STATE OF COLORADO

Bill Owens, Governor
Douglas H. Benevento, Acting 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

December 30, 2002

Richard Long, Director
Air and Radiation Program (8P-AR)
U.S. EPA Region VIII
999 18th Street, Suite 500
Denver, CO 80202

Dear Dick:

Enclosed is the Denver Ozone Early Action Compact for signature by EPA Region 8's Regional Administrator. All of the signatories at the State and local level have signed the Compact and I am requesting your assistance in obtaining Mr. Roberts signature by December 31, 2002. I appreciate your staff's assistance in drafting the Compact and facilitating EPA Headquarters' review of the document.

If there are any questions or you require additional information, please contact me at 303-692-3115 or Mike Silverstein at 303-692-3113.

Sincerely,

Margie Perkins, Director
Air Pollution Control Division

Enclosure

cc: Doug Lempke, Air Quality Control Commission
Ken Lloyd, Regional Air Quality Council
Tim Russ, EPA Region 8

THE EARLY ACTION COMPACT FOR OZONE
Denver Metropolitan Area

BACKGROUND INFORMATION

The Denver Metropolitan Area's Early Action Compact

The Denver metro area is volunteering to participate in the U.S. Environmental Protection Agency's (EPA) Early Action Compact (EAC) Protocol process for the express purpose of deferring the effective date of a nonattainment designation for the Denver area if a violation of the 8-hour ozone NAAQS occurs in the future. The following presents information on the federal ozone standards, the EAC requirements, and the commitments by all parties to implement the EAC.

The National Ozone Standards

The Federal Clean Air Act (CAA) is the comprehensive law that regulates airborne emissions from area, mobile, and stationary sources nationwide. This law authorizes the EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The EPA currently has two NAAQS for ozone, the 1-hour peak standard and the 8-hour standard.

The 1-Hour Standard and the Denver Metropolitan Area

An area must have a monitored hourly peak ozone concentration below 0.125 parts per million (ppm) to meet the 1-hour ozone standard. If an area exceeds the standard more than three times in three years, it is subject to a nonattainment designation. The Denver metro area has not violated the 1-hour standard since 1988, and the area was redesignated to attainment for the 1-hour ozone NAAQS on September 11, 2001 (effective October 11, 2001).

The 8-Hour Standard and the Denver Metropolitan Area

The 8-hour standard is set at a level of 0.08 ppm (or 80 parts per billion) averaged over an eight hour period. To take into account extreme and variable meteorological conditions that can influence ozone formation, a violation of the standard occurs when the three-year average of the fourth maximum values at a monitor exceeds the federal standard. Due to rounding of monitoring values, a violation occurs when the three-year

average is equal to or greater than 0.085 ppm. During the past several years, public education, outreach and voluntary measures have been implemented in the Denver area as ozone concentrations have approached and occasionally exceeded the value permitted by the 8-hour ozone NAAQS. Based on the 2000-2002, 3-year average, the Denver region currently attains the 8-hour ozone NAAQS.

On November 14, 2002, the EPA announced that each State Governor and Tribal Chief or Leader submit designations, based on the 2000-2002 monitoring data, for the 8-hour NAAQS by April 15, 2003. For the Denver Metropolitan Area, these data demonstrate attainment with the standard. The Colorado Air Quality Control Commission (AQCC) will review these data at a public hearing on February 20, 2003 and is expected to adopt an attainment designation for the Denver area. It is also anticipated that the Governor will submit this designation to EPA in the first quarter of 2003. Metro Denver's highest three-year average of the 4th maximum concentrations for the 2000-2002 period is 0.084 ppm (Rock Flats North site). The second and third highest three-year averages for the 2000-2002 period are 0.082 ppm (National Renewable Energy Laboratory) and 0.080 ppm (Chatfield Reservoir site). There are six other monitoring sites in the Denver area, all with three-year average concentrations less than 0.085 ppm. The EPA will also consider the 2003 monitoring data when promulgating the designations by April 2004.

While the region currently attains the 8-hour standard, the Denver area is extremely close to the standard. For this reason, it is the State of Colorado's desire to develop and implement an EAC in order to avoid a nonattainment designation if the area violates the 8-hour ozone NAAQS in the future.

Protocol for Early Action Compacts

The EPA developed the Protocol for Early Action Compacts (EAC Protocol) on June 19, 2002, supplemented on October 18, 2002. The protocol establishes a two-step process that offers a more expeditious time line for achieving clean air than expected under EPA's 8-hour implementation rulemaking in exchange for relief from certain provisions of the nonattainment requirements. The EAC Protocol allows a region to enter into a memorandum of agreement (MOA) by December 31, 2002, committing to develop and implement a detailed technical plan to reach attainment by 2007.

The principles of the EAC Protocol to be executed by Local, State and EPA officials are:

- Early planning, implementation, and emission reductions leading to expeditious attainment and maintenance of the 8-hour ozone standard;
- Local area control of the measures to be employed, with broad-based public input;
- State support to ensure technical integrity of the early action plan;
- Formal incorporation of the early action plan into the SIP;
- Deferral of the effective date of nonattainment designation and related requirements so long as all terms and milestones are met; and
- Safeguards to return areas to traditional SIP requirements should terms and/or milestones be unfulfilled, with appropriate credit given for emission reduction measures implemented.

EAC Protocol Versus Traditional Nonattainment

The primary differences between the process outlined in the EAC Protocol and the traditional nonattainment area process are:

- EAC Protocol is designed to achieve clean air sooner than expected under the traditional nonattainment process[1].
- EAC Protocol ensures deferral of the effective date of nonattainment designation and related requirements, as long as EAC terms and milestones are met. This would alleviate any stigma associated with a nonattainment designation.
- Transportation conformity and nonattainment area New Source Review permitting requirements would not take effect under an EAC Protocol.

Should any milestones be missed in designing or implementing the EAC, the region will forfeit its participation in the EAC and will revert to traditional nonattainment/attainment requirements based on the latest quality assured monitoring data. Appropriate credit will be given for emission reduction strategies already implemented.

[1] Under the traditional nonattainment process, emissions reduction strategies are unlikely to be implemented before 2007. Under the EAC Protocol, emissions reduction strategies will be fully implemented by 2005.

The Area Encompassed by the EAC

The EAC encompasses the Denver Metropolitan Attainment/Maintenance area for the 1-hour ozone NAAQS, as described in 40 CFR 81.306. This area includes the City and County of Denver, Boulder County excluding Rocky Mountain National Park, Jefferson County, Douglas County, the City and County of Broomfield, and Adams and Arapahoe Counties west of Kiowa Creek.

Signatories and Their Responsibilities

The entities that will sign this EAC are: the Chairman of the Denver Regional Air Quality Council (RAQC), the Chairman of the AQCC, the Executive Director of the Colorado Department of Public Health and Environment (CDPHE), the Executive Director of the RAQC, the Chairman of the Denver Regional Council of Governments (DRCOG), the Executive Director of the Colorado Department of Transportation (CDOT), and the Regional Administrator of EPA Region 8. The development and implementation of this EAC will follow the Denver region's established air quality planning and regulatory adoption process. The DRCOG will provide necessary socio-economic and transportation assumptions and data sets. The Air Pollution Control Division (APCD) will develop the technical information and will provide policy analyses to support the EAC. The RAQC will recommend the appropriate emission control programs and assist with developing the technical and administrative information. All revisions to the State Implementation Plan (SIP) that result from the EAC will be subject to review and approval by the AQCC. The public will be provided opportunity to participate throughout the planning and adoption processes before the RAQC and the AQCC. EPA Region 8 will provide technical and policy support as well as review and approval of all submitted information supporting the EAC.

THE EARLY ACTION COMPACT FOR OZONE
Denver Metropolitan Area

MEMORANDUM OF AGREEMENT

This Early Action Compact (EAC) is a Memorandum of Agreement between the Colorado Department of Public Health and Environment, the Denver Regional Air Quality Council, the Colorado Air Quality Control Commission, the Denver Regional Council of Governments, the Colorado Department of Transportation, and EPA Region 8. It is for the express purpose of deferring the effective date of a nonattainment designation for the Denver area if a violation of the 8-hour ozone NAAQS occurs in the future in exchange for earlier than required compliance with the ozone NAAQS. This agreement sets forth a schedule for the development of technical information and the adoption and implementation of the necessary control measures into the SIP in order to comply with the 8-hour ozone standard by December 31, 2007, and maintain the standard beyond that date. This agreement does not impose any air quality control measures on the Denver area. Failure to meet the obligations of this agreement, listed below, will result in immediate reversion to the traditional nonattainment process.

A. The signatory parties commit to develop, implement and maintain the EAC according to EPA Protocol for Early Action Compacts issued June 19, 2002, and adhere to all terms and conditions stated in the guidelines. See Appendix A for EPA's "Protocol for Early Action Compacts Designed to Achieve and Maintain the 8-Hour Ozone Standard" as supplemented in a letter dated October 18, 2002, from Gregg Cooke, EPA, to Robert Huston, Texas Commission on Environmental Quality".

B. If the region does not meet all the terms of the EAC, including meeting agreed-upon milestones, then it will forfeit its participation and may be designated, if applicable, to nonattainment according to EPA's 8-hour ozone implementation rules.

C. Before formal adoption into the SIP, this agreement may be modified or terminated by mutual consent of all signatory parties, or any party may withdraw from the agreement. If a party's withdrawal from the agreement prevents remaining signatories from satisfying any of the terms and milestones of the original agreement, the MOU will be void and the region may be designated, if applicable, to nonattainment according to EPA's 8-hour ozone implementation rules. Once the Ozone Action Plan is incorporated into the SIP, any modifications will be treated as SIP revisions.

D. The signature date of the EAC is the start date of the agreement's term and the agreement remains in effect until December 31, 2007.

Milestones

EAP Milestones	
June 16, 2003	Potential local and other emission reduction strategies identified and described
March 31, 2004	Additional emission reduction strategies selected
	RAQC will complete a proposed Ozone Action Plan and submit the plan to the AQCC for public rulemaking hearing
September 30, 2004	2004 monitoring data reviewed for compliance with the NAAQS
December 31, 2004	State will complete public rulemaking hearings, adopt the Ozone Action Plan, including all necessary control measures and attainment demonstration for December 31, 2007, and submit the plan to EPA for approval
September 30, 2005	EPA will take final action on the SIP submittal
December 31, 2005	Additional emission reduction strategies implemented no later than this date
June 30, 2006	Submit assessment documenting progress since the December 31, 2005 milestone
December 31, 2007	Attainment of the 8-hour standard demonstrated

Reporting

In order to facilitate self-evaluation and communication with EPA, stakeholders, and the public, the RAQC and the AQCC will assess and report progress towards milestones in a regular, public process, at least every six months, beginning in June 2003 and concluding on December 31, 2007. Included in the reports will be analyses of monitoring data, implementation of and compliance with strategies, and the analyses of growth assumptions for population, traffic, and area/stationary sources.

Through the region's existing air quality planning process, the RAQC and APCD include modeling updates and modeling assumption verification (particularly growth assumptions) concurrent with the tracking and reporting process for the Ozone Action Plan. This update and verification will be an ongoing process between the signatories, stakeholders and the public. Modeling updates and planning/adoption processes must consider and evaluate all relevant actual new point sources, the impacts from potential new source growth, and future transportation patterns and their impact on air quality in a manner that is consistent with the most current adopted Long Range Transportation Plan and most current trend and projections of local motor vehicle emissions.

Emissions Inventories

All emission inventories will be developed by November 30, 2003. These inventories will be developed for summer episode day for the years 1999 or later, 2007, 2012, and possibly other interim years using 1) EPA's MOBILE6 emissions model and the latest transportation information; 2) area sources using a combination of EPA's NONROAD model data, latest demographics information, local equipment populations and usage rates, area source data, and local survey and information data when possible, and 3) the latest stationary sources emissions information. Future year inventories will sufficiently account for projected future growth in ozone precursor emissions through 2007, particularly from stationary, area, and mobile sources. Emissions inventories will be compared and analyzed for trends in emission sources over time.

Dispersion Modeling

Base and future case dispersion modeling will be completed by January 31, 2004. If necessary, one or more modeled control cases will be completed by February 28, 2004. All modeling 1) will be SIP quality and performed within EPA's accepted margin of accuracy; 2) will be carefully documented; 3) will sufficiently account for projected future growth in ozone precursor emissions; 4) will be concurrently reviewed by EPA; and 5)

will be used to determine the effectiveness of NOx and/or VOC reductions. The control case(s) will be used to determine the relative effectiveness of different emission reduction strategies and to aid in the selection of appropriate emission reduction strategies. Modeling will be based on the "Draft Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS" (EPA-454/R-99-004, May 1999). The modeling will follow the guidance as facilitated by EPA Region 8.

Emission Reduction Strategies

All adopted Federal and State emission reduction strategies that have been or will be implemented by the December 31, 2007 attainment date will be included in all emission inventories. Additional, necessary State and local emission reduction strategies under consideration for inclusion in the Ozone Action Plan will be identified and described by June 16, 2003. Any additional emission reduction strategies needed to demonstrate attainment by December 31, 2007 will be proposed by the RAQC to the AQCC by March 31, 2004 and adopted by the AQCC by December 31, 2004. The selected strategies will be implemented as soon as practical, but no later than December 31, 2005. The emission reduction strategies will be specific, quantified, permanent and enforceable. The strategies will also include specific implementation dates and detailed documentation and reporting processes.

Maintenance for Growth

The plan must include a component to address emissions growth at least 5 years beyond December 31, 2007, ensuring that the area will remain in attainment of the 8-hour standard during that period. This future attainment maintenance analysis may employ one or more of the following or any other appropriate techniques necessary to make such a demonstration:

- Modeling analysis showing ozone levels below the 8-hour standard in 2012;
- An annual review of growth (especially mobile and stationary source) to ensure control measures and growth assumptions are adequate;
- Identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates.

The choice of methods and the resultant analyses to demonstrate maintenance through 2012 will be agreed upon by the RAQC, the APCD, the AQCC, and the EPA. The analysis will be completed as part of the SIP revision package by March 31, 2004 and will be submitted to EPA by December 31, 2004.

The plan must also detail the continuing planning process that includes modeling updates and modeling assumption verification (particularly growth assumptions). Modeling updates and planning processes must consider and evaluate all relevant actual new point sources, impacts from potential new source growth, and future transportation patterns and their impact on air quality in a manner that is consistent with the most current adopted Long Term Transportation Plan and most current trend and projections of local motor vehicle emissions. This update and verification will be an ongoing process and reported in the six-month updates described above.

If the review of growth demonstrates that adopted control measures are inadequate to address growth in emissions, additional measures will be added to the plan. If warranted, additional control measures revealed by analysis for growth will be included as part of an additional SIP revision to be submitted after December 31, 2004, the date for submitting the original SIP revision to the EPA.

Public Involvement

Public involvement will be conducted in all stages of planning by the signatory parties. Outreach may include one or more of the following techniques: public meetings and presentations, stakeholder meetings, websites, print advertising and radio. Public education programs will be used to raise awareness regarding issues, opportunities for involvement in the planning process, implementation of emission reduction strategies, and any other issues important to the area. Interested stakeholders will be involved in the planning process as early as possible. The DRCOG, the RAQC and the AQCC shall establish and schedule adequate stakeholder meetings, which will be open to the public with posted meeting times and locations. EAC drafts will be publicly available, and the drafting process will have sufficient opportunities for comment from all interested stakeholders. Public comment on the Ozone Action Plan will follow the normal SIP revision process as implemented by the RAQC and the AQCC. Semi-annual reports detailing, at a minimum, progress toward milestones, will be publicly presented and publicly available.

Roles and Responsibilities of the DRCOG, RAQC, APCD and AQCC

The implementation of this EAC will follow the established air quality planning and regulatory adoption process in place in Denver for many years. The RAQC is the lead agency for air quality planning in the Denver area, the APCD provides technical, policy and administrative assistance, and the AQCC considers and adopts regulations and SIPs throughout the State. In addition, DRCOG and CDOT provide technical assistance and coordination with transportation planning activities in the Denver region. Specific responsibilities for this EAC include the following:

1. Provide necessary socio-economic and transportation assumptions and data sets - DRCOG;
2. Development of emission inventories, dispersion modeling, trend analyses and quantification, and comparison of emission reduction strategies - APCD and RAQC;
3. Compiling information on all Federal and State adopted emission reduction strategies which affect the area - APCD and RAQC;
4. Technical and strategic assistance, as appropriate, in the selection and implementation of emission reduction strategies - APCD and RAQC;
5. Maintenance of monitors and reporting and analysis of monitoring data - APCD;
6. Promote and support for public education efforts - APCD and RAQC;
7. Reporting and tracking progress - APCD and RAQC; and
8. Adoption of emission reduction strategies into the SIP - AQCC.

Roles and Responsibilities of the Environmental Protection Agency

1. The EPA will provide technical assistance to the State and local area in the development of the early action plan.
2. The EPA will move quickly to review and approve completed plans by no later than nine months after submission of the SIP revision by the State.
3. When EPA's 8-hour implementation guidelines call for designations, EPA will defer the effective date of any nonattainment designation and related requirements for participating areas that fail to meet the 8-hour ozone standard as long as all terms and milestones of the compact are being met, including submission of the early action SIP revision by December 31, 2004.
4. If the nonattainment designation is deferred, EPA will move expeditiously to designate the area as attainment and impose no additional requirements, provided that the monitors in the area reflect attainment by December 31, 2007.

5. If at any time the area does not meet all the terms of this compact, including meeting agreed-upon milestones, then it will forfeit its participation and its attainment or nonattainment designation (or redesignation if necessary) will become effective. The EPA will offer such an area no delays, exemptions or other favorable treatment because of its previous participation in this program.
6. If the area violates the standard as of December 31, 2007, and the area has had the effective date of any nonattainment designation deferred, such nonattainment designation will become effective. The State will then submit a revised attainment demonstration SIP revision according to the Clean Air Act (CAA) and EPA's 8-hour implementation rule, unless the 8-hour implementation schedule requires SIPs from 8-hour nonattainment areas before December 31, 2008. In that event, a revised attainment demonstration SIP revision for the participating area will be due as soon as possible but no later than December 31, 2008. In no event will EPA extend the attainment date for the area beyond that required by the CAA and/or EPA's 8-hour implementation rule.
7. The region will not be allowed to renew this EAC after December 31, 2007, or to initiate a new compact if it has previously forfeited its participation.

Signatures:

12-19-2002

Jim Scherer, Chairman
Regional Air Quality Council

12/20/2002

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

12/30/2002

Douglas H. Benevento, Executive Director (acting)
Colorado Department of
Public Health and Environment

12-20-2002

Thomas Norton, Executive Director
Colorado Department of Transportation

12-23-02

Sharon L. Richardson, Chairman
Denver Regional Council of Governments

12/31/02

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