I/M Transition Committee in the North Front Range. An April 19, 2006 revision clarified modeling assumptions related to Regulation No. 11.

This June 30, 2006 Progress Report follows up on the Division's efforts initiated in November 2005 to quantify projected flash emissions growth beyond that anticipated in

the OAP, compliance with 2005 flash emissions reduction requirements and preparedness of the oil and gas industry for achieving required reductions in the 2006 ozone season. In addition, this report presents the results of legislation which restructures the I/M program and allows for changes as long as the integrity of the OAP is preserved.

Updates on Activities Related to the EAC

Stakeholder meetings and other actions and activities that have occurred since the December 31, 2006.

The Air Quality Control Commission discussed or received updates and presentations on EAC issues related to removal and replacement of the I/M program and/or oil & gas compliance and flash tank emissions growth as follows:

- February 16, 2006 - Briefing on the Division's approach to review potential I/M removal or replacement strategies.
- March, 16, 2006 - Briefing and discussion of a matrix of I/M removal and replacement strategies. And, a briefing on efforts to quantify growth in oil & gas flash tank emissions and compliance during the 2005 ozone season.
- April 20, 2006 - Follow up briefings on analysis of I/M related strategies and oil 7 gas issues.
- May 17-19, 2006, AQCC Retreat, - Briefing and discussion of the impact of HB 1302 on the analysis of strategies to remove or replace the I/M program. HB 1302, if signed by the governor, sets the course for revamping the current I/M program, stressing clean screening strategies with high emitter identification, while preserving the EAC. And, a briefing on the oil & gas compliance rate (39% reduction in 2005, exceeding the 37.5% required reduction) and growth issues.

The Regional Air Quality Council received presentations and discussed the RAQC's summer 2006 Ozone Outreach program, oil & gas growth and compliance issues, I/M removal and/or replacement, and HB 1302 at regular bi-monthly meetings on April 6, 2006 and June 1, 2006.

The Air Pollution Control Division and the RAQC staff held a meeting with EPA staff on March 22, 2006 to discuss issues related to growth in oil & gas flash tank emissions beyond those estimated in the EAC Ozone Maintenance Plan, and efforts to quantify the 2005 compliance.

The Air Pollution Control Division a held meetings with northern Front Range government agency staff members, industry representatives, citizens, and elected officials on March 14 and May 4, 2006 to discuss issues related to growth in oil & gas flash tank emissions beyond those estimated in the EAC Ozone Action Plan, and efforts to quantify the 2005 compliance.
The Air Pollution Control Division and the RAQC staff held a meeting with EPA, DRCOG, FWHA, and northern Front Range transportation planning staff

members on April 6, 2006 to discuss issues related to growth in oil & gas flash tank emissions beyond those estimated in the EAC Ozone Action Plan, and efforts to quantify the2005 compliance.

The Air Pollution Control Division met with the Colorado Oil & Gas Association members on March 6, 2006 to apprise them of the need for an adequate response to required reporting of 2005 emissions, remind them of the compliance requirements for 2006 emissions, and to address the need for a solution to the increased growth in flash tank emissions beyond those estimated in the EAC OMP.

The Air Pollution Control Division held meetings on proposed revisions to Air Quality Control Regulation No. 7 for all interested parties to address additional controls for flash tanks on April 19th, June 8th and June 28th.

The Denver Regional Council of Governments received a briefing from staff on recent activities related to the EAC at their regular Board Meeting on May 17, 2006.

Updates or revisions to modeling, technical analysis or planning activities.

Summary of Modeling and Technical Analysis to Date (No change since 12/31/05)

Planning

APCD Staffing Response to Oil & Gas issues

In response to the growing concerns of increasing growth in the oil & gas industry in the EAC area and statewide, the APCD has established an 8-person (including 3 additional FTE) Oil & Gas Team. The team consists of permit, planning, technical services, small business services, and field services (inspectors) staff. Their charge is to track growth and compliance generally and for SIP purposes, develop permits and inspect facilities. Personnel transfers began in mid-April and were completed by the end of May.

Assessment of Growth in Flash Emissions and Compliance Findings

The Oil & Gas Team developed a report, Action Plan to Address Compliance Issues and Underestimation of VOC Emissions from the Oil & Gas Industry for the 8-hour Ozone Control Area, June 2, 2006, which was submitted to the EPA. The findings of the report are briefly summarized below.

As the APCD and RAQC staff were reviewing data related to EAC/OAP compliance in late 2005, there was concern that the level of compliance with the provisions of Regulation No. 7 would fall short and that estimated 2007 VOC flash emission levels were likely exceeded as early as 2004. Information gathered by the APCD since November 2005 indicates that unforeseen rapid growth in the oil and gas exploration and development industry has caused VOC emissions from condensate tanks to increase well above predicted levels, and that the 91 tpd controlled level anticipated in 2007 will be exceeded by approximately 33 tpd.

In November of 2005 the Division sent out 22 letters of inquiry to the oil and gas exploration and development companies in its database, pursuant to Colorado Air Pollution Prevention and Control Act Section 111(i). As of this writing it has been determined that compliance with the required 37.5% reduction by the industry overall was achieved in 2005. Based on industry reporting approximately 39% reduction in flash emissions (approximately 77 tpd reduced) was achieved. This was achieved because several companies over-controlled emissions, compensating for those that did not meet the reduction requirements. Supporting data are provided in the Action Plan, along with the action items to address deficiencies. It is important to note that notwithstanding the achievement of required VOC emission reductions for 2005 (77 tpd reduced) and the likely reduction of 47.5% for 2006, VOC emission levels will still exceed the 91 ton-per-day VOC threshold in 2007. Thus, additional controls are likely necessary.

The Action Plan describes the Division's efforts to ensure swift conformance to the Ozone Action Plan and Regulation No. 7 requirements, and development of additional VOC controls to offset the underestimated growth in the flash emissions. At this time BACT for condensate flash tanks in the 10-12 tpy range by the 2007 ozone season is being considered. A request for Public Hearing before the AQCC is scheduled for August with the Public Hearing scheduled for November.

Progress towards completion of the December 31, 2005 EAC milestones

Technology based controls

Condensate Tank Emissions Controls

The condensate tank emissions are commonly referred to as flash emissions, and are VOCs emitted during the condensate collection, storage, processing and handling at oil and gas wells. In 2002 there were over 3000 condensate tanks operating in the nine-county region, primarily in Weld County. In 2005 there were over 4000 condensate tanks operating in the region noted above.

Revisions were made to AQ Regulation No. 7, as part of the OAP to require a system wide 37.5% reduction in summer 2005 and a 47.5% reduction by the end of 2005 in preparation for the 2006 summer ozone season. Control technology is primarily flares, but some companies have installed vapor recovery systems.

Based on industry reporting on April 30, 2006, a 39% emissions reduction was being achieved industry wide during the ozone season and 32% (30% required) emissions reductions was being achieved in the off seasons. The industry was achieving the 47.5% reduction requirement by mid-May 2006.

As noted above under planning, additional controls prior to the 2007 season are being sought by the APCD to achieve the 91 tpd VOC threshold in 2007 flash emissions and offset the increased growth of uncontrolled emissions.

Revisions to Regulation No. 11 – Automobile Inspection and Readjustment Program

There was some confusion created by the 12-31-05 report concerning the timing of the application of the clean screening disbenefit in the current program. A revision to the 12-31-05 report was issued on 4-19-06.

During its recently completed 2006 session, the Colorado General Assembly enacted HB 1302, Development of a Clean Screen/High Emitter program.

This bill requires the CDPHE and the emissions Contractor to develop an implementation plan by December 31, 2006, to be approved by the AQCC that provides for "The substantially increased use of remote sensing devices for the identification of vehicles whose emissions comply with the air quality criteria... and that exceed the air quality criteria as determined by the commission."

The AQCC is directed to make best efforts to replace regular I/M with a high emitter program, and evaluate options for increasing the number of vehicles clean screened. The bill states that any such program must be acceptable to the EPA.

The CDPHE is directed to work with the emissions Contractor to develop a high emitter program acceptable to the EPA.

The bill terminates the vehicle emissions testing program effective December 31, 2010 "If the commission finds that this action does not violate federal air quality standards"

Program-based measures

Ozone Outreach and Education Program - Let's Take Care of Our Summer Air

The Regional Air Quality Council (RAQC) has been working since January to plan and develop the eighth year of its Voluntary Ozone Reduction Program. The 2006 program will build upon previous years with the implementation of a large-scale awareness, education, and outreach program entitled "Let's Take Care of

Our Summer Air." This comprehensive program is made possible with the help of numerous stakeholders from the Front Range region, including local, state, and federal governments, businesses, transportation organizations, non-profits, and citizens. Its goal is to increase awareness and understanding of ozone pollution and voluntary activities to help reduce ozone in the critical summer months. The 2005 enhanced effort was quite successful, raising general awareness of ozone pollution by 12 percent and the RAQC and its partners hope to further increase awareness and understanding of the issues this year.

The program encompasses large-scale outreach, advertising, and education components in order to raise public awareness and education about ozone issues and increase the number of people undertaking voluntary ozone reduction steps. In addition, it will assist with the promotion of the RAQC's high-emitter outreach project, the Repair Your Air Campaign.

The three main components of the program – media advertising and outreach, citizen outreach, and local government outreach – are designed to complement the efforts of each component of the program to maximize effectiveness and are detailed below.

Media Outreach and Advertising

The media components of the 2006 program will be the same as the 2005 program – utilizing television, radio, and outdoor communication channels. The RAQC will air the same commercials produced last year – one focusing on vehicles and the other on lawn equipment. The commercials will air over 400 times throughout a six week period this summer. The radio spots are 10- and 15-second spots that are read as part of the traffic reports. They will be read by live announcers nearly 400 times throughout a seven week period this summer. The same billboards will be used again this year and will rotate at nine different locations through the region from June through August. In addition to the paid media campaign, Suncor Energy has donated space for 250 signs located on top of fuel pumps located throughout the region. RTD also donated space for 50 signs located on the back of buses traveling throughout the region. KBCO 97.3 is implementing "EnviroMinutes," which are 60-second public service announcements addressing ozone pollution. These spots are read by radio personalities so that they sound like programming, rather than commercials. They will be heard by radio listeners a total of 12 times throughout a six week period. This combination of paid and bonus advertising will reach a broad audience and engage citizens in individuals actions they can adopt that will make a collective impact.

Citizen Outreach

Events

The RAQC and its partners have hosted two community events this year to further educate citizens about ozone pollution. The first included 13 spring Car Care Fairs at which motorists throughout the region learned about the importance of vehicle maintenance through an interactive visual vehicle inspection performed by NAPA technicians. The second event was the Mow Down Pollution lawn mower exchange, which provided $150 discounts on Neuton cordless electric lawn mowers. This summer, the RAQC will participate in other events, such as a Federal Highway Administration Transportation Fair, Bike to Work Day, and RideSmart Thursdays to promote alternatives to driving.

Web site

The RAQC is enhancing its ozone-dedicated web site at OzoneAware.org to keep citizens engaged in taking action and making them aware of upcoming programs and events. The web site has both English and Spanish language versions. RAQC will be working with its partners to increase unique visitors to the web site over last year's total of 6,500.

As a new and fun way to encourage behavior change, the RAQC and its partners created the "Summer Chill" program. Designed as a pledge system, citizens throughout the Front Range region are encouraged to take a pledge to chill this summer and avoid the activities that contribute to ozone pollution. Citizens can mail in a pledge or can register online at www.pledge.OzoneAware.org. Several area businesses have donated coupons and prizes and periodic drawings will be held to award pledge participants. As a complement to the pledge program, the "Summer Chill" campaign is establishing "Chill Zones" such as ice cream or coffee shops, restaurants, and other places where people can get out of the heat and chill, reducing ozone causing activities.

Education

New for this year the RAQC and the Greater Metro Telecommunications Consortium (GMTC) worked to write, develop, and produce a 30 minute educational television program on ozone. The project was funded through a Community-Based Clean Air Grant awarded by the Colorado Department of Public Health and Environment as well as contributions by GMTC – a consortium of over 30 municipal cable access stations. The program provides a unique opportunity to deeply explore and explain the complexities of ozone formation and its health impacts. The program aired on all municipal cable access stations on June 14 and will be replayed throughout the summer. In addition, the program will be aired as part of Comcast's Metro Beat TV series July through September and will be available to Comcast subscribers on-demand.

Local Government Outreach

Local governments continue to be an integral part of the RAQC's ozone reduction efforts. For the 2006 program, the RAQC will implement two unique programs developed last year. The first is a fleet gas cap testing program to identify and replace faulty and missing gas caps on gasoline-powered fleet vehicles. To date, a total of five local governments are signed up to participate, including Arapahoe County, City and County of Denver, and the Cities of Englewood, Golden, and Louisville. The second program is a sub-grant program to encourage and increase ozone outreach and education efforts by providing small grants to a few select governments that developed creative outreach proposals. Proposals were recently evaluated and the Cities of Arvada and Aurora, Town of Castle Rock, and the Greater Metro Telecommunications Consortium will each receive $2,500 to implement ozone outreach and education projects this summer ranging from a lawn mower exchange to a gas can exchange and general public outreach.

STATE OF COLORADO

Bill Owens, Governor
Dennis E. Ellis, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

June 2, 2006

Richard R. Long, Director
Air and Radiation Program
USEPA, Region 8, 8P–AR
999 18th Street, Suite 200
Denver, Colorado 80202

RE: *EPA's Request for an Action Plan to Address Compliance Issues and Underestimation of VOC Emissions from the Oil & Gas Industry for the 8-hour Ozone Control Area*

Dear Dick:

Enclosed is the Oil and Gas Activities Action Plan designed to address compliance issues and increasing emissions from oil and gas development in the 8-hour Ozone Control Area.

The plan documents that many oil and gas companies over-controlled volatile organic compound (VOC) "flash" emissions during 2005, thus ensuring the required percentage reduction overall for the oil and gas sector. On the other hand, many companies did not achieve required emission reductions and appropriate enforcement actions are underway. Additionally, the Plan documents the Division's plans for addressing the increase in flash emissions that are above established VOC emissions estimates.

Many components of the enclosed Action Plan are already underway and I look forward to increased emission reductions in compliance with the EPA-approved Ozone Action Plan.

Sincerely,

Margie M. Perkins

Margie Perkins, Director
Air Pollution Control Division

cc: Cindy Cody, Tim Russ - USEPA Region 8
Cindy Allen, Kirsten King, Lisa Silva, Mike Silverstein – APCD
Dennis E. Ellis, Executive Director, CDPHE
Jerry Dilley, Ken Lloyd, Denver Regional Air Quality Council
Thomas Norton, Executive Director Colorado Department of Transportation
Nancy N. Sharpe and Jeff May, Denver Regional Council of Governments
Stephen F. Stutz, Elbert County Board of County Commissioners
Kathay Rennels, Larimer County Board of County Commissioners
Michael Harms, Morgan County Board of County Commissioners
Rob Masden, Weld County Board of County Commissioners
Cliff Davidson and Suzette Thieman, North Front Range MPO

EAC Oil and Gas Activities Action Plan
June 2, 2006

This Oil and Gas Action Plan addresses the Division's approach to achieving and maintaining compliance with the Early Action Compact's (EAC) Ozone Action Plan, which includes the following:

- Year 2005 Compliance with Air Quality Control Commission (AQCC) Regulation No. 7 compliance;
- Year 2005 Enforcement activities for identified non-compliance issues;
- The Division's response to the increased growth in the EAC area; and
- The Division's plans for measuring compliance for 2006.

Overview

First, a review of Regulation No. 7 required-reports submitted by 25 companies for calendar year 2005 indicates that the average reduction of volatile organic compound (VOC) "flash emissions" for the 2005 ozone season was 39%. Twelve (12) of the 25 subject companies achieved the required 37.5% VOC emission reduction during ozone season, and 13 did not meet the required reduction. The overall average of 39% was achieved because some of the larger producing companies over-controlled their emissions, which compensated for those companies that did not meet the 37.5% reduction level.

Second, enforcement activities are underway and will be pursued for the companies who failed to meet Regulation No. 7 requirements as well as for many small companies that were not in APCD's emissions inventory system.

Third, unanticipated growth has resulted in greater flash emission in the region than previously estimated. The previous estimated flash emissions for Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld Counties were:

- 146 tons per day (tpd) for 2007 (*uncontrolled*)
- 91 tpd for 2007 (*controlled*)
- 101 tpd for 2012 (*controlled*)

The Division has developed revised estimates (preliminary) for flash emissions based on the reported 2005 data. These flash emissions are estimated to be:

- 236 tpd for 2007 (*uncontrolled*)
- 338 tpd for 2012 (*uncontrolled)*

These projections will be used to establish more stringent control requirements designed to maintain the *controlled* flash emissions level established in the EAC's Ozone Action Plan:

- 91 tpd VOC emissions in 2007 (*controlled*)
- 101 tpd VOC emissions in 2012 (*controlled*)

The stakeholder process is proceeding and the Division plans to propose a new rule in August 2006 that, if approved, would take effect in 2007.

Finally, during the past few months, the Division's newly created Oil and Gas Team has been focusing their efforts in the 8-hour Ozone Control Area with field inspections and observations. This presence in the field will help ensure compliance for 2006.

Details

I. 2005 Compliance with Regulation 7, Part XII

A. **PROBLEM:** Determine compliance with the 2005 Ozone season (May 1 – September 30). Annual reports were due to the Division by April 30, 2006.

i. **ACTION:** Report Total Uncontrolled TPY vs. Total Controlled TPY for the whole EAC area.

1. Division staff analyzed all the reports. See Table 1 for detailed emission data.

ii. **ACTION:** Report the % Reduction for entire EAC area.

1. See Table 1 for detailed emission data.

B. **PROBLEM:** Determine compliance with the 2005 Non-Ozone Season: January 1 – April 30, October 1 – December 31

i. **ACTION:** Report Total Uncontrolled TPY vs. Total Controlled TPY for the whole EAC area.

1. See Table 1 for detailed emission data.

ii. **ACTION:** Report the % Reduction for entire EAC area.

1. See Table 1 for detailed emission data.

C. **PROBLEM:** Determine compliance rates for each company for 2005.

i. **ACTION:** Provide a summary spreadsheet for a detailed list of each company and their compliance status.

TABLE 1

Companies Subject to Regulation 7

Company Name	Spreadsheet Submitted	% Reduction Ozone Season	% Reduction Non-ozone Season	2005 Compliance Status	Anticipated '06 Compliance
ACEITE ENERGY CORP	Yes	41.67%	31.76%	In	Yes
BLUE CHIP	Yes	0.00%	0.00%	Out	Yes
BONANZA CREEK OIL	Yes	0.00%	25.00%	Out	Yes
CITY/COUNTY DENVER	yes	43.32%	46.81%	Out	Yes
COLTON LLC	Yes	28.16%	37.00%	Out	Yes
ENCANA	Yes	48.00%	42.22%	In	Yes
EXCO RESOURCES	Yes	46.03%	24.10%	Out	Yes
FOUNDATION ENERGY MGT	Yes	0.00%	0.00%	Out	Yes
FOUNTAINHEAD	Yes	0.00%	0.00%	Out	Yes
K.P. KAUFFMAN CO	Yes	7.12%	3.63%	Out	?
KERR MCGEE	Yes	41.70%	34.00%	In	Yes
MACHII ROSS	Yes	51.39%	34.70%	In	Yes
MATRIX ENERGY, LLC	yes	0.00%	0.00%	Out	Yes
MERIT ENERGY COMPANY	yes	33.32%	9.79%	Out	Yes
NOBLE ENERGY INC.	yes	39.07%	32.40%	In	Yes
PALADIN ENERGY	yes	0.00%	23.40%	Out	Yes
PETRO-CANADA	yes	42.80%	33.80%	In	Yes
PETROLEUM DEVELOPMENT CORP.	yes	45.63%	32.67%	Out	Yes
PETROLEUM MANAGEMENT LLC	Yes	0.00%	0.00%	Out	Yes
RED WIL'.OW OPERATING CO.	yes	0.00%	0.00%	Out	Yes
SETEX OIL AND GAS	yes	54.99%	55.00%	Out	?
STARLIGHT OPERATING COMPANY	yes	11.29%	19.65%	Out	Yes
UNITED STATES EXPL	yes	0.00%	0.00%	Out	Yes
WHITEWING RESOURCES	yes	52.99%	44.69%	In	Yes
WHITING OIL & GAS CORP	yes	33.24%	33.24%	In	Yes
	TOTAL:	39.05%	32.88%		

Pending Companies Subject to Regulation 7

Company Name	Comments
DIVERSIFIED OPERATING	Currently developing site specific factors for crude oil tanks with 2 other companies
PRIMA EXPLORATION	Currently being investigated by APCD
RENEGADE OIL & GAS	Currently developing site specific factors for crude oil tanks with 2 other companies
TYLER ROCKIES EXPLORATION	Currently developing site specific factors for crude oil tanks with 2 other companies
WALSH PRODUCTION INC	Currently involved in enforcement with APCD

Companies NOT subject to Regulation 7

Company Name	Comments
ANTELOPE ENERGY CO	All the companies listed in this section are exempt from Regulation 7 either because their system wide VOC emissions are less than 30 TPY or their condensate production is less than 730 bbl/tank/year.
DELTA PETROLEUM	
DIAMOND OPERATING	
DUKE ENERGY FIELD SERVICES, LP	
INDUSTRIAL GAS SERVICES	
INTER MOUNTAIN OIL CO	
MOUNTAIN PETROLEUM	
OILFIELD OPERATING CO	
OVERLAND RESOURCES	
PRIMA OIL AND GAS	
SANDLIN OIL CORP	
SAWTOOTH ENERGY	
SMITH OIL PROPERTIES	
SNYDER OIL CORP POUDRE VALLEY	
SWIFT BEEF COMPANY	
TIGGES OIL LLC	
TINDALL OPERATING CO	
TOP OPERATING CO - DITA	
TRINITY ENERGY CORP	
TUDEX PETROLEUMS INC.	

II. 2005 EAC Enforcement Response

A. **PROBLEM**: 2005 field observations found that some companies may not be meeting the VOC reductions required by Regulation 7.

i. **ACTION**: Twenty-two letters sent to companies in APCD's inventory system requesting Reg. 7 reporting spreadsheet under C.R.S. §25-7-111 and Reg. 7, §XII.A.4.g

ii. **ACTION**: Twelve companies didn't respond and were sent Compliance Advisories (CA)→ all responded to the CA and are currently involved in enforcement.

1. Two companies confirmed exempt for Reg. 7
2. One company purchased by another
3. Companies instructed that first priority is to be able to meet 2006 emission percent reductions:
   a. One company appeared to demonstrate compliance with 2005 Ozone Season reduction requirements; the APCD is investigating pursuing further enforcement
   b. One company installed Vapor Recovery Units (VRUs) on six batteries
   c. Three companies have installed flares and demonstrated ability to comply with 2006 Ozone Season reduction requirements
   d. One company has introduced the usage of a Leed manufactured VOC meter, that the APCD has asked for more information on. This company may be exempt based upon API gravity of liquids.
   e. Two companies are presently installing flares to achieve 2006 Ozone Season reductions, with a status update due to the APCD by May 31
   f. One company's compliance status is unknown, but is scheduled to meet with the Division on June 20, 2006

B. **PROBLEM:** APCD became aware of companies that had failed to report production, exceeding Reg. 3 and 7 thresholds. In December 2005, approximately 30 potentially subject companies were identified that have not submitted Air Pollution Emission Notices ("APENs") or complied with Regulation 7.

i. **ACTION:** Commence new enforcement based upon COGCC well production data. O&G Fact Sheet created to provide compliance assistance to smaller companies. To date:

1. Nine companies were sent compliance advisories.

   a. One company prepared a 2005 annual report that demonstrated compliance with 2005 except for 13 days and controlled nearly all batteries, but failed to submit APENs to the Division

b. Two companies demonstrated compliance beginning in 2006, installing flares at highest emitting batteries
c. Three demonstrated exemption based upon API gravity of liquids
d. Two more companies prepared 2005 annual reports are installing flares for 2006 Ozone season
e. One company has stated it is not subject because of the API gravity of the liquids from its wells; see below under section C.ii.1 for APCD involvement in resolving this issue as a general trend.

ii. **ACTION:** 13 additional companies identified in the COGCC database are being researched for applicability based upon single well production data exceeding annual thresholds, API gravity data where available, and having a total annual production greater than 4380 barrels of liquids (equaling 30 tons VOCs based upon state emission factors).

C. **PROBLEM**: Establish applicability and compliance rates for EAC 8 Hour Ozone Control Area.

i. **ACTION:** review Reg. 7 Spreadsheets submitted by companies demonstrating daily compliance during Ozone Season and average for Non-ozone season.

1. 29 companies are subject to the emissions reduction and recordkeeping requirements of Regulation No. 7 (this includes the 22 companies discussed in II.A.i.).
2. Of the 29 companies, 7 were unreported sources for which enforcement commenced as a result of searching the COGCC database and working with the SBAP unit.
3. Of the 29 sources, 23 failed to meet 2005 Ozone and/or Non-Ozone Season reductions to varying degrees.
4. Overall the <u>average</u> reduction for the 2005 Ozone season was 38%. A spreadsheet identifying the type and longevity of violations is attached.
5. The APCD is currently formulating a penalty calculation methodology to foster consistency and equity in penalty assessment for 2005 Reg. 7 compliance.

ii. **ACTION**: the APCD identified the following general trends in reviewing 2005 Ozone Reg. 7 Compliance Data:

1. Three companies subject to enforcement have raised the issue of the adequacy of the API gravity threshold in APCD Common Provisions.

a. APCD Defines Condensate as Hydrocarbon liquids that remain liquid at standard conditions (68 degrees F and 29.92 in. Mercury) and are formed by condensation from, or produced with, natural gas, and which have an American Petroleum Institute gravity ("API gravity") of 40 degrees or greater."

TABLE 2

Company	May - Sept. (37.5% daily) # of days out of compliance	Average ozone reduction if out of compliance?	Non-ozone (30%) Reduction average	Approx date of compliance?
BLUE CHIP (enforcement concluded)	153	0%	0%	1-May-06
BONANZA CREEK OIL	149	0%	25%	31-Jul-05
CITY/COUNTY DENVER	80	43.32%	46.81%	15-Jul-05
COLTON LLC	121	28.16%	37.00%	1-May-06
EXCO RESOURCES	19	46.03%	24.01%	20-May-05
FOUNDATION ENERGY MGT	61	0%	0%	19-Jan-06
FOUNTAINHEAD (COC pending back fee calc)	153	0%	0%	1-May-06
K.P. KAUFFMAN CO	153	7.12%	3.63%	
KERR MCGEE	9	41.70%	34%	10-May-05
MATRIX ENERGY, LLC	153	0%	0%	1-May-06
MERIT ENERGY COMPANY	153	33.32%	9.79%	1-Jun-06
NOBLE ENERGY INC.	5	39.07%	32.40%	1-May-05
PALADIN ENERGY	153	0.00%	23.40%	1-Sep-05
PETROLEUM DEVELOPMENT CORP.	28	45.63%	32.67%	13-Jun-05
PETROLEUM MANAGEMENT LLC	153	0%	0%	1-Jun-06
RED WILLOW OPERATING CO.	153	0%	0%	1-May-06
RENEGADE OIL & GAS	153	0%	0%	5/22/2006; exempt?
STARLIGHT OPERATING COMPANY	151	11.29%	19.65%	
TYLER ROCKIES EXPLORATION	153	0%	0%	exempt?
UNITED STATES EXPL	153	0%	0%	
WALSH PRODUCTION INC	153			

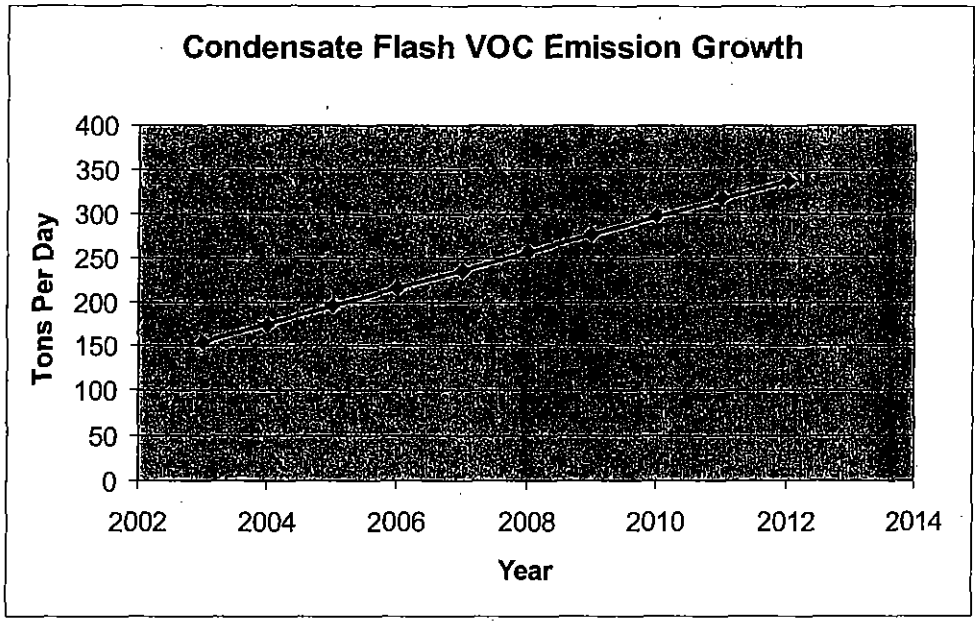
III. Oil and Gas Growth in the EAC Area

A. **PROBLEM:** The growth rate predicted for modeling attainment with the ozone standard in the original Ozone Action Plan was underestimated. Uncontrolled actual emissions reported in 2004 were 176 tpd and 2005's emissions were 197 tpd, both of which exceed the projected 2007 uncontrolled emissions. 2005 controlled emissions were 120 tpd.

i. **ACTION:** The Division recognizes that the 91 tpd (2007) and the 101 tpd (2012) controlled emissions levels must be preserved to maintain the EAC.

1. The Division has made industry aware of the problem and began a stakeholder process to make necessary changes to Regulation 7 to ensure the emission cap is preserved
2. The Division plans on pursuing a state-wide minor source BACT program, which will encompass the EAC area.
3. The Division utilized 2005 industry reported emission data to estimate projected uncontrolled emission in 2007 to be 235.7 tpd and 2012 to be 337.7 tpd. This will be used to determine the additional control required to preserve the 91 tpd and the 101 tpd emissions levels. See Table 3

TABLE 3



IV. Action Items for 2006

A. **PROBLEM:** The Division must ensure compliance with the VOC reduction requirements of Regulation 7.

   i. **ACTION:** Require companies to provide an update to the Division on August 15, 2006, which outlines compliance for May, June and July. The update will include copies of their spreadsheet showing their daily compliance for these months.
   ii. **ACTION:** Require companies to provide another update of compliance at the end of the ozone season by November 15, 2006.

B. **PROBLEM:** Regulation 7 is a self-reporting regulation. When a control device goes down (i.e. pilot light blows out) the companies should report that on their spreadsheet. The Division needs to establish a way to ensure all operating parameters are being recorded as required.

   i. **ACTION:** The Division has contracted personnel from the Weld County Health Department to make routine observations of control equipment at these facilities.
   ii. **ACTION:** The Division has established an Oil and Gas team, comprised of 7 people who will be solely assigned to oil and gas work. Inspection and compliance efforts will be focused on the region throughout 2006.

REGIONAL AIR QUALITY COUNCIL

Colorado Department of Public Health and Environment

Action Plan to Address Compliance Issues and Underestimation of VOC Emissions from the Oil & Gas Industry for the 8-hour Ozone Control Area
June 2, 2006

Background, Purpose and Need

In December of 2002, a number of state and local agencies entered into an Early Action Compact (EAC) with the USEPA to address ozone exceedances in an accelerated manner to avoid a nonattainment designation under the 8-hour Ozone Standard. Signatory agencies are: the Colorado Air Quality Control Commission; the Colorado Department of Public Health and Environment; the (Denver) Regional Air Quality Council; the Denver Regional Council of Governments; the Colorado Department of Transportation; the counties of Elbert, Larimer, Morgan and Weld; and EPA Region 8.

The EAC required an Ozone Action Plan (OAP) featuring emissions reductions, compliance milestones, semi-annual progress reports, and related regulations to ensure expedited compliance with the 8-hour Ozone National Ambient Air Quality Standard by December 2007.

The commitments include (but not limited to):

- Limiting VOC "flash" emissions via AQCC Regulation No. 7 from oil and gas operations to 91 tons per day in 2007. The 91 tons per day were the controlled emissions in the OAP's attainment modeling. Pertinent requirements of Regulation No. 7 include:
    - For oil and gas well system condensate tanks whose VOC emissions are > 30 tons per year: Reductions of 37.5% was required in the 2005 ozone season. Reductions of 47.5% are required for 2006 ozone season.
    - For stationary reciprocating internal combustion engines (RICE) larger than 500 horsepower: Controls for rich-burn RICE should be non-selective catalyst reduction; controls for lean-burn RICE should be oxidation catalyst.

Findings

As the APCD and RAQC staff were reviewing data related to EAC/OAP compliance in late 2005, there was concern that the level of compliance with the provisions of Regulation No. 7 would fall short and that estimated 2007 VOC flash emission levels were likely exceeded as early as 2004. Information gathered by the APCD since November 2005 indicates that unforeseen rapid growth in the oil and gas exploration and development industry has caused VOC emissions from condensate tanks to increase well above predicted levels, and that the 91 tpd level has been exceeded.

In November of 2005 the Division sent out 22 letters of inquiry to the oil and gas exploration and development companies in its database, pursuant to Colorado Air Pollution Prevention and Control Act Section 111(i). As of this writing it has been determined that compliance with the required 37.5% reduction rate for 2005 was achieved by the industry overall. This was achieved because several companies over-controlled emissions, compensating for those that did not meet the reduction requirements. Supporting data are provided in this Action Plan, along with the action items to address deficiencies. It is important to note that notwithstanding the achievement of required VOC emission reductions for 2005 and the likely reduction of 47.5% for 2006, VOC emission levels will still exceed the 91 ton-per-day VOC cap. Thus, additional controls are deemed necessary.

In addition to the exceedances of the VOC cap, noncompliance findings for 17 companies place the Early Action Compact in jeopardy of being rescinded by EPA, which would necessarily result in an immediate nonattainment designation for the area of concern, and all of the attendant restrictions upon industry, as well as significant additional air quality and transportation planning requirements for all of the agencies involved.

Agency and Industry Response Lead to a Realistic Action Plan

At meetings in the past few months, area agencies and industry continue to indicate their strong preference to address compliance shortcomings swiftly in order to preserve the EAC and to avoid the nonattainment designation. EPA then requested that the Division provide an Action Plan by June 2006 describing the Division's response to the issues described above.

The Action Plan describes the Division's efforts to ensure swift conformance to the Ozone Action Plan and Regulation No. 7 requirements, and as well as development of additional VOC controls to offset the underestimated growth in the oil and gas industry.