Fifth Biannual Report on the Early Action Compact for Northeast Texas

June 28, 2005

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Background

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 with the 8-hour ozone standard by December 31, 2007 and maintain the standard beyond that date. The EAC includes a series of milestones to guide progress toward the development of the CAAP and as shown in Table 1. The area also must submit progress reports to EPA documenting progress in implementing the EAC and achieving the milestones. The requirements for the progress reports are given in EPA's April 4, 2003 guidance. This is the fifth (June 2005) progress report covering activities for the first half of 2005.

Table 1. Key milestone dates for the Northeast Texas Early Action Compact (EAC).

Date	Item
December 31, 2002	Signed EAC agreement
June 16, 2003	Identify/describe potential local emission reduction strategies
November 30, 2003	Initial modeling emission inventory completed Conceptual model completed Base case (1999) modeling completed
December 31, 2003	Future year (2007) emission inventory completed Emission inventory comparison for 1999 and 2007 Future case modeling completed
January 31, 2004	Schedule for developing further episodes completed Local emission reduction strategies selected One or more control cases modeled for 2007 Attainment maintenance analysis (to 2012) completed Submit preliminary Clean Air Action Plan (CAAP) to TCEQ and EPA
March 31, 2004	Final revisions to 2007 control case modeling completed Final revisions to local emission reduction strategies completed Final attainment maintenance analysis completed Submit final CAAP to TCEQ and EPA
December 31, 2004	State submits SIP incorporating the CAAP to EPA
December 31, 2005	Local emission reduction strategies implemented no later than this date
December 31, 2007	Attainment of the 8-hour ozone standard

Implementing the Clean Air Action Plan

The TCEQ incorporated NETAC's CAAP into a SIP revision on November 17, 2004. The TCEQ submitted the SIP revision to EPA on schedule by December 31, 2004. On May 16,

2005, the EPA published a proposed rule for approval and promulgation of the Northeast Texas CAAP (Federal Register 70(93): 25794-25798). NETAC is on schedule in implementing the CAAP.

Ozone Attainment Status

The Northeast Texas ozone monitoring data determine whether the area is in compliance with the National Ambient Air Quality Standards (NAAQS) for ozone. The TCEQ operates three ozone monitors (Continuous Air Monitoring Station, CAMS) in Northeast Texas at Longview, Tyler and Karnack. NETAC operates a research ozone monitor that was located at Waskom in 2002-2003 and in Panola County in 2004. The Panola research monitor began operating again on April 30, 2005 and reports data through the TCEQ as CAMS 627.

There were no exceedences of the 1-hour ozone standard in Northeast Texas in the past 3 years and the area monitored attainment of the 1-hour ozone NAAQS in 2004 and through June 26, 2005. The annual 4th highest 8-hour ozone values at monitors in Northeast Texas are shown in Table 2 along with the resulting 2002-2004 8-hour design values. No design values are shown for Waskom and Panola because the monitors do not have 3 years of complete data. The monitors at Longview, Tyler and Karnack have complete 2002-2004 data and monitored attainment of the 8-hour ozone NAAQS in 2004. EPA designated all five NETAC counties as 8-hour ozone attainment areas on April 15, 2004 (see 69 FR 23858).

Table 2. Annual 4th highest 8-hour ozone values (ppb) and 2004 8-hour ozone design values for Northeast Texas

Year	Longview	Tyler	Karnack	Waskom	Panola
2002	84	84	88	86	
2003	82	79	80	82	
2004	83	81	77		75
2004 Design Value	83	80	81	N/A	N/A

The first half of 2005 has seen several days with high 8-hour ozone levels at the Longview monitor. As of June 27, 2005, the fourth highest 8-hour ozone reading at Longview (CAMS 19) for 2005 stood at 88 ppb (based on preliminary monitoring data that have yet to be fully quality assured). NETAC will study these and any other high ozone days in 2005 to determine how they compare to previous high ozone days that were considered when the CAAP was developed for the EAC. NETAC will continue moving ahead with the emission reduction measures described in the CAAP.

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. A 23-member policy committee consisting of representatives of

local government, business and industry, the general public and environmental interest groups governs NETAC. (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 2005 NETAC the Technical Advisory Committee held meetings on February 11, and April 21, 2005. The NETAC Policy Committee met on April 21, 2005.

The February 11, 2005 Technical Committee meeting discussed and approved: (a) A 2002 emission inventory for the NETAC region; (b) Plans for aircraft and other monitoring studies in summer 2005 to understand ozone levels in the region, and; (c) Developing a Supplemental Environmental Program (SEP) that could fund emission controls on gas compressor engines. The February 11, 2005 meeting also discussed progress on NETAC's Pilot Project to demonstrate emission reduction technologies for gas compressor engines and ozone levels observed during the 2004 ozone season and lessons learned on the causes of high ozone in Northeast Texas.

The April 21, 2005 Technical and Policy Committee meetings included briefings on EPA's progress toward approving a State Implementation Plan (SIP) revision to implement NETAC's CAAP. Also discussed at the April 21, 2005 meetings were: (a) State and National legislative issues affecting air quality in Northeast Texas; (b) Results from NETAC's pilot program to demonstrate NOx emission reduction technologies for gas compressor engines; (c) Plans for NETAC technical studies in 2005 to monitor and understand ozone levels in the region.

Public Outreach

NETAC is actively engaged in public education and outreach activities concerning ozone air quality issues. The public outreach committee met on March 16, 2005 and organized an ozone season awareness kickoff event for April 21, 2005. The purpose of the "kickoff event" is to raise public awareness of ozone air quality issues and encourage public support for programs designed to minimize ozone formation. At this years kickoff event, NETAC presented an Environmental Achievement award to the Hanover Compressor Company recognizing the company's voluntary contribution to NETAC's Pilot Program to demonstrate retrofit controls on gas compressor engines (discussed below). The award presentation was covered by local television and newspaper media.

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 (http://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.

Technical Activities

NETAC is carrying out the following technical activities in 2005 to support the EAC and CAAP.

Air Monitoring

NETAC has operated an ozone research monitoring site for several years. For the 2005 ozone season the research monitor is located in northern Panola County near the border between

Texas and Louisiana. The research monitor collects data for ozone, oxides of nitrogen (NOx), sulfur dioxide (SO2) and meteorological parameters that are reported via the TCEQ's web site as CAMS 627. The measurement of SO2 was added to the research monitor for 2005 to help identify the origin of any high ozone levels observed at the Panola monitor.

For several years, NETAC has collected canister VOC samples at CAMS 19 to augment the TCEQ's monitoring activities at Longview. NETAC constructed a new VOC auto-sampler for 2005 that can collect VOC samples at preset times (e.g., on ozone action days) or when high total VOC levels are detected. The VOC auto-sampler is installed at CAMS 19 and will begin collecting data in the second half of 2005. NETAC plans to collect up to 200 canister VOC samples at CAMS 19 in 2005.

NETAC conducted an aircraft study in August/September 2003 that provided data on the ozone contributions from local sources in Northeast Texas and ozone transport. NETAC will conduct a similar study again in August/September 2005. The aircraft will be operated by Baylor University and will collect data for ozone, nitric oxide, total reactive nitrogen (NOy), SO2, total olefins and meteorological parameters.

The CAMS 19 monitor near Longview frequently records higher maximum ozone levels than other monitoring locations in Northeast Texas. Contributing factors appear to be proximity to local point sources and wind patterns that sometimes re-circulate emissions from nearby sources. The wind patterns at CAMS 19 may be influenced by lake breezes from nearby Lake Cherokee. NETAC is conducting a low-cost study of wind patterns near Lake Cherokee using home weather stations operated by local volunteers. The goals are to determine whether lake breezes re-circulate emissions from sources near lake Cherokee and, if so, how extensive is the area influenced by the lake breeze.

Emission Inventory

NETAC completed an emission inventory for 2002 and provided the data to the TCEQ in electronic format for submission to EPA. The 2002 NETAC emission inventory also is documented in a report. In the second half of 2005 NETAC will select and begin working on technical studies to future inventories for the NETAC area such as the next national emission inventory required by the EPA for calendar year 2005.

Ozone Modeling

NETAC is performing seasonal ozone modeling for the summer of 2002. This period was selected to coincide with NETAC's 2002 aircraft study in August/September 2002. The modeling will study the relative contributions of local sources and ozone transport throughout a summer. The seasonal modeling will be less detailed than the SIP quality modeling completed for the CAAP and EAC.

Emission Reduction Measures

NETAC's CAAP includes a demonstration that the area expects to remain in compliance with the 8-hour ozone standard through 2007 and 2012 due to a combination of local and regional emission reduction measures. The local measures included in the attainment demonstration are reductions in NOx emissions at several facilities operated by AEP, TXU and Eastman Chemical Company in Northeast Texas and VOC reductions at facilities operated by Eastman Chemical Company and Huntsman Chemical Company. The local NOx reduction measures are in place now. The local VOC reduction measures are enhanced leak detection and repair (LDAR) programs at two chemical plants near Longview. Eastman Chemical completed projects in their polyethylene units in 2004 and is in the process of implementing ethylene MACT regulations in their cracking plants to be completed by the end of 2005. Huntsman completed implementing their enhanced LDAR programs in the first half of 2005.

The CAAP also describes additional local emission reduction strategies that go beyond the attainment demonstration to further improve air quality in Northeast Texas. In particular, NETAC is implementing a pilot program to demonstrate NOx emission reduction technologies for gas compressor engines. Previous studies by NETAC indicate that an estimated 32 tons/day of NOx emissions are generated by a large number of relativity small gas compressor engines that are widely distributed throughout the five county area. NETAC is conducting a pilot program to demonstrate control technologies for gas compressor engines and encourage owners and operators of gas compressor engines in the NETAC area to apply for grants under the Texas Emissions Reduction Plan (TERP).

In the first half of 2005, NETAC installed and tested retrofit equipment on three gas compressor engines. Each retrofit consisted of an exhaust catalyst and an improved air/fuel ratio controller. NOx emissions were reduced by over 90 percent at a cost-effectiveness of less than $300 per ton of NOx emissions abated. NETAC plans to retrofit several more compressor engines in the second half of 2005.

NETAC does not anticipate obstacles in implementing its pilot program. However, unless TCEQ determines that TERP funds may be used for retrofit equipment to reduce gas compressor engine emissions, NETAC's goal of encouraging and facilitating owners and operators of gas compressor engines to achieve broader reductions through individual TERP grants could be impaired.

Attachment 1

NETAC Policy Committee

- Mayor Joey Seeber, Co-Chair, City of Tyler
- Judge Bill Stoudt, Co-Chair, Gregg County
- Judge Becky Dempsey, Smith County
- Judge Fowler, Upshur County
- Judge Wayne McWhorter, Harrison County
- Judge Sandra Hodges, Rusk County
- Mayor Pro Tem Darryl Williams, City of Longview
- Mayor Edward Smith, City of Marshall
- Mayor John Fullen, City of Henderson
- Jeff Howell, City Manager, City of Kilgore
- Greg Morgan, Project Coordinator, City of Tyler
- Jeff Ellington, City Manager, City of Gilmer
- Ricky Childers, City Manager, City of Longview
- Janet Cook, Asst. City Manager, City of Marshall
- Tammy Campbell, WE CAN
- David Duncan, Environmental Regional Manager, TXU
- Darrell J. Rachels, Eastman Chemical Company
- Keith Honey, General Manager, AEP/SWEPCO
- Eric Albritton, Attorney
- L. Dale Rhoades, Environmental Supervisor, LaGloria Oil & Gas Co.
- Lou Ann Nisbett, Director, MEDCO
- John M. Stroud, Executive Director, LEDCO
- Tom Mullins, Executive Director, Tyler Economic Development Corporation

Attachment 2

NETAC Technical Advisory Committee

- Mayor Pro Tem Darryl Williams, City of Longview
- Robert Ray, Assistant City Attorney, City of Longview
- Councilwoman Karen Hailey, City of Longview
- Karen Owen, Longview MPO
- Greg Morgan, Projects Coordinator, City of Tyler
- Stephanie Rollings, Tyler MPO
- Janet Cook, Asst. City Manager, City of Marshall
- Jim Mathews, NETAC General Counsel
- Erik Snyder, EPA Region 6
- Carrie Paige, EPA-Region 6
- Eric Gribbin, SIP Coordinator, TCEQ-Austin
- Pete Breitenbach, TCEQ-Austin
- Charles Murray, TCEQ-Region 5 Air Program
- Dale Spitz, TXDOT-Tyler District
- Sharon Wellman, Eastman Chemical Company
- L. Dale Rhoades, LaGloria Oil & Gas Company
- Kelly Spencer, AEP/SWEPCO
- Bruce Moore, Manager Air Quality West, AEP/SWEPCO Environmental Services
- Dick Robertson, TXU Air Quality Manager
- David Duncan, TXU
- Dennis Leahey, Huntsman Chemical
- Dwight K. Shellman, Jr., Caddo Lake Institute, Inc.
- Ramon Alvarez, Ph.D., Environmental Defense Fund
- Eric Albritton, Attorney
- Henry C. Bradbury, Environmental Solution
- Micaela Crooks, CenterPoint Energy

Attachment 3

NETAC Public Education/Outreach Committee

- Robert Ray, Assistant City Attorney, City of Longview
- Greg Morgan, Project Coordinator, City of Tyler
- Janet Cook, City of Marshall
- Sharon Wellman, Eastman Chemical Company
- Don Montgomery, TXU
- Kathy Bell, TCEQ-Region 5 Air Program
- Darrell Powell, TCEQ-Austin
- Kelly Spencer, AEP/SWEPCO
- Scott McCloud, AEP/SWEPCO
- Henry C. Bradbury, Environmental Solution