

US EPA ARCHIVE DOCUMENT

June 24, 2003

Richard E. Greene  
Regional Administrator  
USEPA Region VI  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202-2733

Dear Mr. Greene:

In accordance with Lydia Wegman's memo of April 4, 2003, please find enclosed our initial 6 month progress report describing Oklahoma's early action compact activities for the Central Oklahoma and the Tulsa areas.

Please note that this report meets the June 30, 2003, milestone by summarizing the activities for both the Tulsa and Oklahoma City area compacts. Topics addressed in the report include stakeholder involvement, selection of potential emission reduction measures, public outreach, and modeling activities for the Central Oklahoma and Tulsa areas.

If you have any questions or desire additional information concerning this report, please contact Mr. Scott Thomas of my staff at 405-702-4157.

We look forward to working with your Agency on these important matters.

Sincerely,

Eddie Terrill  
Director, Air Quality

ET:ST:ref

C: Tom Diggs, EPA  
Jerry Lasker, INCOG  
Zach Taylor, ACOG

**Progress Report for the  
Central Oklahoma Early Action Compact  
and the  
Tulsa Early Action Compact**

**Submitted by the Oklahoma Department of Environmental Quality**

**June 25, 2003**

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- Interim Report: Meteorological Conditions during 8-hour Ozone Exceedances
- 10-year Review of Meteorological Conditions During 8-hour Ozone Exceedances

## **Agreements for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact**

Early Action Compacts were signed for the Central Oklahoma area on 12/31/02, and for the Tulsa area on 12/23/02. These agreements signified the beginning of the public process to develop and implement local measures to meet the new 8-hour ozone standard earlier.

To ensure funding was available for required SIP Quality Modeling Activities, Oklahoma Department of Transportation (ODOT), Association of Central Oklahoma Governments (ACOG), Indian Nations Council of Governments (INCOG), and Oklahoma Department of Environmental Quality (DEQ) executed a subsequent agreement March 27, 2003. This agreement provided a mechanism to support these modeling efforts with State Planning and Research Funds and FHWA PL Planning Funds.

The following agreements are included in Attachment A:

- Tulsa Metropolitan Area 8-hour Ozone Early Action Compact
- Central Oklahoma Early Action Compact
- Modeling Funding Agreement

# Stakeholder Process for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact

The stakeholder process began with an informational public meeting November 19, 2002 at the DEQ. Potential stakeholders (included in Attachment B) received an overview of Early Action Compacts and ozone guidance from EPA. DEQ provided information on state monitoring, emissions inventories, and current modeling capabilities. ENVIRON, who had contracted with DEQ to perform the modeling, presented the modeling protocol for statewide photochemical modeling. ACOG and INCOG stated their intentions for participation in the EAC process. After a question and answer session, it was decided a smaller technical review committee would be useful.

Members of the Technical Advisory Committee (TAC) were chosen to represent the different stakeholder groups. Members of the TAC and their duties are included in Attachment B. A Modeling Protocol Decision Tree was established to define the steps in the public process.

Meetings to update, inform, and request input from the TAC and stakeholders were held December 19, 2002, January 7, March 5, March 13, May 22, and May 27, 2003.

The following documents are included in Attachment B:

- List of Stakeholders
- Technical Advisory Committee Members and Responsibilities
- Policy Committee Members
- Modeling Protocol Decision Tree
- Agendas and Meeting Notes
  - November 19, 2002
  - December 19, 2002
  - January 7, 2003
  - March 5, 2003
  - March 13, 2003
  - May 22, 2003
  - May 27, 2003

## **Local Control Strategies for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact**

Control measure development began in March 2003. DEQ compiled informational materials and presentations detailing emissions inventory summaries and the Top 25 NO<sub>x</sub> emitters in the Tulsa and Oklahoma City areas. Staff began researching potential controls for the Oklahoma EAC areas and prepared a preliminary list with descriptions and references for each measure. This preliminary list was provided to ACOG and INCOG for consideration. The COGs presented this preliminary list to their own internal committees and workgroups for additional input and approval. As the COGs made revisions, a separate control measure list was developed for each of the areas. These control measures for Oklahoma City and Tulsa were presented in separate public meetings, recommended by the TAC to the Policy Committee, and submitted to EPA on June 16, 2003 to satisfy the required milestone.

The following control measure documents are included in Attachment C:

- Emissions Inventory Summary
- Top 25 Emitters for Oklahoma City and Tulsa Areas
- DEQ Draft List of Potential Control Strategies
- Central Oklahoma's (OKC area) Control Measures
- Central Oklahoma's (OKC area) Control Measure Presentation
- List of Potential Control Strategies for Tulsa EAC
- Tulsa EAC Potential Control Strategies Presentation

## Public Outreach for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact

Public outreach is critical to the success of the EAC process. A list of Stakeholders was developed through the cooperative effort of DEQ, ACOG, and INCOG. Email was used as the primary method to notify stakeholders of meetings, informational materials, and products from the contractor. DEQ established an EAC website for posting background materials, EPA guidance, Central Oklahoma and Tulsa EAC agreements, meeting information, presentations, and other documents produced during the process. ACOG and INCOG have also used their websites to post the Agreements and news items. Attachment D includes pages from these websites, illustrating the types of information available.

DEQ, ACOG, and INCOG have printed articles in their newsletters announcing and describing participation in the EAC. These publications are distributed to a large number of stakeholders and are also available on the Web. DEQ also issued news releases prior to the public meetings for control measure development. Members of the press attended each of these meetings, and resulting news articles are included in Attachment D.

Presentations to educate and update stakeholders are given at Technical Advisory Committee and Public Meetings. Each of these presentations is made available on the EAC Website ([www.deq.state.ok.us/AQDnew/whatsnew/SIP/EAC.htm](http://www.deq.state.ok.us/AQDnew/whatsnew/SIP/EAC.htm)) and is included in this submittal.

Attachment D includes the following public outreach materials:

- Websites
  - EAC Website
  - INCOG EAC Web Page
  - ACOG web page with EAC link
  - EPA EAC web pages with links to Oklahoma
  
- Press Coverage
  - ACOG news release
  - ACOG newsletter – EAC article
  - INCOG newsletter – EAC article
  - DEQ newsletter – EAC article
  - DEQ news releases for May 22 and May 27 meetings
  - DEQ media distribution list
  - Daily Oklahoman news article 5/23/03
  - Daily Oklahoman editorial 5/27/03
  - Tulsa World news article 5/24/03
  - Daily Oklahoman news article 5/27/03
  
- Public Presentations from EAC TAC and Public Meetings



# Modeling/Technical Planning Activities for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact

## Progress on Emissions, Meteorological and Photochemical Modeling (June 2003)

On November 15, 2002, the Oklahoma Department of Environmental Quality (ODEQ) entered into a contract with ENVIRON International Corporation to perform the emissions, meteorological and photochemical modeling components of the Tulsa and Oklahoma City 8-hour ozone Early Action Compact (EAC). A draft 8-hour ozone Modeling Protocol was prepared dated December 31, 2002 that contained the following:

- Episode selection for the Tulsa and Oklahoma City areas that recommended the August 13-25, 1999 episode for 8-hour ozone EAC modeling using EPA's episode selection criteria.
- Modeling domain definition for a 36/12/4 km modeling domain with the 4 km domain focused on Oklahoma.
- Meteorological modeling procedures using the MM5 model.
- Emissions modeling procedures using the EPS2x model.
- Photochemical modeling procedures using the CAMx model and procedures for performance evaluation.
- Procedures for demonstrating attainment of the 8-hour ozone standard.

The draft Modeling Protocol also contained key target dates as follows:

- June 16, 2003 submit to EPA list of potential control measures being considered in the 8-hour ozone EAC.
- June 30, 2003 submit to EPA biannual progress of 8-hour ozone EAC.
- December 2002 – target date for Modeling Protocol.
- March 2003 – target date for meteorological modeling.
- May 2003 – target date for emissions modeling.
- July 2003 – target date for base case photochemical modeling and model performance evaluation.
- August 2003 – target date for future-year base case modeling.
- September 2003 – target date for future-year sensitivity modeling.

EPA reviewed the draft Modeling Protocol and found it acceptable but wanted to assure that local stagnation episodes were included in the August 13-25, 1999 episode period. The ODEQ performed analysis of high ozone stagnation days in Oklahoma and found that by extending the episode to September 1, 1999 more such days were included. Thus, the ODEQ elected to extend the Oklahoma 8-hour ozone episode to cover the August 13 through September 1, 1999 periods.

The MM5 meteorological modeling and performance evaluation for the August 13-25, 1999 period was completed in March 2003. On March 5, 2003, ENVIRON presented the preliminary results of the MM5 modeling to the EAC Stakeholders Group in Oklahoma City, Oklahoma where they were authorized to proceed with the MM5 modeling through September 1, 1999. A draft report on the meteorological modeling dated April 14, 2003 was also submitted ODEQ.

Emissions modeling is proceeding and is almost completed for the 1999, 2002 and 2007 Base Case emissions scenarios. The major remaining piece is the link-based on-road mobile source emissions for the Tulsa and Oklahoma City areas. Thus, the emissions modeling for the 1999 Base Case emissions scenario is a little behind schedule, but the emissions modeling for the future-year base case inventories is a little ahead of schedule, so we expect to make up any lost time.

Other CAMx photochemical modeling inputs, including initial concentrations, boundary conditions, land cover, albedo/haze/stratospheric ozone, and photolysis rates, have been prepared and the CAMx base case simulation and model performance evaluation is expected to occur in July 2003 as schedule.

Attachment E includes the following modeling documents:

- Draft Modeling Protocol 12/12/02
- Revised Modeling Protocol 12/31/02
- Appendix A to the Modeling Protocol
- Interim Report: Meteorological Conditions during 8-hour Ozone Exceedances
- 10-year Review of Meteorological Conditions During 8-hour Ozone Exceedances

# **Attachment A**

## **Agreements for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact**

## **Attachment B**

# **Stakeholder Process for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact**

# **Attachment C**

## **Local Control Strategies for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact**

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## **Public Outreach for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact**

# **Attachment E**

## **Modeling/Technical Planning Activities for the Central Oklahoma Early Action Compact and the Tulsa Early Action Compact**