

Biannual Report on the Early Action Compact for Northeast Texas

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On December 20, 2002 local governments in a five county area of Northeast Texas (Gregg, Harrison, Rusk, Smith, and Upshur counties) entered into an Early Action Compact (EAC) with the U.S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ). The purpose of the EAC is to develop and implement a Clean Air Action Plan (CAAP) that will reduce ground level ozone concentrations throughout the five county area to comply to with the 8-hour ozone standard by December 31, 2007 and maintain the standard beyond that date. This report describes the progress in implementing the EAC and achieving its milestones consistent with the EPA's April 4, 2003 guidance concerning such reports.

I. Stakeholder Process

In 1995 local elected officials and other leaders in local government, business and industry created Northeast Texas Air Care (NETAC) in order to provide leadership and guidance in addressing ozone air quality issues in a five county area consisting of Gregg, Harrison, Rusk, Smith, and Upshur counties. NETAC is governed by a 26 member policy committee consisting of representatives of local government, business and industry, the general public and environmental interest groups. (Attachment 1)

From its inception NETAC has placed significant emphasis on the need to ensure that air quality planning activities are developed using scientifically sound techniques. In order to achieve this objective NETAC created a Technical Advisory Committee to undertake, supervise, and guide technical studies such as emission inventory development, air quality modeling and control strategy development, and specialized monitoring studies. The Technical Advisory Committee reports to the policy committee. The Technical Advisory Committee consists of representatives from local government, local business and industry, EPA technical staff, TCEQ technical staff, Texas Department of Transportation planning staff, and the general public and environmental interest groups. (Attachment 2)

NETAC is actively involved in public education and outreach programs concerning ozone air quality issues. This work is guided by NETAC's Public Education/Outreach Committee which consists of representatives from local government, local business and industry, TCEQ staff, and environmental interest groups. (Attachment 3) The Public Education/Outreach Committee reports to the NETAC Policy Committee.

NETAC receives staff support for its activities from the East Texas Council of Governments (ETCOG) which receives and administers grant funds provided by the Texas Legislature for air quality planning activities.

NETAC and its subcommittees meet on an as-needed basis. All meetings are open to the public and are posted at the East Texas Council of Governments and advertised through the distribution of information packets to local media outlets.

During the first half of 2003 NETAC's activities have focused primarily on implementation the EAC. The NETAC Policy Committee met on April 29, 2003 to discuss and approve plans for developing potential emission reduction strategies and establish a public meeting to receive input on the development of such strategies. During the first half of 2003 NETAC's Technical Advisory Committee held seven meetings. Its activities focused primarily on completion of a regional scale model to be used for ozone modeling and evaluation of control strategies for the 8-hour ozone standard. Additionally, the NETAC Technical Committee supervised the development of the report on potential emission reduction strategies that must be submitted to EPA as the first milestone under the EAC. NETAC's Public Education/Outreach committee met once during the first half of 2003 to plan activities for the 2003 ozone season.

II. Evaluating and selecting emission reduction measures

The initial milestone in the Early Action Compact for Northeast Texas is the identification and description of potential emission reduction strategies. This milestone must be completed and submitted to EPA by June 16, 2003. In the first half of 2003 NETAC conducted a study to identify potential control measures to be considered in the EAC control strategy modeling later in 2003.

The methodology followed to complete the assessment can be summarized as follows:

1. Tabulate and analyze the most recent (1999) emission inventory for the NETAC five county area to rank emissions sources and identify emission sources/sectors where control measures could make a difference to ozone.
2. Identify what control measures are available for the important emission sources/sectors identified in (1).
3. Estimate the potential emission reductions that could be realized from (2), recognizing uncertainties by giving ranges of emission reductions.
4. Evaluate whether the control measures could be implemented in time to meet the EAC schedule, i.e., by the end of 2005.

The assessment was reviewed by the NETAC Technical Committee with the EPA and TCEQ, and then presented to the public at a meeting held in Longview on May 28, 2003. Public comments are included in the final report. The control strategy assessment is documented in the report "Identification of Potential Emissions Reduction Strategies For the Northeast Texas Early Action Compact" which was submitted to EPA by June 16, 2003.

III. Public outreach

NETAC is actively engaged in public education and outreach activities concerning ozone air quality issues. Public education and outreach programs that have been established and that continue on an ongoing basis include:

1. Production and distribution of public service announcements broadcast on local radio stations providing information on ozone air quality issues and recommending actions to reduce ozone levels on ozone action days.
2. Printing and distribution to local public schools book covers designed to increase public awareness of ozone air quality issues.
3. Establishment and maintenance of a website (www.netac.org) to provide information concerning ozone air quality issues and NETAC's ongoing activities.
4. Annual sponsorship of an ozone awareness event prior to the commencement of ozone season in order to highlight ozone air quality issues and encourage public support for programs designed to minimize ozone formation.

In cooperation with the Texas Commission on Environmental Quality, NETAC and local governments in the area provide "ozone action alerts" for the public on days when TCEQ predicts meteorological conditions are favorable for high ozone formation. Notification is provided through the NETAC website, local government public access channels, and the display of ozone alert flags.

IV. Modeling/Technical Planning Activities

A. Photochemical modeling progress update

During the first half of 2003, NETAC completed developing a regional scale, nested grid ozone model for August 13-22, 1999. The modeling used the CAMx version 3.1 air quality with meteorology from the MM5 version 3. Emissions were based on the latest available data from EPA and the TNRCC. Model performance was evaluated for the 1999 base case and satisfied the EPA's model performance criteria. Modeling also was completed for a 2007 base case with existing controls in place. A source apportionment analysis was completed for 2007 to identify the relative contributions of local emissions and regional transport, and the relative contributions of different emissions source categories. The modeling was documented in a report that was reviewed and approved by the NETAC technical committee including representatives from the TCEQ and EPA.

Emission inventory updates were begun for revised ozone modeling and control strategy development with the August 1999 episode to be completed later in 2003. Emissions updates include on-road mobile source emissions from EPA's MOBILE6 model and off-road mobile source emissions from EPA's new NONROAD model. The NONROAD model calculations for Northeast Texas include local survey data collected

by NETAC for construction and mining equipment. The MOBILE6 emissions reflect the latest TxDOT activity data as modeled by the Texas Transportation Institute (TTI). Other emissions data from EPA's National Emissions Trends 1999 (NET99) inventory have been updated to the latest version 2 of the NET99 inventory.

The NETAC technical committee discussed and decided upon the procedures to be used for the 2007 attainment demonstration modeling for the EAC. It was agreed upon with the EPA and TNRCC that the design value scaling for the 8-hour ozone attainment demonstration would use a base year 2002 emission inventory with 2001-2003 design values.

B. Ambient Monitoring

NETAC conducts ambient monitoring for ozone and precursors in Northeast Texas to supplement and enhance the data collected by the TCEQ. NETAC operates a research ozone-monitoring site located near Waskom in Harrison County, which is toward the east of the NETAC region near the Texas/Louisiana border. This location was selected to provide information on ozone levels entering the NETAC region when winds are from the east because these wind conditions are associated with high ozone levels in Northeast Texas. The Waskom ozone, NO_x and meteorological data are reported to the TCEQ's data system and are immediately available via the TCEQ's web page. In the first half of 2003, NETAC completed a draft report that documented the Waskom ozone data and compared ozone levels at Waskom to the other surface monitoring sites in the NETAC area. These data will be used to update the conceptual model for ozone formation in the NETAC area later in 2003. The Waskom research site is operating again in 2003.

NETAC also collects and analyzes VOC canister samples at the TCEQ's CAMS19 monitoring site near Longview. These VOC samples supplement the TCEQ's data for ozone, NO_x, SO₂ and meteorological parameters. In the first half of 2003, NETAC completed a draft report that documented the 100 VOC samples collected at Longview in 2002. These data will be used to update the conceptual model for ozone formation in the NETAC area later in 2003. NETAC will collect 100 VOC samples at Longview in 2003.

In August/September 2002, NETAC conducted an aircraft monitoring study in Northeast Texas. Baylor University operated a single engine plane that collected data on ozone, NO_x, NO_y, SO₂, VOC, olefins and meteorological parameters. Flights looked at boundary conditions for the region, industrial plumes from major point sources, urban plumes, and biogenic emissions distributions (using the olefins instrument). Baylor University have been analyzing the data in the first half of 2003, and a report will be completed in the second half of 2003 so that the data can be used to update the conceptual model for ozone formation in the NETAC area.