

REVISED
Work Plan for Air Quality Activities in Northeast Texas
For FY 2004-2005

OBJECTIVES

The overall objective for the studies proposed in this work plan is assisting the Northeast Texas area in maintaining compliance with EPA's ozone air quality standards. This will provide public health benefits and assure that the region can continue to develop and grow without compromising air quality. The East Texas Council of Governments (ETCOG), under the technical direction of Northeast Texas Air Care (NETAC), has utilized previous near-nonattainment area funding from the Legislature to develop a sound scientific basis for ozone planning and developed a State Implementation Plan (SIP) for 1-hour ozone that meets all of the requirements of EPA and the TCEQ. In December 2002, Northeast Texas entered into an Early Action Compact (EAC) agreement with the EPA to address 8-hour ozone attainment under an accelerated schedule. Current NETAC activities are developing the technical analyses required for the EAC through mid-2004. Future activities will continue to support the EAC and monitoring the progress of the region in improving compliance with ozone air quality standards.

Specific objectives for FY 2004-2005 are:

- Continuing to develop 8-hour ozone plans as required under the EAC
- Updating the emission inventory for important local sources
- Enhancing the air monitoring network in Northeast Texas to track progress as emissions control measures are implemented
- Performing seasonal ozone modeling concurrent with the enhanced monitoring
- Conducting ozone awareness public education and outreach programs

PROPOSED PROJECTS

The following activities are proposed for FY2004-2005 to meet the objectives described above. The total estimated budget for all activities is **\$1,087,600**.

Task 1. Work Plan: \$9,600

The first task is to complete a work plan and reach agreement on all of the details of the scope of work with the TCEQ and NETAC. The results of this activity will be the development of a Draft Work Plan for review by TCEQ, and then the subsequent submittal of a Final Work Plan, to be incorporated into the FY 2004-2005 Air Quality Contract.

Task 1.1: Detailed Work Plan

Methodology: Prepare a work plan for review and approval by NETAC

Responsible Party: ENVIRON

Funding requirement: \$9,600

Timeline: August 2003 – October 2003.

Deliverable: Work Plan (this document)

Task 2. Maintain 1-hr Ozone SIP: \$0

EPA may require an update to the 1-hour ozone SIP for Northeast Texas. No funds are allocated to this task at this time because the 8-hour ozone modeling is expected to cover all EPA ozone SIP requirements.

Task 3. Early Action Compact 8-hr Ozone Analyses: \$75,000

The Northeast Texas region is submitting a series of Early Action Compact milestone deliverables to EPA in 2003 and 2004. The EAC milestones culminate in the development of an 8-hr ozone Clean Air Action Plan (CAAP) to be incorporated into the SIP by December 2004. The 2004/2005 work plan must include adequate resources to complete and package all of the CAAP modeling and technical analyses in the SIP.

Task 3.1: EAC Technical Support

Methodology: Work with NETAC, TCEQ and EPA to update CAAP technical analyses and provide documentation necessary for the SIP. Coordinate technical interactions such as teleconference calls and project updates.

Responsible Party: ENVIRON

Funding requirement: \$50,000

Timeline: January 2004 – August 2005.

Deliverables: Revised CAAP technical analyses and documentation.

Task 3.2: Meetings in East Texas (five)

Methodology: Adequate technical coordination between ENVIRON and NETAC is essential to the development of effective and cost-effective ozone control

strategies for Northeast Texas. This task provides for five face-to-face meetings in Northeast Texas.

Responsible Party: ENVIRON

Funding requirement: \$25,000

Timeline: January 2004 – August 2005.

Deliverables: Participation by the ENVIRON project manager in five face-to-face meetings in Northeast Texas.

Task 4. Emission Inventory Updates: \$70,000

In recent years, NETAC has sponsored studies to improve the quality of the emission inventory for sources that are important in the NETAC area. Studies have included data collection for biogenic sources, oil and gas production, construction equipment and mining equipment. The latest 2002 emission inventory for Northeast Texas includes the results from all of these local emissions studies. The same approach will be followed for the 2004-2005 work plan. The first task will be to prepare an emissions work plan to define what emissions sources will be studied and prepare a Quality Assurance Project Plan for the emissions studies consistent with EPA guidance document R-5. The second task will be to implement these studies and update the 2002 emission inventory and emission inventory report.

Task 4.1: Emissions Work Plan

Methodology: Develop a work plan for the studies to improve and update the 2002 emission inventory. Areas for study will be identified based on high contribution to Northeast Texas emissions, quality of the existing inventory and potential for improvement based on local data. The work plan will be developed in consultation with TCEQ and reviewed by NETAC. A Quality Assurance Project Plan will be developed consistent with EPA guidance document R-5.

Responsible Party: Pollution Solutions and ENVIRON

Funding requirement: \$5,000

Timeline: March 2004 – August 2005.

Deliverable: Emission inventory work plan and Quality Assurance Project Plan.

Task 4.2: Update 2002 Emission Inventory

Methodology: Carry out local studies in Northeast Texas to collect data for an improved emission inventory. Update the emission inventory methodology for specific source categories based on the survey data. Prepare an updated 2002 emission inventory and document the inventory in an updated 2002 emission inventory report.

Responsible Party: ENVIRON and Pollution Solutions

Funding requirement: \$65,000

Timeline: August 2004 – August 2005.

Deliverables: Updated 2002 emission inventory and report.

Task 5. Enhanced Ambient Monitoring: \$343,000

Ambient monitoring was made a major component of FY2002-2003 work program in order to track progress as emission reductions are implemented and better define the role of transport in high ozone events in Northeast Texas. Both issues are critical to maintaining progress toward attaining ozone air quality standards in Northeast Texas. We propose to continue this increased level of monitoring in FY 2004-2005 with a focus on the same issues of quantifying the benefits from local controls and quantifying the impacts of transport. In particular, we propose an aircraft study in summer 2004 or 2005 to follow up on the 2002 aircraft study.

Task 5.1: NETAC Research Monitoring Site 2004

Methodology: Collect ozone, NO_x and meteorological data at the NETAC research site located in the eastern part of the NETAC region. The NETAC research monitoring site may be relocated in 2004. Monitoring data for the NETAC research site will be collected in accordance with 40 CFR Parts 50,53,58 and EPA guidance document R-5. Collect 100 VOC samples at Longview CAMS19 and analyze the samples using EPA methods TO-14 and TO-15 (GC/Mass Spectrometry). Prepare a monitoring Quality Assurance Project Plan and a monitoring report. Deliver the monitoring data to TCEQ and NETAC in electronic format.

Responsible Party: AQSI

Funding requirement: \$63,000

Timeline: April 2004 – January 2005.

Deliverables: Quality Assurance Project Plan, monitoring data and 2004 monitoring report.

Task 5.2: NETAC Research Monitoring Site 2005

Methodology: Collect ozone, NO_x and meteorological data at the NETAC research site located in the eastern part of the NETAC region. Monitoring data for the NETAC research site will be collected in accordance with 40 CFR Parts 50,53,58 and EPA guidance document R-5. Collect 100 VOC samples at Longview CAMS19 and analyze the samples using EPA methods TO-14 and TO-15 (GC/Mass Spectrometry). Prepare a monitoring Quality Assurance Project Plan and a monitoring report. Deliver the monitoring data to TCEQ and NETAC in electronic format.

Responsible Party: AQSI

Funding requirement: \$63,000

Timeline: April 2005 – January 2006.

Deliverables: Quality Assurance Project Plan, monitoring data and 2005 monitoring report.

Task 5.3: 2004 or 2005 Aircraft Study in Northeast Texas

Methodology: Conduct an aircraft study for Northeast Texas in 2004 or 2005 similar to the study completed in 2002. The objectives will be to characterize ozone transport and local ozone production from a variety of sources. A Quality Assurance Project Plan for the aircraft study will be prepared in accordance with EPA guidance document R-5 for review by NETAC and the TCEQ. The monitoring data will be delivered to the TCEQ and NETAC in electronic format.

Responsible Party: To be determined.

Funding requirement: \$170,000

Timeline: Summer 2004.

Deliverables: Quality Assurance Project Plan, monitoring data and monitoring report.

Task 5.4: Conceptual Model Update

Methodology: Update the conceptual model for ozone formation in 2005 to reflect changes in air quality and emissions. The updated conceptual model will

analyze and integrate the results of monitoring completed by the TCEQ and for NETAC special studies such as the research-monitoring site and aircraft studies.

Responsible Party: ENVIRON.

Funding requirement: \$47,000

Timeline: Summer 2005.

Deliverable: Conceptual model report.

Task 6. Seasonal Ozone Modeling: \$200,000

Enhanced ambient monitoring was performed in August/September 2002 and is planned for summer 2004 to investigate ozone transport into Northeast Texas and changes in ozone production from local sources as emission reduction programs take effect. The seasonal ozone modeling will support the interpretation of the enhanced monitoring data and tie in the 8-hr ozone control strategy modeling by completing seasonal ozone modeling. As discussed below, the seasonal modeling will complement but not substitute for the SIP modeling already completed for August, 1999. The seasonal modeling will be based on the CAMx ozone model used for control strategy development. For 2002, modeling will be completed retrospectively for the period when aircraft flights were conducted in Northeast Texas (expected to be August/September 2002). The ozone source apportionment option in CAMx will be used to quantify the local and transport contributions to ozone. If feasible, the 2004 or 2005 seasonal modeling may be completed in real-time to provide ozone forecasts for Northeast Texas that can be used to plan daily flights during the aircraft study described in Task 5.3, as well as interpret study results.

Task 6.1: Seasonal Modeling of August/September 2002

Methodology: Complete seasonal ozone modeling of August/September 2002 to compare with NETAC aircraft flights. The objective of the seasonal modeling is to better understand the regional transport events that were captured during the 2002 aircraft flights. These flights showed high ozone (approaching the level of the 8-hour standard) being transported into Northeast Texas over wide regions and prolonged periods on several days. Ozone source apportionment will be used to investigate the sources of ozone transport and the relative roles of transport and local sources. The seasonal modeling will be based on the CAMx ozone model developed for control strategy evaluation to promote consistency and the transfer of modeling technology between the seasonal and control strategy modeling. However, the 2002 seasonal modeling will not be suitable for SIP modeling purposes as it will not have the same level of detail in the day specific emission inventories nor undergo as extensive testing and evaluation as the existing SIP modeling for August, 1999.

Responsible Party: ENVIRON.

Funding requirement: \$110,000

Timeline: Early summer 2004.

Deliverable: Report on the 2002 seasonal ozone modeling.

Task 6.2: Seasonal Modeling for 2004

Methodology: Complete seasonal ozone modeling of Summer 2004 or 2005 to coincide with NETAC aircraft flights planned under Task 5.3. This task will follow the same approach as task 6.1 and will leverage the procedures developed for that task. The objective will be to understand the sources of ozone observed in the aircraft study including the relative roles of transport and local sources and trends in regional ozone levels. As discussed for Task 6.1, the 2004 or 2005 seasonal modeling will not be suitable for SIP modeling purposes as it will not have the same level of detail in the day specific emission inventories nor undergo as extensive testing and evaluation as the existing SIP modeling for August, 1999.

Responsible Party: ENVIRON.

Funding requirement: \$90,000

Timeline: Summer 2004, concurrent with aircraft study (Task 5.3).

Deliverable: Report on the 2004 seasonal ozone modeling.

Task 7. Public Education/Outreach: \$76,000

Continue comprehensive public education and ozone awareness programs for the five county Tyler-Longview-Marshall Near Non-Attainment Area. The program will include the following elements: an updated and enhanced ozone watch and warning communications network between local governments and industries; an established speakers bureau; public service announcements; bi-monthly NETAC Committee meetings and /or conference calls; further development of school programs and teacher training workshops; distribution of public information and educational materials; coordination of the Annual Ozone Season Kick-Off activities for East Texas; and continued maintenance and expansion of the NETAC website.

Task 8. Contract Administration and Policy Analysis: \$194,000

ETCOG (\$152,000) will administer all contractual, programmatic, reporting and financial aspects of the authorized air quality activities with TCEQ and with our primary contractor/consultant, ENVIRON. Mathews & Freeland, Legal Counsel (\$42,000), will handle legal and technical aspects of the program and contract administration.

Task 9. Contingency – \$120,000

Maintain a contingency reserve to allow NETAC flexibility in completing the overall program objectives for Northeast Texas. The task descriptions below are for optional monitoring tasks that total \$103,000.

Optional Task 9.1: Event Triggered VOC Sampling at Longview in 2004

Methodology: Modify the VOC auto-sampler installed at Longview (CAMS19) to have the capability of triggering a speciated VOC sample when total VOCs exceed a threshold level. This would provide information on VOC speciation during periods of high VOC concentrations during the 2004 ozone season. The TCEQ is using this approach to VOC monitoring other areas. This project includes the auto-sampler modifications and collecting an additional 100 VOC canisters in 2004.

Responsible Party: AQSI.

Funding requirement: \$69,000

Timeline: April 2004 – January 2005.

Deliverable: Event triggered VOC monitoring data for Longview included in the 2004 monitoring report from Task 5.2.

Optional Task 9.2: Event Triggered VOC Sampling at Longview in 2005

Methodology: Collect 100 VOC canisters at Longview (CAMS19) using the modified auto-sampler developed under optional task 9.1. This would provide information on VOC speciation during periods of high VOC concentrations during the 2005 ozone season.

Responsible Party: AQSI.

Funding requirement: \$28,000

Timeline: April 2005 – January 2006.

Deliverable: Event triggered VOC monitoring data for Longview included in the 2005 monitoring report from Task 5.3.

Optional Task 9.3: Repairs to NETAC Research Monitoring Equipment

Methodology: The monitoring equipment for ozone and NO_x deployed at the NETAC research, monitoring site requires periodic maintenance and repairs (e.g., due to lightning damage). The budget for this optional task is an estimate based on past experience.

Responsible Party: AQSI.

Funding requirement: \$6,000

Timeline: 2004 and 2005.

Deliverable: Repairs to monitoring equipment as needed.