ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

RME Docket Number R08-OAR-2005-CO-0001; FRL-

Approval and Promulgation of Air Quality Implementation Plans; State of Colorado; Denver Early Action Compact Ozone Plan, Attainment Demonstration of the 8-hour Ozone Standard, and Approval of Related Revisions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing approval of a State Implementation Plan (SIP) revision submitted by the State of Colorado. On July 21, 2004, the Governor of Colorado submitted an Early Action Compact (EAC) ozone plan for the Denver metropolitan area (hereafter, Denver area) for the 8-hour ozone National Ambient Air Quality Standard (NAAQS). The Governor's submittal also contained an attainment demonstration for the 8-hour ozone NAAQS. In conjunction with the EAC ozone plan, the Governor submitted revisions to Colorado's Common Provisions Regulation, Colorado's Regulation No. 7 "Emissions of Volatile Organic Compounds" (hereafter, Regulation No. 7), and revisions to Colorado's Regulation No. 11 "Motor Vehicle Emissions Inspection Program" (hereafter Regulation No. 11). In this action, EPA is proposing approval of the Denver EAC ozone plan, the associated attainment demonstration, and the revisions to the Common Provisions Regulation, Regulation No. 7, and Regulation No. 11. This action is being taken under section 110 of the Clean Air Act.

DATES: Comments must be received on or before [Insert date 30 days after publication in the Federal Register].

ADDRESSES: Submit your comments, identified by RME Docket Number R08-OAR-2005-CO-0001, by one of the following methods:

- Federal eRulemaking Portal: http://www.regulations.gov. Follow the on-line instructions for submitting comments.
- Agency Website: http://docket.epa.gov/rmepub/index.jsp. Regional Materials in EDOCKET (RME), EPA's electronic public docket and comment system for regional actions, is EPA's preferred method for receiving comments. Follow the on-line instructions for submitting comments.
- E-mail: long.richard@epa.gov and russ.tim@epa.gov.
- Fax: (303) 312-6064 (please alert the individual listed in the **FOR FURTHER INFORMATION CONTACT** if you are faxing comments).
- Mail: Richard R. Long, Director, Air and Radiation Program, Environmental Protection Agency (EPA), Region 8, Mailcode 8P-AR, 999 18th Street, Suite 300, Denver, Colorado 80202-2466.
- Hand Delivery: Richard R. Long, Director, Air and Radiation Program, Environmental Protection Agency (EPA), Region 8, Mailcode 8P-AR, 999 18th Street, Suite 300, Denver, Colorado 80202-2466. Such deliveries are only accepted Monday through Friday, 8:00 a.m. to 4:55 p.m., excluding federal holidays. Special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to RME Docket Number R08-OAR-2005-CO-0001. EPA's policy is that all comments received will be included in the public docket without change and

may be made available at http://docket.epa.gov/rmepub/index.jsp, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through EDOCKET, regulations.gov, or e-mail. EPA's Regional Materials in EDOCKET and federal regulations.gov website are "anonymous access" systems, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA, without going through EDOCKET or regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit EDOCKET online or see the Federal Register of May 31, 2002 (67 FR 38102). For additional instructions on submitting comments, go to Section I. General Information of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: All documents in the docket are listed in the Regional Materials in EDOCKET index at http://docket.epa.gov/rmepub/index.jsp. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be

publically available only in hard copy form. Publicly available docket materials are available either electronically in Regional Materials in EDOCKET or in hard copy at the Air and Radiation Program, Environmental Protection Agency (EPA), Region 8, 999 18th Street, Suite 300, Denver, Colorado 80202-2466. EPA requests that if at all possible, you contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section to view the hard copy of the docket. You may view the hard copy of the docket Monday through Friday, 8:00 a.m. to 4:00 p.m., excluding federal holidays.

FOR FURTHER INFORMATION CONTACT: Tim Russ, Air and Radiation Program, Environmental Protection Agency (EPA), Region 8, Mailcode 8P-AR, 999 18th Street, Suite 300, Denver, Colorado 80202-2466, phone (303) 312-6479, and e-mail at: russ.tim@epa.gov.

SUPPLEMENTARY INFORMATION:

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Definitions

For the purpose of this document, we are giving meaning to certain words or initials as follows:

(i) The words or initials Act or CAA mean or refer to the Clean Air Act, unless the context indicates otherwise.

(ii) The words EPA, we, us or our mean or refer to the United States Environmental Protection Agency.

(iii) The initials NAAQS mean National Ambient Air Quality Standard.

(iv) The initials SIP mean or refer to State Implementation Plan.

(v) The word State means the State of Colorado, unless the context indicates otherwise.

I. General Information

A. What Should I Consider as I Prepare My Comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so

marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

I. Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).

II. Follow directions - The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

III. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

IV. Describe any assumptions and provide any technical information and/or data that you used.

V. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

VI. Provide specific examples to illustrate your concerns, and suggest alternatives.

VII. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

VIII. Make sure to submit your comments by the comment period deadline identified.

II. What is the purpose of this action?

In this action, we are proposing approval of the Early Action Compact ozone plan for the Denver area that is designed to demonstrate attainment of the 8-hour ozone NAAQS by December 31, 2007 with additional provisions for continued maintenance of the ozone NAAQS through 2012, we're proposing approval of the photochemical modeled attainment

demonstration, we're proposing approval of certain revisions to the State's Common Provisions Regulation, we're proposing approval of revisions to Regulation No. 7 for the control of VOC and NOx emissions from certain oil and gas exploration and production operations, we're proposing approval of revisions to the motor vehicle inspections and maintenance (I/M) requirements in Regulation No. 11 the Governor submitted on July 21, 2004, and we're proposing approval of several prior I/M revisions to Regulation No. 11.

III. What is the State's process to submit these materials to EPA?

Section 110(k) of the CAA addresses our actions on submissions of revisions to a SIP. The CAA requires States to observe certain procedural requirements in developing SIP revisions for submittal to us. Section 110(a)(2) of the CAA requires that each SIP revision be adopted after reasonable notice and public hearing. This must occur prior to the revision being submitted by a State to us.

A. The Colorado Air Quality Control Commission (AQCC) held a public hearing for the Denver EAC ozone plan on March 11 and 12, 2004. The AQCC adopted the EAC ozone plan, and its associated attainment demonstration, directly after the hearing. This SIP revision became State effective on May 30, 2004, and was submitted by the Governor to us on July 21, 2004.

We have evaluated the Governor's submittal for the Denver EAC ozone plan and have determined that the State met the requirements for reasonable notice and public hearing under section 110(a)(2) of the CAA. By operation of law under section 110(k)(1)(B) of the CAA, the Governor's July 21, 2004, submittal became complete on January 21, 2005.

B. The Colorado AQCC held a public hearing for the revisions to the Common Provisions

Regulation, Regulation No. 7 and Regulation No. 11 on March 11 and 12, 2004. The AQCC adopted these revisions directly after the hearing. These SIP revisions became State effective on May 30, 2004, and were submitted by the Governor to us on July 21, 2004.

We have evaluated the Governor's submittal for the Common Provisions Regulation, Regulation No. 7 and Regulation No. 11 revisions and have determined that the State met the requirements for reasonable notice and public hearing under section 110(a)(2) of the CAA. By operation of law under section 110(k)(1)(B) of the CAA, the Governor's July 21, 2004, submittal became complete on January 21, 2005.

C. For the 2000, 2001, and 2002 Regulation No. 11 revisions, the Colorado AQCC held a public hearing on November 16, 2000, December 20, 2001, August 15, 2002, and October 17, 2002. The AQCC adopted the revisions to Regulation No. 11 directly after these hearings. These SIP revisions became State effective on December 30, 2000, January 30, 2002, September 30, 2002, and December 30, 2002, respectively, and were all submitted by the Governor to us on June 20, 2003.

We evaluated the Governor's submittal and concluded that the State met the requirements for reasonable notice and public hearing under section 110(a)(2) of the CAA. Pursuant to section 110(k)(1)(B) of the CAA, we reviewed these SIP materials for conformance with the completeness criteria in 40 CFR part 51, Appendix V and determined that the Governor's June 30, 2003, submittal was administratively and technically complete. Our completeness determination was sent on November 28, 2003, through a letter from Robert E. Roberts, Regional Administrator, to Governor Bill Owens.

D. For the 2003 Regulation No. 11 revisions, the Colorado AQCC held a public hearing on September 18, 2003, and December 18, 2003. The AQCC adopted the revisions to Regulation No. 11 directly after these hearings. These SIP revisions became State effective on November 30, 2003, and March 1, 2004, respectively, and were all submitted by the Governor to us on April 12, 2004.

We evaluated the Governor's submittal and concluded that the State met the requirements for reasonable notice and public hearing under section 110(a)(2) of the CAA. Pursuant to section 110(k)(1)(B) of the CAA, we reviewed these SIP materials for conformance with the completeness criteria in 40 CFR part 51, Appendix V and determined that the Governor's April 12, 2004, submittal was administratively and technically complete. Our completeness determination was sent on June 17, 2004, through a letter from Robert E. Roberts, Regional Administrator, to Governor Bill Owens.

E. The Colorado AQCC held a public hearing for additional revisions to Regulation No. 7 on December 16, 2004. The AQCC adopted these revisions directly after the hearing. These SIP revisions became State effective on March 2, 2005, and were submitted by the Governor to us on March 24, 2005.

We have evaluated the Governor's submittal of the additional revisions to Regulation No. 7 and have determined that the State met the requirements for reasonable notice and public hearing under section 110(a)(2) of the CAA. Pursuant to section 110(k)(1)(B) of the CAA, we reviewed these SIP materials for conformance with the completeness criteria in 40 CFR part 51, Appendix V and determined that the Governor's March 24, 2005, submittal was administratively and technically complete. Our completeness determination was sent on April 6, 2005, through a

letter from Robert E. Roberts, Regional Administrator, to Governor Bill Owens.

IV. Background for Early Action Compacts for the 8-hour Ozone NAAQS

A. *Why was the compact program developed?*

As discussed in our proposed rule for the implementation of the 8-hour ozone NAAQS (see 68 FR 32805, June 2, 2003), State, local and Tribal air pollution control agencies continued to express a need for added flexibility in implementing the 8-hour ozone NAAQS, including incentives for taking action sooner than the CAA requires for reducing ground-level ozone. The compact program permits local areas to make decisions that will achieve reductions in VOC and NOx emissions sooner than otherwise is mandated by the CAA. Early planning and early implementation of control measures that improves air quality will likely accelerate protection of public health. We issued our initial policy on early planning on November 14, 2002[1] (hereafter, November 14, 2002 policy), with a further description in our June 2, 2003 proposed rule (68 FR 32805), and as provided in our April 30, 2004 final rule (69 FR 23951) entitled "Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standard - Phase 1."

B. *What was the "early action" protocol that Texas submitted to EPA?*

In March of 2002, the Texas Commission on Environmental Quality (TCEQ) encouraged EPA to consider incentives for early planning towards achieving the 8-hour ozone NAAQS. The TCEQ submitted to EPA the *Protocol for Early Action Compacts Designed to Achieve and Maintain the 8-hour Ozone Standard (Protocol)*. The Protocol was designed to achieve NOx and VOC emissions reductions for the 8-hour ozone NAAQS sooner than would otherwise be

[1]Memorandum from Jeffrey R. Holmstead, Assistant Administrator, to Regional Administrators, entitled "Schedule for 8-Hour Ozone Designations and its Effect on Early Action Compacts" dated November 14, 2002.

required under the CAA. The TCEQ recommended that the Protocol be formalized by "Early Action Compact" agreements primarily developed by local, State and Federal (EPA) officials. In a letter dated June 19, 2002, from Gregg Cooke, Administrator, Region 6, to Robert Huston, Chairman, TCEQ, EPA endorsed the principles outlined in the Protocol. The Protocol was subsequently revised on December 11, 2002[2], based on comments from EPA. Areas meeting the necessary prerequisites prepared an Early Action Compact (EAC) document that was based on the provisions of the Protocol. These EACs were then executed by the necessary State and local entities, along with the respective EPA Regional Office, by December 31, 2002. The EACs were required to contain the following:

1. Early planning, implementation, and emissions reductions leading to expeditious attainment and maintenance of the 8-hour ozone standard.
2. Local control of the measures employed with broad-based public input.
3. State support to ensure technical integrity of the early action plan including completion of emissions inventories and dispersion modeling (based on most recent Agency guidance) to support the attainment demonstration and selected local control measures.
4. Formal incorporation of the early action plan itself into the State Implementation Plan (SIP). Also, adoption and submittal as revisions to the SIP of control strategies that demonstrate attainment.
5. Completion of 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 ozone

[2]The Texas Protocol was submitted to EPA in March 2002 for review and was revised in December 2002 based on the Agency's comments concerning the need for additional milestones and other clarifications. Docket No. OAR-2003-0090-0004.

standard during that period.

6. Semiannual reports detailing progress toward completion of compact milestones.

7. Designation of all areas as attainment or nonattainment in April 2004, but for compact areas, deferral of the effective date of the nonattainment designation and/or designation requirements so long as all compact terms and milestones continue to be met.

8. Safeguards to return areas to traditional SIP attainment requirements should compact terms be unfulfilled (e.g., if the area fails to attain in 2007), with appropriate credit given for reduction measures already implemented.

C. *What are the milestone and submittal requirements for Early Action Compact areas?*

The November 14, 2002, policy memorandum, an additional EPA memorandum dated April 4, 2003[3], our June 2, 2003 proposed rule (68 FR 32805), and our April 30, 2004 final rule (69 FR 23951) establish the activities EAC areas are required to perform and the necessary submittals that must be made to EPA. EAC areas are required to select control strategies based on SIP-quality dispersion modeling that shows attainment of the 8-hour ozone NAAQS no later than December 31, 2007 through implementation of the control strategies. We specified that all EAC areas must submit a local plan by March 31, 2004 that includes measures that are specific, quantified, and permanent and that, once approved into the SIP by EPA, will be federally enforceable. The March 31, 2004 submission also had to include specific implementation dates for the local controls, as well as detailed documentation supporting the selection of measures. Control measures must be implemented no later than December 31, 2005, which is at least 16½

[3]Memorandum from Lydia N. Wegman, Director, Air Quality Strategies and Standards Division, "Early Action Compacts (EACs): The June 16, 2003 Submission and Other Clarifications," April 4, 2003. Docket No. OAR-2003-0090-0002.

months earlier than required by the CAA. Reports are required every 6 months to describe progress toward completion of milestones.

Table IV-1 below presents the milestones and submissions that EAC areas are required to complete in order to continue eligibility for a deferral of the effective date of the nonattainment designation for the 8-hour ozone NAAQS.

Table IV-1. Early Action Compact Milestones

Submittal Date	Compact Milestone
December 31, 2002	State/Locals submit EAC for EPA signature
June 16, 2003	State/Locals submit preliminary list and description of potential local control measures under consideration
March 31, 2004	Plan submitted to State for necessary action (includes specific, quantified and permanent control measures to be adopted)
December 31, 2004	State submits EAC plan and adopted local measures to EPA as a SIP revision that, when approved, will be federally enforceable
No later than December 31, 2005	State/Locals to implement adopted SIP control measures
June 30, 2006	State reports on implementation of control measures, assessment of air quality improvement, and reductions in NOx and VOC emissions to date
December 31, 2007	EAC area attains 8-hour ozone NAAQS

In accordance with the Protocol and the executed EAC documents, EPA recognized the EAC areas' commitments to early, voluntary action by designating the EAC areas that were violating the 8-hour NAAQS (based on air quality data from 2001, 2002, and 2003) as nonattainment on April 30, 2004 (see 69 FR 23858), but deferred the effective date of the

nonattainment designation so long as all terms and milestones of the EAC continue to be met.

V. EPA's evaluation of the Denver Early Action Compact Milestone Submittals

We have reviewed the Denver EAC milestone submittals with respect to the requirements in the Protocol and the executed December 31, 2002 Denver EAC. We consider these milestone submittals as necessary prerequisites in order for us to propose approval of the Denver EAC ozone plan SIP revision. The following are our analyses of how the EAC milestone submittal requirements, discussed above, have been met for the Denver EAC.

A. *State/Locals submit EAC for EPA signature by December 31, 2002*

The State of Colorado delivered the Denver EAC to EPA, Region 8 on December 30, 2002. The EAC had been signed by Jim Scherer, Chairman of the Denver Regional Air Quality Council (RAQC), Robert E. Brady Jr., Chairman of the Colorado Air Quality Control Commission (AQCC), Douglas H. Benevento, Executive Director, Colorado Department of Public Health and Environment (CDPHE), Thomas Norton, Executive Director, Colorado Department of Transportation (CDOT), and Sharon L. Richardson, Chairman, Denver Regional Council of Governments (DRCOG). The Denver EAC was executed by Robert E. Roberts, Regional Administrator, EPA Region 8, on December 31, 2002.

The Denver EAC was amended on March 18, 2004 with the additional signatures of Stephen F. Stutz, Chair, Elbert County Board of County Commissioners, Kathay Rennels, Chair, Larimer County Board of County Commissioners, Michael Harms, Chair, Morgan County Board of County Commissioners, and Rob Masden, Chair, Weld County Board of County Commissioners.

Based on the above actions, EPA has determined that this EAC milestone requirement

has been addressed.

B. *State/Locals submit preliminary list and description of potential local control measures under consideration by June 16, 2003*

On June 16, 2003, Ken Lloyd, Executive Director, RAQC and Margie Perkins, Director, Air Pollution Control Division (APCD) of the CDPHE jointly submitted the Denver EAC area's "June 16, 2003 Milestone - Identification and Description of Potential Control Strategies for Further Consideration." This submittal contained a further description of the stakeholder process, strategy evaluation considerations, and a list of ten potential emission reduction strategies. Provided for each of the potential strategies were, a brief description, estimate of potential emission reductions (where available), an implementation approach and schedule, and a description of the geographic area of application of the strategy.

Based on the content of this document, EPA has determined that this EAC milestone requirement has been addressed.

C. *Plan submitted to State for necessary action (includes specific, quantified and permanent control measures to be adopted) by March 31, 2004*

The Denver RAQC held a public meeting on December 11, 2003, at the end of which, the RAQC gave their approval to the Denver EAC ozone plan. In conjunction with the RAQC's planning processes, the Colorado AQCC entertained public comment during noticed public meetings in July, August, September, November, and December, 2003. With the RAQC's approval, the Denver EAC plan, and associated materials, were then transmitted to the Colorado AQCC. At their December 18, 2003, public meeting the AQCC gave notice to open a three-month public comment period and scheduled a public hearing for March 11, 2004 (which was

subsequently extended to March 11 and March 12, 2004.) At the December 18, 2003 AQCC meeting, the AQCC also noticed for public comment revisions to the appropriate Colorado Regulations that would achieve the necessary emission reductions that were modeled in the attainment demonstration which supported the EAC plan. Once approved, these Regulation revisions would generate permanent and enforceable emission reductions. We note that the Denver EAC plan does not take any credit for voluntary measures.

Based on the above actions, EPA has determined that this EAC milestone requirement has been addressed.

D. *State submits EAC plan and adopted local measures to EPA as a SIP revision (that, when approved, will be federally enforceable) by December 31, 2004*

On March 11 and March 12, 2004, the AQCC conducted a public hearing to consider the Denver EAC plan, the attainment demonstration, and the necessary revisions to Colorado's Common Provisions Regulation, Regulation No. 7, and Regulation No. 11. At the end of the public hearing on March 12, 2004, the AQCC adopted all the above SIP materials. The entire Denver EAC SIP package was forwarded to Governor Owens who then transmitted the SIP package to EPA, Region 8, with a letter dated July 21, 2004.

We note that on March 10, 2004, and just prior to the AQCC public hearing of March 11 and March 12, 2004, we sent a letter to the State and AQCC expressing concerns with the adequacy of the revisions to Colorado's Regulation No. 7. In that March 10, 2004 letter, we stated that we would continue to work with the State to resolve our concerns.

CDPHE and EPA staff met several times starting in August, 2004 up through December, 2004 to address the Regulation No. 7 deficiencies. At the September, 2004 AQCC meeting, the

AQCC established a public comment period and noticed for public hearing revisions to Regulation No. 7. The AQCC held a public hearing on December 16, 2004 to consider the revisions to Regulation No. 7. The AQCC adopted the revisions directly after the public hearing and Governor Owens submitted these supplemental Regulation No. 7 revisions to us on March 24, 2005.

Based on the above actions, EPA has determined that this EAC milestone requirement has been addressed.

We also note that in addition to meeting all the required EAC milestones, the State and RAQC jointly submitted "Progress Reports" on June 30, 2003, December 31, 2003, March 31, 2004, and December 31, 2004.

VI. EPA's evaluation of the Denver Early Action Compact Ozone Plan

We have reviewed the Denver EAC ozone plan (hereafter, Denver EAC plan) with respect to the requirements in the Protocol, the December 31, 2002 Denver EAC document, and our general requirements for a nonattainment area plan and believe that approval of the Denver EAC plan is warranted. The following are our descriptions and analysis of how the Denver EAC plan meets the necessary provisions referenced above.

We note that the Denver EAC plan is divided into two sections; a non-SIP introduction and monitoring background section and the SIP section entitled "8-Hour Ozone State Implementation Plan" that contains emission inventories, control measures, photochemical dispersion modeling, and a weight of evidence analysis.

A. Introduction and Monitoring background section (non-SIP materials)

The introduction section discusses the EAC protocol, the aspects of the Denver EAC, the

Protocol milestones and how these were met, information that went into the development of the SIP emission inventories and dispersion modeling, emission reduction strategies, aspects of maintenance for growth, a brief description of the stakeholder/public process, and a description of the area encompassed by the Denver EAC plan. The ozone monitoring section provides information with respect to the location of Front Range ozone monitors (from southern metropolitan Denver north to Fort Collins including Rocky Mountain National Park), the State's ambient air quality data assurance program, a description and commitment for continued operation of the ozone monitoring network, and relevant 8-hour ozone monitoring data from 1996 through 2003 with design values presented for data from 2001, 2002, and 2003.

B. Denver EAC plan - "8-Hour Ozone State Implementation Plan"

1. Base Case Emissions Inventories

a.) As described in Chapter I of the Denver EAC plan, the State and RAQC used demographic data that was provided by the metropolitan planning organizations (MPO), DRCOG and North Front Range Transportation and Air Quality Planning Council (NFRTAQPC). Demographic data were prepared for 2002, 2007, and 2012 and are presented in Table 4 of the Denver EAC plan.

b.) At the time that the emission inventories were being prepared for the Denver EAC plan, EPA had not yet finalized the 8-hour ozone nonattainment boundary for the Denver-Boulder-Greeley area[4]. The State and RAQC prepared the EAC emission

[4]EPA promulgated the final 8-hour ozone nonattainment boundary for the Denver-Boulder-Greeley area on April 30, 2004 (see 69 FR 23858.) The boundary includes all of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson Counties and the southern halves of Larimer and Weld Counties.

inventories for two situations depending on EPA's final decision on the boundary: (1) inventories based on Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and Weld Counties, and (2) inventories based on Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Elbert, Jefferson, Larimer, Morgan, and Weld Counties. These inventories address ozone precursor emissions of volatile organic compounds (VOC) and nitrogen oxides (NOx).

c.) The 2002 and 2007 base case inventories incorporate control measures that were in place in 2002 and were predicted to be in place in 2007. The essential control measures are described in Chapter I of the Denver EAC plan and are: (1) Federally-mandated regulations for motor vehicle exhaust (or tailpipe) emissions and Federally-mandated regulations for exhaust emissions from non-road engines, (2) Colorado's Regulation No. 7 for the control of VOC emissions, and (3) Colorado's Regulation No. 11, the State's Automobile Inspection and Readjustment (A.I.R.) Program, which requires the application of the State's Basic Inspection and Maintenance (I/M) program for vehicles older than 1982 and the Enhanced I/M program for vehicles of model year 1982 and newer. With respect to the Basic I/M program, Chapter I, 2 of the EAC plan states, "The computer modeling does not include any credit for the basic programs in Colorado Springs and Fort Collins/Greeley areas and such basic programs are not part of, or being submitted for inclusion in, the SIP." In addition to the above, Chapter I, 4 indicates that a conventional gasoline Reid Vapor Pressure (RVP) of 8.2 pounds per square inch (psi) was used in the 2002 base case inventory and an RVP of 9.0

was assumed for the 2007 base case inventory. Chapter I.,4 also states that "All of the inventories were developed using EPA-approved emissions modeling methods, including EPA's MOBILE6 model and local VMT data for on-road mobile source emissions, EPA's non-road model and local demographic information for area and off-road sources, and reported actual emissions for point sources." The 2002 and 2007 base case VOC and NOx emission inventories are presented in Table 5a and Table 5b in Chapter I of the Denver EAC plan and are summarized below in Tables VI-1 and VI-2.

Table VI-1
Summary of Emission Inventories in Tons Per Day (TPD)
Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and Weld Counties

Source Category	2002 VOCs	2002 NOx	2007 VOCs	2007 NOx
Point Sources	192.8	105.2	204.1	107.1
Area Sources	96.9	25.6	104.1	27.6
Non-Road Sources	73.1	87.99	53.7	82.5
On-Road Sources	152.8	157.8	117.5	119.3
Subtotal Anthropogenic	515.6	376.6	479.4	336.5
Biogenics	468.1	37.1	468.1	37.1
Total	983.7	413.7	947.5	373.6

Table VI-2
Summary of Emission Inventories in Tons Per Day (TPD)
Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Elbert, Jefferson, Larimer, Morgan, and Weld Counties

Source Category	2002 VOCs	2002 NOx	2007 VOCs	2007 NOx
Point Sources	200.0	140.1	209.3	144.9

Area Sources	111.3	30.4	119.6	32.7
Non-Road Sources	84.9	104.6	62.6	92.4
On-Road Sources	172.6	177.6	135.1	136.6
Subtotal Anthropogenic	568.8	452.7	526.6	406.6
Biogenics	799.46	52.3	799.5	52.3
Total	1368.3	505.0	1326.1	458.9

2. Control Measures

Chapter II of the Denver EAC plan describes the additional control measures, above and beyond those assumed in the 2007 base case emissions inventory, that will be implemented by December 31, 2005. These additional control measures are incorporated into the SIP to demonstrate attainment of the 8-hour ozone NAAQS by 2007, maintenance of the 8-hour ozone NAAQS through 2012, and to meet the requirements of the EAC Protocol.

a.) Gasoline Reid Vapor Pressure (RVP). Chapter II A. of the Denver EAC plan describes the RVP control measure. Since 1991, gasoline sold in the Denver area during the summer ozone season (for gasoline RVP, this is defined as June 1st through September 15th) has been subject to an EPA national rule that requires an RVP of 7.8 psi (see 55 FR 23658, June 11, 1990, and 56 FR 64704, December 12, 1991.) This RVP requirement of 7.8 psi was applicable to the Denver 1-hour ozone NAAQS nonattainment area as defined in the Federal Register (see 56 FR 56694, November 6, 1991.) From 1992 through the 2003 summer ozone season, and in response to waiver petitions from the Governor of Colorado, we either

waived or granted enforcement discretion for the 7.8 psi RVP requirement for the Denver area and instead allowed the less stringent 9.0 psi RVP. Our decisions were based on evidence that demonstrated the 7.8 psi RVP was not necessary given the Denver area's record of continued attainment of the 1-hour NAAQS using the 9.0 psi RVP requirement and additional evidence presented by the State that showed economic hardship to consumers and industry if the 7.8 psi RVP level was imposed.

Since 1999, and in response to a request from the RAQC, refiners serving the Denver area voluntarily provided gasoline with an RVP of 8.5 psi or lower to help reduce evaporative emissions of VOCs from refueling and vehicle operations. Through the Denver EAC stakeholder meetings, the RAQC, State, and industry elected to commit to a gasoline RVP of 8.1 psi to help reduce VOC emissions. Therefore, the Denver EAC plan and 2007 dispersion modeled attainment demonstration took credit for the more stringent RVP level of 8.1 psi.

On January 12, 2004, the Colorado Petroleum Association (CPA) submitted a request to EPA for enforcement discretion for the 7.8 psi RVP requirement for June 1, 2004 through September 15, 2004. In their January 12, 2004 letter, CPA acknowledged their continuing efforts with CDPHE and the RAQC in developing the Denver EAC plan using an RVP of 8.1 psi, but asked that EPA grant enforcement discretion for a 9.0 psi RVP with CPA's offer to meet the prior voluntary 8.5 psi RVP level. However, quality-assured ozone monitoring data for 2001, 2002, and 2003 showed that three of the ozone ambient air quality monitors

in the Denver area's network recorded violations of the 8-hour ozone NAAQS. In a letter dated March 25, 2004, we explained that primarily based on the monitored violations of the 8-hour ozone NAAQS and public health issues, enforcement discretion was not warranted and that the Federal requirement for 7.8 psi RVP gasoline for the Denver area would be effective beginning June 1, 2004.

We note that, although the Denver EAC plan and attainment demonstration dispersion modeling take credit for 8.1 psi RVP conventional gasoline (9.1 psi RVP for ethanol blends), the Denver area will instead be realizing greater evaporative VOC emissions reductions due to EPA's requirement for 7.8 psi RVP[5].

An additional RVP issue is found in the third paragraph in Chapter II A. of the Denver EAC plan which states:

> "Therefore, since this EAC ozone action plan for the 8-hour ozone standard relies on an RVP level of 8.1 psi (9.1 psi for ethanol blends) in the 2007 control case inventory for the existing Denver 1-hour ozone attainment/maintenance area, the State of Colorado requests a three year waiver establishing an 8.1 psi (9.1 psi for ethanol blends) RVP level for the existing Denver 1-hour attainment/maintenance area through the 2007 summer ozone season."

[5]The requirement for conventional gasoline is an RVP of 7.8 psi. However, the CAA allows an additional 1.0 psi increase for gasoline blended with ethanol. In the Denver EAC attainment demonstration dispersion modeling, the State assumes a 25% market penetration for ethanol blended gasoline.

We view this and related language in the SIP as a petition to EPA to establish an 8.1 psi RVP standard for the Denver area rather than the currently applicable 7.8 psi RVP standard. A revision to the federal RVP standard can only be done via rulemaking under section 211 of the CAA, and the authority to conduct such rulemaking cannot be delegated from the Administrator of EPA to the Regional Administrator of EPA Region VIII. Hence, Colorado's RVP petition cannot be addressed in this SIP rulemaking. Our inability to act on Colorado's RVP petition does not affect our ability to propose approval of the EAC plan because the currently applicable standard - 7.8 psi RVP - will reduce VOC emissions more than the 8.1 psi RVP standard the State relied on to model attainment in 2007.

b.) Oil and Gas Exploration and Production (E&P) Condensate Tank Controls. The Denver EAC plan and attainment demonstration include a reduction in flash emissions of VOCs from new control equipment to be installed on E&P condensate collection, storage, processing and handling operations. Revisions to Colorado's Regulation No. 7 (also being proposed for approval with this action and described in section VIII below) require the installation of air pollution control technology to achieve at least a 47.5% reduction in VOC emissions from E&P production operations, natural gas compressor stations, and natural gas drip stations located in the Denver EAC plan area.

c.) Controls for Stationary Reciprocating Internal Combustion Engines (RICE). The Denver EAC plan and attainment demonstration include VOC and NOx emission reductions from new control equipment to be installed on new and existing rich

burn and lean burn natural gas-fired RICE engines larger than 500 horsepower. Chapter II C. states that emission control equipment for uncontrolled rich burn RICE shall be non-selective catalyst reduction and an air fuel ratio controller or other equally effective air pollution control technology. Chapter II C. also states that for uncontrolled lean burn RICE, emission control equipment shall be oxidation catalyst reduction or other equally effective air pollution control technology. These RICE controls are contained in revisions to Colorado's Regulation No. 7.

d.) Controls for Dehydration Units. Chapter II D. of the Denver EAC plan and the attainment demonstration include VOC emission reductions from new control equipment to be installed on new and existing dehydration towers, with VOC emissions in excess of 15 tons per year, located at oil and gas operations. These new control requirements are contained in revisions to Colorado's Regulation No. 7.

e.) Revisions to Colorado's Regulation No. 11 - Automobile Inspection and Readjustment Program. Chapter II E. of the Denver EAC plan and the attainment demonstration include VOC and NOx emission reductions from revisions to Regulation No. 11. These revisions reduce the coverage of the remote sensing clean screen area in order to reduce the disbenefit of the clean screen program and to reflect the practical reality of potential coverage. No more than 50% of the fleet of gasoline vehicles in the enhanced I/M program area (described in Regulation No. 11) of applicability will be evaluated with remote sensing during

any twelve-month period after December 31, 2005. These revisions to Colorado's Regulation No. 11 are also being proposed for approval with this action. For further discussion, see section IX below.

3. Maintenance for Growth - Continuing Planning Process.

The State's methodology and demonstration of maintenance of the 8-hour ozone NAAQS is described in Chapter III H. of the Denver EAC plan and our evaluation is described further in section VII C. below. We note, however, that an oversight occurred in which the State failed to include a discussion in the Denver EAC plan as to how it would address the Protocol's continuing planning process provisions. To address this issue, the State submitted a commitment letter, dated March 22, 2005, that detailed the specific measures it would use to address the continuing planning requirements of the Protocol.

The State will periodically evaluate the data and growth assumptions used in the attainment demonstration, review point source growth, and review transportation patterns. If these periodic reviews demonstrate a need to adopt additional control measures, the State will evaluate and adopt the necessary controls for the Denver EAC plan. The State also noted that the transportation patterns and emissions in the Denver EAC plan's 8-hour ozone control area are already evaluated due to the transportation conformity requirements of currently-approved maintenance plans (i.e., Denver PM10, Denver carbon monoxide, Denver 1-hour ozone, Fort Collins carbon monoxide, Greeley carbon monoxide, and Longmont carbon monoxide). The State's letter also contained a commitment to amend the Denver EAC plan, as a SIP revision, to incorporate the continuing planning process language from our Protocol. This SIP revision will be performed in 2005. However, due to State-internal SIP processing requirements, it will not be

submitted to EPA until 2006.

In addition to the above, we note that once the Denver area receives an effective attainment designation in 2008, the area will then have to meet the requirements of 40 CFR 51.905(a)(4) and 40 CFR 51.905(a)(4)(ii). To meet the requirements of 40 CFR 51.905(a)(4)(ii), the State will have to submit a CAA section 110(a)(1) maintenance plan within three years of the designation of attainment (i.e., 2011). In the State's March 22, 2005 letter, it acknowledges this obligation and also states its intention to prepare this required maintenance plan in an earlier time period.

Based on the contents of the March 22, 2005 commitment letter, we have determined that the State has adequately addressed the continuing planning process requirements of the Protocol.

VII. EPA's evaluation of the Denver Early Action Compact Ozone Plan's Attainment Demonstration

Chapter III of the Denver EAC plan contains descriptions and results of the attainment demonstration photochemical dispersion modeling, including relative reduction factors (RRF), 2007 design values, 2007 control case inventories, a 2007 control case demonstration, and weight of evidence analyses.

A. Photochemical Dispersion Modeling.

1. Model Approach Selected. The State selected the EPA-approved photochemical model "Comprehensive Air Quality Model with Extensions" (CAMx). The State's contractors, ENVIRON International Corporation and Alpine Geophysics Atmospheric Sciences Group performed the modeling work. Meteorological fields for input into the CAMx model were produced with the Mesoscale

Meteorological Model (MM5). Emissions data, previously described above, were processed with the Emissions Processing System (EPS2x) for 2002 and 2007. The photochemical dispersion modeling was performed in accordance with our then available draft May, 1999 modeling guidance entitled "Draft Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS." A more in-depth discussion of the modeling protocol is located in Appendix A ("Modeling Protocol, Episode Selection, and Domain Definition") of the State's TSD which is included with the docket for this action.

2. Modeling Domain. The Denver EAC plan's air quality modeling domains were defined on an MM5 system with 36 kilometer (km), 12 km, and a 4 km nested-grid structure. This structure was utilized in conjunction with the CAMx and EPS2x air quality and emissions modeling during the episode periods that are described below. The larger 36km domain was selected to address the impact of boundary condition uncertainties for the Front Range area of Colorado, as CDPHE was concerned there may be transport from Southern California and Texas. The 12 km grid resolution domain essentially covers the central Rocky Mountain states or portions thereof (i.e., Arizona, Colorado, New Mexico, Utah and Wyoming.) The 4 km nested-grid was used for the period encompassing the final, selected ozone episode of June 25, 2002 to July 1, 2002 to provide finer resolution of the emissions, transport, and transformation, and to evaluate the selected control strategies for the Denver EAC area and nearby Front Range cities. A more in-depth discussion of the modeling domain is located in Appendix

A ("Modeling Protocol, Episode Selection and Domain Definition") of the State's TSD.

3. Episode Selection. Initially, the State, RAQC, and the modeling contractors evaluated three 2002 ozone episodes. These episodes were June 8th to June 12th, June 25th to July 1st, and July 18th to July 21st . The June 8th to June 12th episode was removed from consideration due to the problems associated with the Hayman wildfire that started on June 8, 2002. The potential influx of emissions along with the effects of the large smoke plume made this episode unsuitable for use. Both the June 25th to July 1st and July 18th to July 21st episodes were modeled. However, the results for the July 18th to July 21st episode were unable to conform to the necessary model performance standards required by our 8-hour ozone NAAQS modeling guidance ("Draft Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS.") It appears that the poor model performance for this episode was due to convective meteorological conditions that could not be resolved by MM5. However, the results for the June 25th to July 1st episode were successful in meeting our modeling guidance and were used for the Denver EAC ozone plan's attainment demonstration. Additional discussion on episode selection can be found in section D of our TSD and in Appendix B of the State's TSD.

4. Base Case Relative Reduction Factors (RRF). The dispersion modeling for the Denver EAC plan produced base case relative reduction factors (RRF) for receptors in the modeling domain where ozone monitors are located. In general,

the RRF for each monitor is equal to the mean 2007 base case modeled 8-hour ozone concentration divided by the mean 2002 base case modeled 8-hour ozone concentration. Once the RRFs are developed, the RRF for each monitoring site is multiplied by the monitoring site's base case design value to determine a future case design value (i.e., 2007) to indicate if attainment is demonstrated at each site. This is further discussed in Chapter III B. and C. of the Denver EAC plan.

Twelve Front Range ozone monitors were considered by the State, ranging from Fort Collins to the north of metropolitan Denver, in Larimer County, to the Chatfield reservoir in the southwestern portion of metropolitan Denver, and also including an ozone monitor operated by the National Park Service (NPS) just outside the eastern border of Rocky Mountain National Park in Larimer County. The current (2001-2003) base case ozone design values used in the Denver EAC plan and attainment demonstration are based on monitoring data from 2001, 2002, and 2003. In these three years of data, three of the twelve monitors were violating the 8-hour ozone NAAQS. They are: (1) the Chatfield (hereafter Chatfield) reservoir monitor, located in Douglas County, Air Quality System (AQS) site identification number 080350002, (2) the National Renewable Energies Laboratory (hereafter NREL) monitor, located in Jefferson County, AQS identification number 080590011, and (3) the Rocky Flats North (hereafter Rocky Flats) monitor, located in Jefferson County, AQS identification number 080590006. For the violating monitors, we have extracted RRF information from Table 6 of the Denver EAC plan and present it below in our Table VII-1:

Table VII-1: RRF for Violating Monitors

Monitoring Site Name	8-hour Ozone Current (2001-2003) Base Case Design Values in ppm	Base Case Relative Reduction Factors (RRF)	8-hour Ozone Future (2007) Base Case Design Values in ppm
Chatfield	0.085	0.9807	0.0834
NREL	0.085	0.9946	0.0845
Rocky Flats	0.087	0.9942	0.0865

Table VII-1 represents the 2007 base case modeling which relied on expected emission reductions from existing State controls, existing Federal rules, and anticipated reductions from new Federal rules. As is clear from Table VII-1 above and the Denver EAC plan, additional emission reductions are necessary to bring the Rocky Flats monitor towards modeled attainment for 2007. The 2007 "control case" emission inventories and modeling are described below and in Chapter III.. E and F of the Denver EAC plan. Further discussions are found in sections C and D of our TSD and in Appendices F, J, K, and L of the State's TSD.

5. 2007 Control Case Emission Inventories. The 2007 control case emission inventories reflect estimated VOC and NOx emission reductions from the control strategies described in Chapter III. E of the Denver EAC plan and in section VI B.2. above. In addition to emission reductions from existing State and Federal rules, for 2007 the State calculated the following:

(a) 10 tons per day (tpd) VOC reductions from an 8.1 psi RVP for conventional gasoline with 9.1 psi RVP for ethanol blends (9 tpd from on-road vehicles, 1 tpd from refueling, and assuming 25% market penetration for ethanol blends),

(b) 55 tpd VOC reductions from control of oilfield flash emissions,

(c) 5.5 tpd VOC reductions and 19 tpd NOx reductions from oilfield RICE controls, and,

(d) 0.5 tpd VOC reductions from the control of oilfield dehydrators.

The State calculated total emission reductions from existing and new State and Federal rules for the 2007 control case of 106 tpd of VOC emissions and 58 tpd of NOx emissions for the eight-county metropolitan Denver area (counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and Weld) and slightly greater tons per day for the eleven-county area (adding Elbert, Larimer, and Morgan counties to the other eight). These projected emission reductions were extracted from Chapter III. E of the Denver EAC plan (Tables 7a, 7b, 8a, and 8b) and are presented below in our Tables VII-2 and VII-3:

Table VII-2
Summary of Emissions Tons Per Average Episode Day (TPD)
Emissions for Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and Weld Counties

Source Category	2007 VOCs Base Case	2007 NOx Base Case	2007 VOCs Control Case	2007 NOx Control Case
Point Sources	204.1	107.1	143.3	88.3
Area Sources	104.1	27.6	104.1	27.6
Non-Road Sources	53.7	82.5	53.5	82.6
On-Road Sources	117.5	119.3	108.4	119.0
Subtotal Anthropogenic	479.4	336.5	409.3	317.5
Biogenics	468.1	37.1	468.1	37.1
Total	947.5	373.6	877.4	354.6

Table VII-3
Summary of Emissions Tons Per Average Episode Day (TPD)
Emissions for Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Elbert, Jefferson, Larimer, Morgan, and Weld Counties

Source Category	2007 VOCs Base Case	2007 NOx Base Case	2007 VOCs Control Case	2007 NOx Control Case
Point Sources	209.3	144.9	148.1	126.1
Area Sources	119.6	32.7	119.6	32.7
Non-Road Sources	62.6	92.4	62.6	93.3
On-Road Sources	135.1	136.6	126.0	136.3
Subtotal Anthropogenic	526.6	406.6	456.4	388.4
Biogenics	799.5	52.3	799.5	52.3
Total	1326.1	458.9	1255.8	440.7

6. 2007 Control Case Modeling Demonstration. The State modeled the above base case and control case scenarios with CAMx. As discussed above and in Chapter III. F of the Denver EAC plan, the 2007 base case and 2007 control case modeling produce relative reduction factors (RRF) for receptors in the modeling domain where ozone ambient air quality monitors are located. Table VII-4 below presents the 2007 control case RRFs, 2007 control case design values for modeled days greater than 0.070 ppm, and control case design values for modeled days greater than 0.080 ppm for the Chatfield, NREL, and Rocky Flats monitors. We note that the nine other monitors listed in Table 9 of the Denver EAC plan all show predicted attainment with values less than 0.081 ppm for both evaluation days

(i.e., modeled days greater than 0.070 ppm and greater than 0.080 ppm.)

Table VII-4

		Days > 0.070 (ppm)	Days > 0.070 (ppm)	Days > 0.080 (ppm)	Days > 0.080 (ppm)
Monitoring Site Name	8-hour Ozone Base Case Design Values 2001-2003 (ppm)	2007 Control Case RRF	2007 Control Case Design Values (ppm)	2007 Control Case RRF	2007 Control Case Design Values (ppm)
Chatfield	0.085	0.9761	0.0830	0.9779	0.0831
NREL	0.085	0.9891	0.0841	0.9748	0.0829
Rocky Flats	0.087	0.9888	0.0860	0.9811	0.0854

In Section D of our TSD and in Appendix I of the State's TSD, results are presented for the final modeling runs for the June 25, 2002 to July 1, 2002 episode. These results reflect incorporation of all the control measures for the 2007 attainment year. However, CAMx still predicts that the Rocky Flats monitor will marginally exceed the 8-hour ozone NAAQS. The information is presented below in Table VII-5.

Table VII-5

Monitoring Site	2001-2003 Design Value	2007 Predicted Design Value
Chatfield	85 ppb	82.9 ppb
NREL	85 ppb	83.9 ppb
Rocky Flats	87 ppb	85.9 ppb

As can be seen above in Tables VII-4, VII-5, and Table 9 of the Denver EAC plan, the Rocky Flats monitor was unable to demonstrate attainment with the 2007

control case emission reduction strategies. The State and its modeling contractor performed additional sensitivity analyses, that are described further in section D of our TSD and Appendix K of the State's TSD. They concluded, based on the anomalous meteorological conditions in 2003 and the under-prediction tendency of the CAMx model, for the Denver EAC plan application, that a weight of evidence (WOE) demonstration was warranted. A WOE demonstration provides corroborating evidence and technical analysis, beyond the dispersion modeling, to support a conclusion that attainment is likely to occur. Weight of evidence demonstrations may be accepted by EPA and have been approved in prior 1-hour ozone dispersion-modeled demonstrations of attainment. We also describe their use in our May, 1999 draft guidance for the 8-hour ozone NAAQS ("Draft Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS.")

B. Weight of Evidence Determination.

As described in Chapter III. G of the Denver EAC plan and in our May, 1999 draft modeling guidance for the 8-hour ozone NAAQS, if resultant values of the dispersion modeling for an attainment demonstration are between 0.084 ppm and 0.089 ppm at one or more monitoring site receptor locations, then a WOE determination should be performed. Since the final modeled design value at the Rocky Flats monitoring site is predicted to be below 0.089 ppm, our guidance indicates that corroborating evidence, based on other analyses, can be sufficiently convincing to support a conclusion that attainment is likely to occur despite the outcome of the dispersion modeling. To the State and its contractors, the modeling results

appear to be very "stiff"; that is, the estimated 2007 design values are not very sensitive to local emission controls. The State indicated in Chapter III. G of the Denver EAC plan that they believe this lack of sensitivity is primarily caused by the following: (1) anomalous temperatures and low mixing heights in 2003 were more conducive to ozone formation than the meteorological conditions that were used in the 2002 modeling episode, (2) the model's tendency, despite achieving most of EPA's model performance goals, to under-predict ozone concentrations and thus under-predict the beneficial impact of local control measures, and (3) potential influence from elevated, upwind background concentrations of ozone and ozone precursor emissions that were detected by the air quality monitors in 2003, but unaccounted for in the photochemical modeling.

The following describes aspects of the State's WOE analysis:

1. Anomalous Meteorological Conditions in 2003 and Trends Analysis. The Denver EAC plan's photochemical modeling was designed with ozone episode days and meteorological data from 2002. However, with the 8-hour ozone violations detected in 2003, the 2002-based photochemical modeling was then applied to address these higher 2003 ozone values. It was discovered, though, that meteorological conditions were significantly different between 2002 and 2003 and this affected the photochemical model's performance. One evaluation method the State applied to address this issue was to provide meteorological data that indicated that 2003 had record-setting maximum ambient temperatures and lower than average mixing heights, both of which contributed to the elevated 2003 monitored 8-hour ozone values. If the extreme high ambient temperatures and

low-level mixing heights of summer 2003 are excluded, a 1993 to 2002 trends analysis shows a 1.2% annual reduction in ozone concentrations, which would result in predicted attainment of the 8-hour ozone NAAQS by 2007. A further discussion is provided in section D of our TSD and in Appendix N of the State's TSD.

2. Under-Prediction Tendency of the Model. An overall under-prediction tendency of the model was documented by the State in Appendixes H and N of their TSD and in section D of our TSD. The model tended to under-predict 2003 ozone concentrations by approximately 20%. We note that when a photochemical model underestimates the ozone concentrations, less ozone is attributed to the local precursor emissions in the model than resulted from these emissions in reality. To evaluate this issue, the State's contractor prepared an analysis for modeled days greater than 70 ppb for the episode days of June 27, 2002 through June 30, 2002. However, for these episode days, only minimal changes in the predicted ozone values were seen (modeled values were still low). Only the July 1, 2002 episode day modeling results, with a model-predicted value of 85 ppb, approached the design value of 87 ppb and the monitor-observed value of 89 ppb. This is further described in Chapter III. G, Table 10, of the Denver EAC plan, section D of our TSD, and in Appendices B, K, and L of the State's TSD.

3. Number of Fine Grid Cell Hours Greater than 84 ppb. The State evaluated an indicator of the model's performance - the relative change from the 2002 base case modeling to the 2007 control case modeling with respect to the predicted

ozone concentrations in the 4 km grid cells. Specifically, the State's contractor found that the number of 8-hour periods that the model predicted to be greater than 84 ppb for the 2007 control case (4) were 88% fewer than the model predicted for the 2002 base case (33). This 88% figure is greater than the "large" reduction (80%) that is suggested in our 1999 draft 8-hour ozone modeling guidance and supports the conclusion that the proposed control strategy package for 2007 is consistent with meeting the 8-hour NAAQS. This evaluation is further described in section D of our TSD and in Appendix L of the State's TSD.

4. Relative Difference (RD). Relative Difference (RD) is another metric the State's contractor evaluated. RD examines the amount by which the 8-hour ozone concentration is above 84 ppb in the 2007 control case modeling versus the 2002 base case modeling. The State's contractor computed the ratio of the average estimated "excess 8-hour ozone" for the 2007 control case modeling to the average estimated "excess 8-hour ozone" for the 2002 base case modeling. In this case, we are using the phrase "excess 8-hour ozone" to mean the amount by which the average in the particular year exceeds 84 ppb. The State's contractor calculated an RD of 93%, which means the 2007 value was 93% less than the 2002 value. EPA considers large RDs to be desirable, with anything greater than 80% considered large. Thus, this 93% figure further supports a conclusion that the control strategy package for 2007 is consistent with meeting the 8-hour NAAQS. This evaluation is further described in section D of our TSD and in Appendix L of the State's TSD.

5. VOC and NOx Sensitivity. The State and its contractor performed sensitivity modeling runs looking at reductions in VOCs, VOCs and NOx , and just NOx. The sensitivity analyses indicated that VOC reductions alone were more important for achieving reductions in ozone values in the urbanized area and at the Rocky Flats air quality monitoring location. This also helped confirm the validity of the 2007 control strategy package which focused on VOC controls. This evaluation is further described in section D of our TSD and in Appendixes J and K of the State's TSD.

In summary, the State's WOE analyses provide adequate support for the State's attainment demonstration. Our decision on the adequacy of the WOE is based on the composite of the analyses, and not on any single element. The WOE complements the modeled 2007 control strategies and indicates that attainment should be reached by December 31, 2007 as is required by the EAC Protocol.

C. Maintenance Through 2012.

The EAC Protocol requires that, in addition to demonstrating attainment of the 8-hour ozone NAAQS in 2007, areas demonstrate maintenance of the 8-hour ozone NAAQS through 2012. For the Denver EAC plan, the State performed a comparison of projected emissions, from all source categories, for 2012 to those used in the 2007 dispersion modeled attainment demonstration (as supported by WOE.) The 2012 emission inventories assume that the 2007 control strategies remain in place through 2012. The 2012 emission inventories also account for Federal emission control measures that are scheduled to take effect in the 2007 to 2012 time period. As the 2012 projected

emissions are less than the 2007 dispersion modeled emissions in the attainment demonstration, continued maintenance is demonstrated. The 2007 control case emission inventories for the 8-county area and the 11-county area, along with the 2012 maintenance emission inventories, are presented in Chapter III E. Tables 7a, 7b, 8a, and 8b respectively and also in our Tables VII-5 and VII-6 below.

Table VII-5
Summary of Emissions Tons Per Average Episode Day (TPD)
Emissions for Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and Weld Counties

Source Category	2007 VOCs Control Case	2012 VOCs Control Case	2007 NOx Control Case	2012 NOx Control Case
Point Sources	143.3	152.9	88.3	96.5
Area Sources	104.1	114.0	27.6	31.1
Non-Road Sources	53.5	47.7	82.6	74.8
On-Road Sources	108.4	76.0	119.0	77.7
Subtotal Anthropogenic	409.3	390.6	317.5	280.1
Biogenics	468.1	468.1	37.1	37.1
Total	877.4	858.7	354.6	317.2

Table VII-3
Summary of Emissions Tons Per Average Episode Day (TPD)
Emissions for Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Elbert, Jefferson, Larimer, Morgan, and Weld Counties

Source Category	2007 VOCs Control Case	2012 VOCs Control Case	2007 NOx Control Case	2012 NOx Control Case
Point Sources	148.1	159.2	126.1	138.1
Area Sources	119.6	131.3	32.7	36.7
Non-Road Sources	62.6	56.2	93.3	84.6

On-Road Sources	126.0	89.0	136.3	90.1
Subtotal Anthropogenic	456.4	435.7	388.4	349.4
Biogenics	799.5	799.5	52.3	52.3
Total	1255.8	1235.2	440.7	401.8

Our review of the attainment demonstration shows that it should be approved . The State has adopted acceptable control strategies and has performed modeling that meets our modeling guidance requirements for the 8-hour ozone NAAQS and the EAC Protocol. Modeling based on newly adopted and existing control measures, and supplemented by a weight-of-evidence analysis, demonstrates attainment by December 31, 2007 and maintenance through 2012. Therefore, we are proposing to approve the attainment demonstration.

VIII. EPA's evaluation of the of the Regulation No. 7 Revisions

Colorado's Regulation No. 7 is entitled "Emissions of Volatile Organic Compounds" (hereafter, Regulation No. 7). In conjunction with the development of the Denver EAC plan, the State made several changes and/or additions to sections I.A., I.B., XII, and XVI of Regulation No. 7 which the AQCC adopted after its March 12, 2004, public hearing. These Regulation No. 7 revisions were submitted to us by the Governor on July 21, 2004. Based on input and discussions with EPA, the AQCC further amended Regulation No. 7 on December 16, 2004, following a public hearing. The Governor submitted these additional revisions to Regulation No. 7 to us on March 24, 2005. These March 24, 2005 Regulation No. 7 revisions supersede and replace those submitted by the Governor on July 21, 2004, and are those we are proposing to approve.

The purpose of the revisions to Regulation No. 7 was to reduce emissions of: (1) VOCs from condensate tanks and operations at oil and gas exploration and production (E&P) facilities, (2) VOCs and NOx from stationary and portable oilfield reciprocating internal combustion engines (RICE), (3) VOCs from gas processing plants, and (4) VOCs from dehydrators at oilfield operations. These revisions to Regulation No. 7 apply to all affected facilities within the 8-hour ozone nonattainment area boundary, with the majority of affected facilities being located in southern Weld County.

The revisions to Regulation No. 7 affect the following sections:

A. Sections I.A. and I.B. Including definitions of the Denver 1-hour ozone area and the Denver 8-hour ozone control area. Also indicating that new and existing oil and gas operations come under the provisions of sections XII and XVI..

B. Section II.A., additional definitions.

C. A new Section XII, "Volatile Organic Compound Emissions From Oil And Gas Operations." Includes definitions, percentages of emission reductions for the high ozone season and rest of the year, numerous recordkeeping requirements for a spreadsheet to determine daily compliance, emission factors used to demonstrate compliance, reporting requirements for certain equipment if a construction or Title V permit is issued by the State, methodology for approval of alternative emissions control equipment, requirements for gas-processing plants, requirements for controlling emissions from dehydration units, and a methodology for approval to develop testing methods and revised emission factors.

D. A new Section XVI, "Control of Emissions From Stationary And Portable

Engines in the 8-hour Ozone Control Area." Includes specific requirements for emission control technology for applicable RICE and dates for the removal or replacement with electric units for certain existing internal combustion engines.

One of the major requirements of the changes is an overall reduction of 47.5% of VOCs from E&P condensate storage tanks during the summer ozone season to meet the modeled requirements of the attainment demonstration. Due to the unique operating parameters and numerous tanks in the field (in excess of 1,000), the AQCC allowed an overall averaging approach, rather than a unit-by-unit approach, to achieve the necessary emission reductions. The regulation includes detailed record keeping requirements to help ensure the 47.5% reduction requirement is met.

We have reviewed, and are proposing approval of, all of the above State-adopted revisions to Regulation No. 7.

IX. EPA's evaluation of the of the Regulation No. 11 Revisions

Colorado's Regulation No. 11 is entitled "Motor Vehicle Emissions Inspection Program" (hereafter referred to as Regulation No. 11). This program has undergone several revisions since 2000, including revisions that were adopted by the AQCC in conjunction with the Denver EAC plan after the March 11-12, 2004 public hearing. The prior Regulation No. 11 revisions that the Governor submitted on June 20, 2003 and April 12, 2004 are briefly described below. The revisions the Governor submitted on July 21, 2004 in support of the Denver EAC plan are also described below:

A. Revisions adopted November 16, 2000, submitted June 20, 2003.

This submittal amended Regulation No. 11 by (1) extending the time for

taking valid remote-sensing readings for purposes of the clean screen program, and (2) correcting a citation error in a section of the rule concerning the licensing of clean screen inspectors.

B. Revisions adopted December 20, 2001, submitted June 20, 2003.

This submittal amended Regulation No. 11 by (1) expanding the clean screen program, (2) excluding El Paso County from the clean screen program, and (3) repealing the "Verification of Emissions Test" certificate or windshield sticker.

C. Revisions adopted August 15, 2002, submitted June 20, 2003.

This submittal amended Regulation No. 11 to switch to a pay-upon-registration system for the clean screen program. The rule amendments also included a change to the timing requirements for remote sensing readings to make the clean screen program more flexible. As amended, the regulation requires two valid remote sensing readings within a twelve-month period in order to clean screen a vehicle. The regulation previously required the most recent reading to be within 120 days of the registration renewal date. In addition, this submittal included several minor, housekeeping changes such as:

1. The elimination of a requirement for agencies to develop the equivalent of a windshield sticker for clean screened vehicles.
2. The elimination of a provision requiring annual inspections for government vehicles.
3. The repeal of provisions establishing a method to mail payments to the

contractor.

D. Revisions adopted October 17, 2002, submitted June 20, 2003.

This submittal to Regulation No. 11 expanded the pay-upon-registration for the clean screen program (see the August 15, 2002 version) to the enhanced I/M program area (see the December 20, 2001 version). These revisions also contained provisions that the malfunction indicator light (MIL) and on-board diagnostic (OBD II) fault codes will not be used as the basis for test failures and it eliminated a pre-existing state requirement for vehicles to pass MIL tests. We note that Federal law does not require MIL or OBD tests for pre-1996 vehicles.

These revisions also eliminated the requirement for 1996 and newer vehicles to pass MIL and OBD tests. This particular revision is acceptable to EPA in view of our final Motor Vehicle Inspection/Maintenance requirements (see 66 FR 18155, April 5, 2001) which extended the deadline for beginning OBD inspections to January 1, 2002. As the Denver metropolitan area was redesignated to attainment for carbon monoxide on December 14, 2001 (see 66 FR 64751), this January 1, 2002 OBD implementation date was not applicable to the Denver metropolitan area and the State need not retain the MIL and OBD program in the SIP.

E. Revisions adopted September 18, 2003, submitted April 12, 2004.

This submittal to Regulation No. 11 allows the sale and registration of used motor vehicles without an emissions inspection if the motor vehicle is less than 3 years old. In addition, Regulation No. 11 previously required motor vehicle dealers to

have an emissions test for used vehicles at the time of sale, regardless of when they may have been inspected before. The rule has been revised such that motor vehicle dealers need to only have vehicles that are consigned for sale inspected annually; further inspection is not required at the time of sale.

F. Revisions adopted December 18, 2003, submitted April 12, 2004.

This submittal to Regulation No. 11 removed the calendar year 2004 and 2005 cutpoints, while retaining the 2006 cutpoints, and also removed El Paso County (Colorado Springs area) from the Federal applicability of a basic I/M program.

G. Revisions adopted March 12, 2004, submitted July 21, 2004.

This submittal to Regulation No. 11 supports the Denver EAC plan by reducing the percentage of the fleet to be clean-screened from a maximum of 80% to a maximum of 50% after December 31, 2005.

We have reviewed, and are proposing approval of, all of the above State-adopted revisions to Regulation No. 11.

X. EPA's evaluation of the Common Provisions Regulation Revision

The State amended the Common Provisions Regulation to incorporate the American Petroleum Institute's (API) definition of "condensate," which refers to hydrocarbon liquids that have an API gravity of 40 degrees or greater.

We have reviewed, and are proposing approval of, this revision to the Common Provisions Regulation.

XI. Consideration of Section 110(l) of the CAA

Section 110(l) of the CAA states that a SIP revision cannot be approved if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress towards attainment of a NAAQS or any other applicable requirement of the CAA. The Denver EAC ozone plan will not interfere with attainment, reasonable further progress, or any other applicable requirement of the CAA.

XII. Proposed Action

EPA is proposing to approve the Denver Early Action Compact (EAC) ozone plan that the Governor submitted on July 21, 2004, the attainment demonstration, the revisions to Regulation No. 7 that the Governor submitted on March 24, 2005, all of the revisions to Regulation No. 11, and the revisions to the Common Provisions Regulation, all as a revision to the SIP.

Submit your comments, identified by RME Docket Number R08-OAR-2004-CO-0001, by one of the methods identified above at the front of this proposed rule. We will consider your comments in deciding our final action if they are received before [Insert date 30 days after publication in the Federal Register.] EPA will address all public comments in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period on this action. Any parties interested in commenting must do so at this time.

XIII. Statutory and Executive Order Reviews

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this proposed action is not a "significant regulatory action" and therefore is not subject to review by the Office of Management and Budget. For this reason, this action is also not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution,

or Use" (66 FR 28355, May 22, 2001). This proposed action merely proposes to approve state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this proposed rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.). Because this rule proposes to approve pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4).

This proposed rule also does not have tribal implications because it will not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action merely proposes to approve a state rule implementing a Federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. This proposed rule also is not subject to Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because it is not economically significant.

In reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This proposed rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq*.).

List of Subjects 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

5/6/05
Dated:

Kerrigan G. Clough
Acting Regional Administrator
Region VIII