

US EPA ARCHIVE DOCUMENT

**Ozone Early Action Compact
Denver Metro Area
June 30, 2007 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 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 (OAP) 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 regarding potential Transportation Conformity issues and coordination of voluntary control programs, if necessary.

The December 31, 2005 Progress Report addressed progress towards completion of milestones, the adoption of periodic assessment language to the Plan, 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.

The June 30, 2006 Progress Report followed up on the CDPHE Air Pollution Control Division's (APCD) 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, the report presented the results of legislation (HB 06 – 1302), which restructures the I/M program and allows for changes as long as the integrity of the OAP is preserved.

The December 31, 2006 Progress Report described the efforts of the Air Pollution Control Division, the Air Quality Control Commission, the Regional Air Quality Council, the oil & gas industry, environmental interests and other stakeholders to preserve the EAC in the face of unanticipated growth in the oil & gas industry. In addition the progress report summarized recent EPA action regarding deferral of the non-attainment designation for the Denver EAC area. This report also addressed the HB 1302 implementation plan for an increased high emitter identification program and efforts to revise the current I/M program.

In this Progress Report of June 30, 2007, the final efforts of the region to achieve the 8-hour ozone standard by the close of the 2007 ozone season are summarized. These efforts include the state's action regarding legislative approval and governor's signature on the December 2006 revision to the Ozone Action Plan, the response of the oil & gas industry to the required increase in controls on Flash tanks by the beginning of the 2007 summer ozone season, and an update on the APCD efforts on development of the HB 1302 implementation plan. This progress report also outlines the RAQC's voluntary ozone outreach program for summer 2007. In addition the progress report summarizes recent EPA action regarding deferral of the non-attainment designation for the Denver EAC area.

Updates on Regulatory and Ozone Action Plan Activities Related to the EAC

Revisions to Regulation No. 7 and the Ozone Action Plan

The Revision's to Regulation No. 7 & the Ozone Action Plan approved by the AQCC on December 17, 2006 were

- Submitted to Colorado State Legislature for review January 15, 2006, and
- Directed by State statute to be submitted to EPA for final approval and incorporation into the State Implementation Plan on February 16, 2007.
- Under delegated authority the Director of the Colorado Department of Health and Environment shall oversee the transmission of the revisions to the Regulation and the OAP to the EPA.

Recent EPA Action on the Denver 8-Hour EAC Area Deferral Status

In the March 1, 2007 Federal Register (Volume 72, Number 40) [Page 9285-9289], the EPA published Proposed Rules for the Final Extension of the Deferred Effective Date for 8-Hour Ozone National Ambient Air Quality Standards for the Denver Early Action Compact stating that “the EPA has determined that sufficient progress has been made by the Denver EAC area in order to propose extending the deferral of the nonattainment designation from July 1, 2007, until April 15, 2008. Based on comments received on this proposal and the actions of the State Legislature, EPA will make a determination on finalizing this extension.”

The current schedule for this EPA rulemaking is as follows:

- April 2, 2007: the 30-day public comment period closed.
- EPA is currently reviewing the final rule.
- Publication of the final rule in the Federal Register is expected by June 3, 2007.

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

The Regional Air Quality Council hosted an “Ozone Matters” workshop April 25, 2007, which covered health issues related to ozone exposure, monitored ozone levels in the EAC area, the science of ozone formation, and tips for reducing ozone precursor emissions via individual citizen’s action. EAC area agencies, environmental and health organizations and the general public were in attendance.

The Air Quality Control Commission received an update on EAC issues from APCD staff at its recent Retreat on May 17-18, 2007.

The Regional Air Quality Council received an update from staff on the RAQC’s voluntary summer outreach and awareness program, “Let’s Take Care of our Summer Air”, at its regular board meeting on March 1, 2007.

The RAQC staff made a presentation on the *Ozone Challenges for the Denver and Northern Front Range Region* that included references to the EAC at the 2007 Spring Technical Conference of the Rocky Mountain States Air & Waste Management Association on May 17, 2007 in Golden, CO.

The Regional Air Quality Council staff and Air Pollution Control Division staff provided a progress briefing for EAC stakeholders representing the City and

County of Denver, Boulder County, City of Fort Collins, and Environmental Defense on June 12, 2007.

The Air Pollution Control Division convened no stakeholder meetings to present/discuss related EAC issues. However, the APCD provided updates to the Greeley Air Quality and Natural Resource Commission on June 14, 2007.

The Denver Regional Council of Governments neither received briefings from staff nor took positions on any issues related to the EAC at their regular meetings.

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

Meetings were held by the APCD April 4 and June 11 for agencies (APCD, the RAQC and EPA) to discuss inventory planning and modeling needs for a maintenance plan (or attainment plan if that may be necessary). The APCD is working to review and reconcile Air Pollutant Emission Notice reporting and compliance reporting related to oil and gas emissions at this time.

Progress under the APCD Compliance Action Plan (June 2, 2007)

The APCD Stationary Source Program Oil & Gas Team (OGT) has worked with the oil & gas industry in terms of reporting, recordkeeping, inspections and enforcement since the team was formed in May 2006. The Oil & Gas Team initially 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 Action Plan described the Division's efforts to be employed 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.

Growth Estimates

Information gathered in May, July and November 2006 from the 29 companies subject to the regulation in 2005 and 2006 was used to develop the uncontrolled emissions from EAC area condensate tanks for 2005 of 195 tons per day (TPD), which was useful in establishing the estimated uncontrolled emissions for 2007 (233 TPD), the target year in the Ozone Maintenance Plan. The 233 TPD served as the basis for determining the level of VOC emissions control from condensate tanks adopted by the AQCC in December 2006.

Compliance Reporting

In May of 2007, the OGT reviewed and assessed the 2006 Annual Reports for all companies currently subject to Regulation No. 7, §XII, for the EAC area. Annual

reporting for 2006 confirmed that the overall system-wide (across all companies on a day-by-day analysis) daily 2006 ozone season required emissions reduction percentage (47.5%) was met (47.8%) as a whole by the subject companies, although there were daily excursions for particular companies identified. Based upon the 2006 annual reporting, the system-wide overall emission reduction reached 42% as averaged across the non-ozone season (January through April 31 and October 1 through December 31). Again, particular companies failed to meet the average emission reduction of 38% due to early noncompliance with Regulation No. 7 during the first part of the non-ozone season. The Division will pursue enforcement for companies for failing to report, emissions reductions violations, and other reporting noncompliance that have not otherwise been pursued, negotiated and settled prior to the 2006 Annual reporting year.

On January 22, 2007, the Division issued a letter to the industry reflecting the changes to Regulation No. 7 pertaining to the EAC area. This letter is posted on the Division's Oil & Gas website, and issued to all known operators in the EAC. The letter addressed the new emissions reductions, monitoring, and recordkeeping requirements approved by the Air Quality Control Commission (AQCC) on December 16, 2006.

Additionally, in March and April of 2007, the OGT conducted outreach via telephone calls to the industry regarding both the new requirements and the potential regulatory compliance status for the pending 2007 Ozone Season. As a result of that outreach, the industry has represented overall ability to comply with the new emissions reduction requirements, with a few exceptions. The OGT continues to work with operators that have indicated they will not meet or have not met the 75% weekly emission reductions standards, and the Division will evaluate whether further enforcement is necessary for any noncompliance identified. The Division will request data from all known/subject operators in mid-July to better assess compliance with the new 2007 Ozone Season emission reductions requirements.

Enforcement

In March of 2006, members of the Divisions field enforcement group (shortly thereafter placed on the OGT), developed and implemented an action plan to ensure compliance with Regulation No. 7's emission reduction requirements. The Division reviewed sources reporting condensate storage tanks on Air Pollutant Emission Notices (APENs) for regulatory compliance status, as well as those companies that had not reported tanks to the Division but who reported production to the Colorado Oil and Gas Conservation Commission (COGCC). Additionally, as described in the inspections section below, the Division has pursued enforcement for inspections conducted by Weld County during the 2006 ozone season of tank batteries and control devices.

Since January 1, 2007, the Division has initiated an additional thirteen enforcement actions for the following violations:

- Failure to respond to a request for information pursuant to the Division's authority under C.R.S. §25-7-111
- Failure to report pursuant to the requirements set forth at AQCC Regulation No. 7, §XII.A.5
- Failure to meet the emission reduction requirements for either or both the 2005 or 2006 ozone seasons
- Failure to install controls on engines greater than 500 horsepower operating within the EAC area and/or failure to apply for and receive an exemption from the engine control requirement; and/or
- Failure to maintain control devices according to Regulation No. 7 §XII, failure to minimize emissions by leaving a thief hatch open and/or report downtime in the Annual Reports and accord proper zero control efficiency for that device.

The status of active enforcement actions since January 1, 2007 is as follows:

- Ten cases have been resolved via enforceable consent orders or settlement agreements for 2005 violations, 2006 violations, or both
- Three companies remain pending determination for exemption; and
- Four actions are pending settlement. One of note is a pending settlement agreement with Kerr-McGee that it take remedial action, most of which goes beyond remedies available as part of an administrative or civil order. Pending public comment and the Court's decision, Kerr-McKee has agreed to:
 - Install oxidation catalysts for Volatile Organic Compounds (VOCs) on the 11 engines identified in Colorado's November 2005 NOV.
 - **Install NOx controls on 7 of the 11 engines.**
 - **Retrofit or replace approximately 900 high bleed pneumatic devices with low bleed pneumatic devices.**
 - **Perform Optimization Review at five facilities designed to identify opportunities to increase product recovery and efficiency of operations and thereby reduce air emissions.**
 - **Perform a \$150,000 Supplemental Environmental Project designed to retire high emitting vehicles in the Denver Metro Area.**
 - \$50,000 civil penalty.
 - **Perform early installation of a flare to control condensate tank emissions at the Brighton Compressor Station.**
- The settlement is expected to achieve the following annual emission reductions in Colorado:
 - 1,041 tons per year (tpy) of VOCs,
 - 1,751 tpy of NOx,
 - 440 tpy of CO.

Inspections

The APCD entered into a contract with the Weld County Health Department for the summer 2007 ozone season. The contract requires Weld County to inspect 102 flared sources over the period of May through June 31, 2007. The purpose of these inspections is to determine flare operation status and compare flare downtime reporting in the Regulation No. 7 submittals with what is observed by Weld County inspectors. To date during the ozone season, Weld County has discovered 29 potential compliance issues. Comparing these potential violations to the Regulation No. 7 reporting submittals will determine compliance status. The Division has issued a formal request that companies in the EAC area submit a Regulation No. 7 submittal by July 2, 2007 documenting emissions and emission reductions for the period from January 1, 2007 through June 9, 2007.

Progress towards preservation of the EAC Agreement

Technology based controls

Condensate Tank Emissions Controls

As noted earlier in this document, additional control requirements for Condensate Tanks prior to the 2007 season have been adopted by the AQCC through revision to Regulation No. 7 to achieve the 91.3 TPD VOC level in 2007. The adopted revision was submitted to the Colorado State Legislature for review. The adopted actions of the AQCC were directed by State statute to be submitted to EPA for final approval and incorporation into the State Implementation Plan. The revisions to the regulation and the plan are to be delivered to the EPA by the Director of the CDPHE under delegated authority.

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

To further investigate the implementation of HB1302 CDPHE, Envirotest and the RAQC met on April 16, 2007 to discuss refinements to the identification and data filtering protocols. From the plan put forth by Envirotest, CDPHE and RAQC have begun analyzing these refinements.

Throughout June 2007, CDPHE and RAQC met to discuss the analysis plan. CDPHE is developing an outline of the analytical plan with a full draft analysis to be completed around the beginning of July 2007. This analysis will be reviewed

by stakeholders, with a final analysis to be completed by September for the October AQCC hearing.

Program-based measures

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

The Regional Air Quality Council (RAQC) is currently in the planning stages for the ninth year of its Voluntary Ozone Reduction Program. The 2007 program is built 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 efforts were quite successful, raising general awareness of ozone pollution by 12 percent in the first year of the three-year comprehensive effort.

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 greatly assisted 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 2007 program are planned to be the same as the 2005 and 2006 programs – utilizing television, radio, and outdoor communication channels. The RAQC plans to air the same television commercials produced in 2005 – one focusing on vehicles and the other on lawn equipment. The commercials are slated to air nearly 700 times throughout a seven-week period this summer. The radio spots are 10- and 15-second spots that are to be read as part of the traffic reports. In addition, the radio spots recorded for the high school radio scholarship contest "AirWaves" will be aired throughout the summer. The radio spots are to air in total nearly 600 times throughout an eight-week period this summer. The same five billboards are being used again this year and rotated at five different locations through the region from June through August. In addition to the paid media campaign, Suncor Energy donated space for 250 signs

located on top of fuel pumps located throughout the region. The RAQC will also be putting up an additional 152 pump toppers and 76 hose talkers at gas stations throughout the metro-Denver area. RTD also donated space for 50 signs located on the back of buses traveling throughout the region. This combination of paid and bonus advertising will reach a broad audience and engage citizens in individual actions they can adopt that will make a collective impact.

Citizen Outreach

Events

Throughout the spring and summer, RAQC and its partners hosted one large online or “virtual” event and will attend several community events to further educate citizens about ozone pollution. The main event this year is the Mow Down Pollution lawn mower exchange, which provides discounts on several different pieces of earth-friendly lawn equipment to those who purchase the selected equipment online through the RAQC’s OzoneAware.org web site. In addition to the deep discounts already offered by the manufacturers, the RAQC is offering an additional rebate to citizens who send in proof of purchase for their new alternative-powered equipment. Citizens who permanently retire a piece of gasoline-powered lawn equipment get an additional rebate after they send in proof that their old mower has been recycled. The RAQC has also committed to participate in several other community events. The summer events schedule is in the process of being finalized, but the RAQC and partners have already participated in the first event of the season – a transportation fair hosted by Transportation Solutions. The RAQC has plans to participate in other events, such as a Federal Highway Administration brown bag lunch event, Bike to Work Day, and RideSmart Thursdays to promote alternatives to driving. The RAQC is also working with new chill partner The Denver Art Museum, and will participate in at least one of their summertime events, which draw large crowds.

Web site

The RAQC continues to enhance 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 work with its partners to increase unique visitors to the web site from last year.

The RAQC and its partners will expand the “Summer Chill” program created in 2006. 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 have the option of mailing in a pledge or registering online at the ozone web site. Several area businesses will sign on as chill partners to donate coupons and prizes for goods and services and drawings will be held throughout the summer for chill participants. As a complement to the

pledge program, the “Summer Chill” campaign will establish even more “Chill Zones” at shops, restaurants, and other places where people are able to get out of the heat and chill, reducing ozone-causing activities. At the end of the ozone season in 2006 over 700 people made a pledge to chill. The RAQC hopes to more than double that number this year.

Education

The RAQC will work to increase the distribution of the ozone video entitled “Ozone in Your Zone” to local governments, schools, and partners. The RAQC has already sent out numerous copies of the video and hopes to continue to distribute the video to interested parties. The program provides a unique opportunity to deeply explore and explain the complexities of ozone formation and its health impacts. The program will air on all municipal cable access stations throughout the summer.

For the third year, RAQC worked with Envirotech Systems, Corp. (Air Care Colorado) to host a high school radio scholarship program to educate teenagers about important air quality issues. The contest asked students to write, record, and produce a 30-second public service announcement on air quality, transportation, and public health. The contest was open to all high school students throughout the state. Two entries were chosen for their creative efforts and the three students who produced them were awarded college scholarships. In addition, each corresponding school received an environmental award. The students were able to record their spots at a professional studio at KBCO’s offices. The finished spots aired on KBCO several times a day for eight weeks.

Research

This year marks the third and final year of the Congestion Mitigation / Air Quality grant, which has funded a large portion of these enhanced education efforts. At the end of the 2007 summer ozone season, another follow-up survey will be conducted to measure the campaign’s effectiveness in raising awareness and changing behavior. The RAQC and partners conducted a request for proposal (RFP) process to select a research firm to conduct the final year of follow-up research. In May, the RAQC and partners chose The Howell Research Group to conduct the research and analysis for the final year of the comprehensive program.

Local Government Outreach

Local governments continue to be an integral part of the RAQC’s ozone reduction efforts. For the 2007 program, the RAQC will continue implementation of a unique program developed in 2005. The fleet gas cap testing program identifies and replaces faulty and missing gas caps on gasoline-powered fleet vehicles. A

total of nine fleets plan to participate, including the Cities of Englewood and Golden, the Counties of Arapahoe, Boulder and Douglas, the Boulder County Sheriff's Office, Poudre Valley Schools, and Little Public Schools.

The comprehensive voluntary program for ozone mitigation will conclude at the end of this summer ozone season, however, the RAQC will continue to work on the important task of reaching out to the public to educate citizens about ozone pollution and what individuals, businesses, government, and non profits can do to help reduce it in the coming years.