

APPENDIX A

Northeast Texas Flexible Attainment Region

Memorandum of Agreement

NORTHEAST TEXAS

FLEXIBLE ATTAINMENT REGION

MEMORANDUM

OF

AGREEMENT

SEPTEMBER 16, 1996

APPENDICES

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To obtain copies of these appendices please contact Mr. Mark Sweeney, Director of Regional Development Services of the East Texas Council of Governments at (903) 984-8641.

FLEXIBLE ATTAINMENT REGION

MEMORANDUM OF AGREEMENT

GENERAL PROVISIONS

Purpose and Scope of Agreement - Northeast Texas is a Flexible Attainment Region ("FAR"), an area in which local entities, the Texas Natural Resource Conservation Commission ("TNRCC") and the Environmental Protection Agency ("EPA"), working together, have created a plan to improve air quality which is appropriate to community needs. This collaboration makes it possible to design common sense strategies which account for the meteorology, mobile emission sources, business and industrial activity, and economy of the region in the creation of a model program. This Agreement is designed to provide for the attainment and maintenance of the National Primary Ambient Air Quality Standard for Ozone ("Ozone NAAQS") using flexible and reasonable control measures developed at the regional level. The Agreement addresses emissions of ozone precursors throughout the Northeast Texas Region, specifically including Gregg, Harrison, Rusk, Smith and Upshur Counties (the "NETAC Region"). Representatives of the entities signing this agreement (the "signatory parties") are committed to:

1. Immediately implementing reasonable emission control measures that will reduce emissions of ozone precursors that will be quantifiable, enforceable revisions to the State Implementation Plan (SIP).
2. Immediately implementing, on a voluntary basis and not as revisions to the SIP, additional reasonable control measures that are likely to reduce emissions of ozone precursors and that are suited to the region's particular problems and abilities.
3. Developing and implementing, with the agreement and consent of affected entities, additional voluntary and SIP control measures, suited to the region's particular problems and abilities, as contingency measures if additional reductions of ozone precursors are needed.
4. Continuing the development, expansion and improvement of the voluntary Ozone Action Day program as a control approach to maintaining National Ambient Air Quality Standards (NAAQS).
5. Creating a regional ozone prevention strategy to develop and evaluate methods which accurately identify sources and levels of emissions with an emphasis on formulating effective common sense control strategies within the region.

6. Providing for an adequate time to evaluate the effectiveness of the enforceable measures implemented pursuant to this Agreement. For the period of time during which this agreement is in effect, whenever enforceable control measures are implemented in accordance with this agreement, an adequate opportunity will be provided to evaluate the effectiveness of the enforceable measures in attaining and maintaining the Ozone NAAQS prior to initiating a change in the attainment status of the NETAC Region airshed. The parties agree to consult on the methods for evaluating effectiveness of enforceable measures.

Funding - The Texas Legislature appropriated funds for near non-attainment areas to utilize for keeping their areas in attainment. Northeast Texas has been allocated \$176,666 of these funds. These funds will be utilized to support studies such as an emissions inventory and additional monitoring, to be used in developing focused control strategies. The proposed studies are described in Part A of the Action Plan and in Appendix D. Additional funding and/or services for the project will be contributed by the signing parties in a manner to be determined. Resources will be requested from other public and private agencies as needed.

Contents of Agreement - This Agreement consists of this memorandum and all appendices attached hereto. The appendices include a schedule of the responsibilities of signatory parties, and detailed descriptions of the measures included in the Action Plan.

Amendment of the Agreement - This Agreement may be amended only with the mutual consent of the signatory parties, except that the Agreement may be amended to add additional control measures with only the consent of the signatory party subject to the additional control.

Termination of the Agreement - This Agreement may be terminated by mutual consent of all signatory parties. Any signatory party may withdraw from this Agreement for cause if provisions of the Agreement are not being carried out by other signatory parties, but a signatory party may withdraw for cause 60 days after initiation of a dispute resolution process by the signatory parties affected by the dispute. Any revision of the existing Ozone NAAQS will be cause for review and reassessment of this Memorandum of Agreement. During the term of this Agreement EPA will treat the NETAC Region under an approach similar to a maintenance plan area.

Conditions Applicable if the NETAC Region is Designated as Non-attainment - After the termination of this Agreement, if EPA designates any or all of the region included within this Agreement as non-attainment under the existing Ozone NAAQS, baseline emissions for purposes of § 182 of the Clean Air Act will be as defined in the

Act. Additionally, inclusion of the five counties in this Agreement should in no way affect the determination of any non-attainment area that may be designated in the future.

Term of Agreement - This Agreement will be in effect for five years from the date of signing. The Agreement may be extended with the agreement of the signatory parties.

BACKGROUND

Prior to 1994, there was one ozone monitor in the Northeast Texas Region, located at the Gregg County Airport. Based on several exceedances of the ozone standard prior to 1979, Gregg County was designated non-attainment. Between 1979 and 1985, every three-year period had at least four exceedances, and Gregg County's non-attainment designation continued. No monitoring data was obtained in 1986. There were continuing improvements to air quality in the NETAC Region, based on both voluntary and regulation-driven programs, and in the eight year period from the beginning of 1987 through 1994, there were only four exceedances of the hourly standard. Based on the three-year period of air monitoring data from 1987-89, in which there were no exceedances, EPA redesignated Gregg County as attainment in 1990, prior to the passage of the 1990 Clean Air Act Amendments. Had EPA redesignated Gregg County as attainment after 1990, EPA would have required a plan to maintain the Ozone NAAQS in the NETAC Region after the redesignation. If such a plan was in place, the failure of a redesignated area to maintain the Ozone NAAQS would not require a SIP revision because the plan itself would trigger the implementation of contingency measures as part of the applicable SIP.

In 1994, with the encouragement of TNRCC and EPA and with the cooperation of local government and business representatives, a voluntary effort was initiated to reduce emissions of ozone precursors and the Northeast Texas Air Care (NETAC) was formed as a voluntary cooperative association of local governments and industries within Smith, Gregg, Harrison, Rusk, and Upshur counties. The expanded voluntary program was well received by the public in 1994 and was extended through 1995. In spite of the voluntary efforts to reduce local emissions, during the period of hot, stagnant air which occurred across Northeast Texas and much of the Midwest in late June and early July of 1995, there was an abnormally high background concentration of ozone in the NETAC Region. The Gregg County monitor recorded four exceedances of the Ozone NAAQS during this time. No exceedances occurred in 1995 at the Smith County monitor.

Because of the need for a more organized and comprehensive approach to improving air quality based on regional needs and abilities, the NETAC Policy Committee was formed in March 1996. The NETAC Policy Committee is composed of elected

officials and senior management from both local government and industry in the NETAC Region and was created to coordinate and oversee the development of a FAR agreement. Meetings were held with major emission sources of ozone precursors to identify quantifiable and enforceable measures to reduce emissions that can be included in this Agreement.

There has been significant progress in reducing man-made emissions of ozone precursors in the NETAC Region since 1990, particularly with regard to on-road vehicle emissions and major industrial sources. These reductions have resulted from voluntary efforts by industry and increased stringency of the air quality regulations driven by the 1990 Amendments to the Clean Air Act. The attached graph depicts the emissions of VOC and NOx from major industrial sources and on-road vehicles in 1990 and 1995. The graph illustrates that during this five-year period, VOC emissions from these sources were reduced by approximately 30%, and NOx emissions were reduced by approximately 24%.

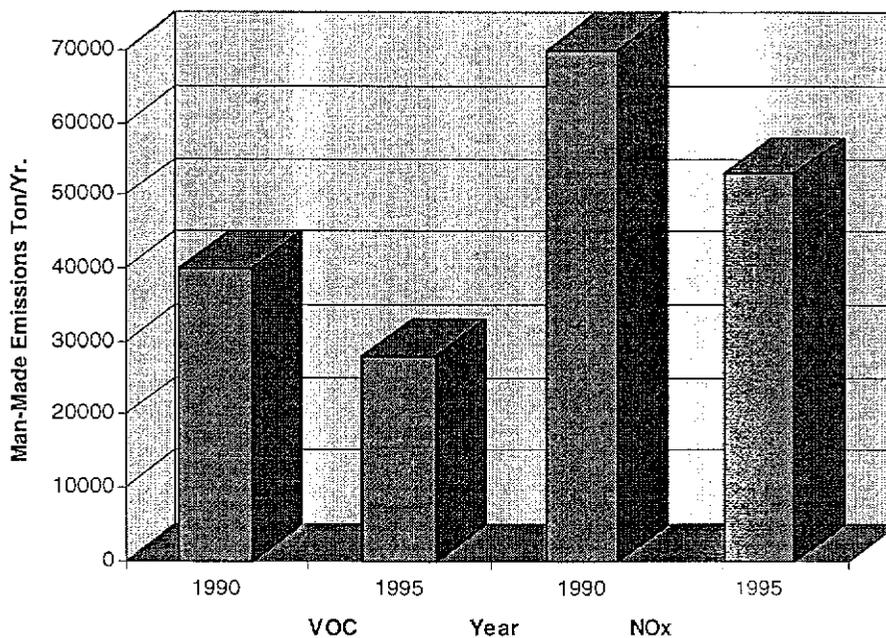
Moreover, the level of emissions of ozone precursors in the NETAC Region from these sources are already low when compared to other ozone non-attainment areas. For example, VOC emissions from on-road vehicles and major industrial sources in the five county NETAC Region are estimated to be 8 tons/year per square mile, which is *significantly lower than most non-attainment and near non-attainment areas*. Obtaining additional reductions from these sources will be difficult. Nevertheless, the NETAC Region is committed to continue on-going emission reduction programs and to intensify public awareness programs designed to reduce emissions by encouraging trip reductions and other common-sense measures. Where appropriate, these programs will include "enforceable" emission reduction programs to further reduce emissions.

Additional emission reductions will soon be achieved as the EPA and the TNRCC implement additional control measures required by the 1990 Amendments to the Federal Clean Air Act. These measures will reduce VOC emissions from such things as architectural and industrial coatings, consumer products, and major sources of hazardous air pollutants. Additional reductions from on-road vehicles will be realized as older, more polluting, cars and trucks are replaced with newer, less polluting, vehicles.

The signatory parties agree that implementation of this agreement will encourage and facilitate the continuation of existing programs and the timely development of effective new programs to improve air quality. When the reductions that have been obtained to date are considered together with the reductions to be achieved by this Agreement and additional federal and state mandated control measures, the NETAC Region will have obtained significant reductions of emissions of VOC precursors. The sum of these reductions will help ensure compliance with the Ozone NAAQS.

EMISSION REDUCTIONS FOR NORTHEAST TEXAS AREA, Selected Manmade Emissions

	VOC Emissions, TPY		NOx Emissions, TPY	
	1990	1995	1990	1995
Major Industrial Sources	18,000	12,000	56,000	41,000
On-Road Mobile Sources	22,000	16,000	14,000	12,000
	40,000	28,000	70,000	53,000



Based on data from TNRCC and other sources

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ACTION PLAN

The Northeast Texas Action Plan will include two main parts. Part A includes quantifiable and enforceable SIP measures and voluntary measures which the affected parties agree to implement immediately to reduce emissions and/or develop programs designed to improve air quality. Part B consists of contingent measures, which will be implemented if additional exceedances of the standard occur, or if the standard is violated, during the life of the agreement.

PART A - Immediate Control Measures

Immediate Implementation of Enforceable SIP Measures:

Within 30 days after the signing of this Agreement, the following list of emission reduction measures (Items 2-5) will be submitted to the TNRCC for incorporation in the SIP. By May, 1997, the TNRCC will submit the measures to EPA, and EPA will commence rulemaking action within ninety days of receiving the submittal. The signatory parties recognize that the affected entities have voluntarily agreed to be subject to the following enforceable SIP measures. The measures set out below include quantifiable and enforceable reductions of emissions of ozone precursors. *These programs are estimated to reduce VOC and NOx emissions by 2,516 and 37 tons/year respectively.*

LIST OF IMMEDIATE SIP MEASURES

1. The NETAC Policy Committee will request the TNRCC to prepare and submit an updated emissions inventory to the EPA. The NETAC Policy Committee will assist in the preparation of the emissions inventory as outlined in the Proposed Air Quality Planning Activities section of this Agreement. The TNRCC will submit the revised emissions inventory to EPA within two years after the effective date of this agreement.

Implementation: NETAC Policy Committee, ETCOG, TNRCC and EPA.

2. ARCO Permian has made the following quantifiable changes to its facilities, which will be made enforceable as described below.
 - a. ARCO Permian installed 12 Vapor Recovery Units (VRU) at production tank batteries located within the NETAC Region. In 1994, four VRUs were installed, reducing emissions by 1400 tons/year. In 1995, eight additional VRUs were installed on other leases, reducing emissions by another 1400 tons/year. ARCO will commit to operating the VRUs on the leases it

currently operates in an enforceable manner to reduce emissions by 1500 tons/year based on the level of emissions occurring prior to the installation of the VRUs. ARCO will achieve the reductions through the use of the VRUs or as a result of natural reservoir decline. Of the 1500 tons/year reductions, 600 tons/year result from the installation of VRUs in 1995.

- b. ARCO Permian replaced a glycol regenerator in 1994 and instead of venting the off-gas as with the old regenerator, ARCO Permian now condenses and captures the water and hydrocarbon emissions. This change is estimated to reduce VOC emissions by 45 tons/year.
3. Eastman Chemical Company, Texas Eastman Division, will make the following quantifiable and enforceable changes to its facility. Texas Eastman's plans are described in more detail in its commitment letter in Appendix E.
 - a. Texas Eastman will replace selected gas engines with electric motors on a cooling tower in 1996, resulting in an estimated NOx reduction of 34 tons/year.
 - b. Texas Eastman will commit to routing loading emissions of VOC in Oxo Aldehyde Production Facilities to a flare, resulting in VOC reductions of 12 tons/year.
 - c. Texas Eastman will commit to immediate implementation of a fugitive emission monitoring and maintenance program in Acetaldehyde Plants 1 and 2, as described in 40 CFR Part 63, Subpart H. Eastman will be implementing this program before the time required under 40 CFR Part 63, Subpart H. This is estimated to reduce VOC emissions by 75 tons/year.
 - d. Texas Eastman has obtained, and will operate, sludge transport trailers to reduce VOC emissions related to organic esters production, resulting in VOC reductions of 13 tons/year.

Implementation: Eastman Chemical Company, TNRCC and EPA.

4. La Gloria Oil and Gas Company has made the following enforceable and quantifiable changes to its facility in Tyler, Texas. La Gloria's plans are described in more detail in its commitment letter in Appendix E.
 - a. La Gloria implemented leak detection and repair programs for six process units and one gasoline truck loading terminal, which resulted in a calculated

decrease in VOC emissions of 749 tons/year. The LDAR programs were implemented in 1993 and 1994.

- b. La Gloria installed process wastewater system modifications resulting in VOC emission reductions of 122 tons/year. These modifications were put in service in 1994.

Implementation: La Gloria Oil and Gas Company, TNRCC and EPA.

5. Norit Americas will reduce NO_x emissions by limiting production of liquid phase activated carbons in the Coal Plant to 6,810 hours per year, reducing NO_x emissions by an estimated 2.5 tons/year.

Implementation: Norit Americas, TNRCC and EPA.

Immediate Implementation of Voluntary Measures not to be Incorporated into the SIP:

The signatory parties agree to implement the following voluntary measures *immediately, or as otherwise specified*. The *signatory parties fully recognize* that the commitments set forth below are strictly voluntary. Nothing in this Agreement authorizes the EPA or TNRCC to convert the voluntary measures undertaken by an affected entity into state or federally enforceable measures under either state or federal law without the express written consent of the affected entity.

LIST OF IMMEDIATE VOLUNTARY MEASURES

1. Continuation of the existing NETAC programs providing public notification of Ozone Action Days, media programs and events, technical assistance to local industry, and public education. These programs are described in more detail in Appendix B, which is attached to this Agreement.

Implementation: NETAC Policy Committee, City and County Governments, and TNRCC.

2. Investigation of additional means to reduce emissions of ozone precursors on a cost-effective basis as described in the Proposed Air Quality Planning Activities section of this Agreement.

Implementation: NETAC Policy Committee, and ETCOG.

3. Implementation of Ozone Action Day programs by the local governments and independent school districts listed below. Details of individual programs are described in the Summary Report for Local Governments and Independent School Districts which attached to this Agreement as Appendix C.

Gregg County	Texas Workforce Commission
Harrison County	Chapel Hill ISD
Rusk County	Harleton ISD
Smith County	Henderson ISD
Upshur County	Kilgore ISD
City of Gilmer	Kilgore College
City of Gladewater	Laneville ISD
City of Henderson	Longview ISD
City of Kilgore	Marshall ISD
City of Longview	Pine Tree ISD
City of Marshall	Spring Hill ISD
City of Tyler	Tatum ISD
City of White Oak	Tyler ISD
East Texas Council of Governments	Texas State Technical College
Texas Department of Health	Union Hill ISD
Texas Department of Human Services	White Oak ISD
Texas Department of Transportation	

Implementation: Affected local governments

4. Implementation of Ozone Action Day facility management and employee awareness programs by the area industries listed below to promote actions and behaviors which will reduce emissions of ozone precursors in the NETAC Region. While the effects have not been quantified at this time, they will produce positive emission reductions, particularly on Ozone Action Days. The following list does not include the many entities who are supporting NETAC on an informal basis. Details of the specific programs are set out in commitment letters contained in Appendix E.

Alcatel	Eastman Chemical Company,
Alliance Compressors	Texas Eastman Division
Amoco Production	Enserch Exploration, Inc.
BICC Cables	Exxon Pipeline Company
Boral Bricks	Gillespie Coatings
Brookshire Grocery Co.	Howe-Baker Engineers, Inc.
Delhi Gas Pipeline	Huntsman Polypropylene Corporation

International Paper, Henderson
Lumber Mill
La Gloria Oil and Gas Company
Lebus Manufacturing
LeTourneau, Inc.
Marathon Oil
Natural Gas Pipeline Company of
America
Noram Field Services
Noram Gas Transmission
Norit Americas, Inc.
Oxy USA
Petrolite, Polymers Division
Star Enterprises

Stroh Brewery Company
Sun Pipe Line Company
Southwestern Electric Power
Company
Texaco Exploration and
Production
Texas Utilities Electric Company
Tonkawa Gas Processing
Company
Trane Company
Trident East Texas Plant
Trinity Industries
Tyler Pipe

Implementation: Affected entities.

5. Implementation of quantifiable, voluntary emission reduction programs that will not be incorporated into the SIP by industries and local governments in the NETAC Region listed below. These programs are estimated to reduce VOC and NOx emissions by 2793 and 1702 tons/year respectively. The reductions are described in more detail in the commitment letters in Appendix E.
 - a. Amoco Production commits to the following:
 - 1) Amoco Production will reduce VOC emissions below standard exemption 66 level at selected sites for a reduction of 46 tons/year.
 - 2) Amoco Production has implemented a quarterly engine analysis program that will reduce NOx emissions by 250 tons/year.
 - b. ARCO Permian installed 12 Vapor Recovery Units (VRU) at production tank batteries located within the NETAC Region. In 1994, four VRUs were installed, reducing emissions by 1400 tons/year. In 1995, eight additional VRUs were installed on other leases, reducing emissions by another 1400 tons/year. ARCO has committed to operating the VRUs on the leases it currently operates in an enforceable manner to reduce emissions by 1500 tons/year based on the level of emissions occurring prior to the installation of the VRUs. ARCO additionally commits to operate the other VRUs on a voluntary basis, which will reduce emissions of VOC by 1150 tons/year. ARCO is no longer the operator of one of the leases with reductions of 150

tons/year. ARCO will achieve the reductions through the use of the VRUs or as a result of natural reservoir decline.

- c. BICC Cables Company, through solvent reduction measures and chemical elimination, will reduce VOC emissions by 10.7 tons/year and emissions of 1,1,1 Trichloroethane by 13.5 tons/year.
- d. City of Longview will use less volatile paints for traffic striping and cleaning of equipment with water rather than solvents, which will reduce VOC emissions by 4.8 tons/year. Longview has also installed modified gasoline fuel nozzles to reduce vapor losses and is converting selected vehicles to CNG fuel.
- e. Delhi Gas Pipeline Corporation and Tonkawa Gas Processing Company commit to the following voluntary emission reduction measures:
 - 1) Delhi Gas Pipeline Corporation and Tonkawa Gas Processing Company have, since December 1992, reduced NOx emissions by 150 tons per year at their facilities in the Longview-Tyler area by installation of lean burn engines or catalytic converters. Delhi and Tonkawa have similarly reduced emissions of NOx by 92 tons/year in nearby Cherokee and Camp Counties. These reductions were authorized pursuant to TNRCC Standard Exemption No. 6.
 - 2) Tonkawa Gas Processing Company will improve its inspection program for detecting VOC leaks, which will reduce VOC emissions.
- f. Eastman Chemical Company, Texas Eastman Division, will implement the following voluntary program to reduce emissions of ozone precursors.
 - 1) Texas Eastman is implementing an improved compressor seal maintenance program in its PE-1 facility, with estimated VOC reductions of 108 tons/year.
 - 2) Texas Eastman will make improvements to its ethylene tank truck gauging system, resulting in VOC reductions of 3 tons/year.
 - 3) Texas Eastman has modified the Tank 198 vent system to reduce VOC emissions by 18 tons/year.

- 4) Texas Eastman will modify its butadiene tank car gauging system by 1997 to reduce VOC emissions by 2 tons/year.
 - 5) Texas Eastman has significantly modified and expanded in 1996 an existing flare and vent collection system to capture certain VOC emissions which can occur during routine compressor maintenance, on an intermittent basis, resulting in a reduction of about 200 tons/year of VOC emissions.
 - 6) Texas Eastman will commit to operational changes in Acetaldehyde Plants 1 and 2, including routing of off-gas during normal operation to either an incinerator or flare, to reduce VOC emissions. The changes will be largely implemented by July 1, 1996, and are projected to be fully operational by April 1997. The estimated VOC reduction is 150 tons/year.
- g. Enserch Exploration, Inc., commits to the following voluntary emission reduction program:
- 1) Enserch has lowered NOx and VOC emissions in Gregg and Harrison Counties by 43 and 17 tons per year respectively by replacing compressors with cleaner burning compressors.
 - 2) Enserch has instituted an improved fugitive monitoring/leak repair program to reduce VOC emissions by 5 tons/year at its Harrison County Facility.
- h. Huntsman Polypropylene Corporation has incorporated measures to manage operations to reduce emissions, including start-up and shutdown procedures and a stringent fugitive emissions monitoring program, with VOC reductions estimated to be 29 tons/year.
- i. La Gloria Oil and Gas commits to the following:
- 1) La Gloria installed internal floating roofs in three storage tanks in 1995 resulting in VOC emission reductions of 20.2 tons/year.
 - 2) La Gloria will install floating roofs in three tanks in 1996 resulting in VOC emission reductions of 94 tons/year.

- j. R. Lacy, Inc., has implemented a fugitive emission monitoring program at one of its Panola County compressor stations pursuant to TNRCC standard exemption number 6. R. Lacy, Inc., also currently plans to install emission control equipment at two of its Panola County compressor stations with estimated NOx reductions of 127 tons/year.
- k. LeTourneau, Inc., has implemented a program of replacing burners on heat treat and forging furnaces with low NOx burners which has reduced NOx emissions by approximately 15 tons/year. Additionally, LeTourneau is actively investigating the feasibility of modifying and/or replacing its painting facility, which would reduce VOC emissions.
- l. Marathon Oil Company has plugged and abandoned approximately 98 wells in the NETAC Region between 1993 and 1996, reducing VOC emissions by 40 tons/year.
- m. NorAm Field Service Corporation commits to the following voluntary emission reduction measures:
 - 1) NorAm has installed a glycol dehydrator with emission controls at its River Hill Station to reduce VOC emissions by 4.4 tons/year.
 - 2) NorAm installed three low emission compressors to replace existing compressors at it River Hill Station, reducing NOx emissions by 208 tons/year.
 - 3) NorAm is in the process of decreasing emissions at its Gilmer Plant for estimated reductions of 74.4 tons/year of VOC and 4 tons/year of NOx.
 - 4) NorAm has additionally installed controls on dehydrators in adjacent Caddo Parish, Louisiana, to reduce VOC emissions by 457 tons/year.
- n. Norit Americas, Inc. will replace existing equipment with lower emitting models, discontinue use of flammable solvents in parts washers, and replace all two cycle engines on in-plant vehicles. These measures will reduce emissions of VOC and NOx.

- o. Oxy USA, Inc., commits to the following voluntary emission reduction measures:
 - 1) Oxy USA has reduced NOx emissions by 140 tons/year with the installation of catalytic converters and air fuel ratio controls at the Lathrop Facility in Gregg County.
 - 2) Oxy USA has implemented a 28 M Leak Detection and Repair program at the Lathrop Facility that reduces fugitive VOC emissions by 22 tons/year.
 - 3) Oxy USA will further reduce VOC emissions by 6.4 tons/year in 1996 by further enhancing its fugitive emission leak detection and repair program.

- p. Petrolite Corporation, Polymers Division (Kilgore facility) commits to the following voluntary emission reduction measures:
 - 1) Petrolite will decommission one unit by the end of 1996. In combination with the related process tank and loading/unloading operations, this change will reduce VOC emissions by 130 tons/year.
 - 2) Petrolite will install a new reactor with more efficient emission controls, and will retrofit the existing reactor to reduce emissions. These changes will reduce VOC emissions.
 - 3) Petrolite will decommission two additional units by 1998 (in addition to the unit to be decommissioned in 1996) resulting in VOC reductions of 135 tons/year.

- q. Southwestern Electric Power Company will reduce NOx emissions at Knox Lee and Pirkey Power Plants by 300 tons/year, collectively, based on selected strategies and comparable capacity factors.

- r. Star Enterprises has installed a vapor combustor to handle vapors from the gasoline truck loading rack in Waskom (Harrison County), which will be in full operation in 1996. This combustor will reduce VOC emissions by 233 tons/year.

- s. Sun Pipe Line Company will commit to an immediate voluntary measure of voluntarily deactivating storage tank #5003 at the Grissom Pump Station.

Actual VOC emission reductions are estimated to be 145 tons/year below 1994 levels. If the tank had been operated at capacity, the deactivation of the tank would reduce VOC emissions by 918 tons/year.

- t. Trane and Alliance Compressors will reduce usage of mineral spirits-based cleaning agents, which will reduce VOC emissions by 5 tons/year. Trane and Alliance will continue to investigate low-VOC and non-VOC painting technologies and low-VOC and non-VOC or aqueous parts cleaning systems, in order to further reduce VOC emissions. In addition to VOC reductions, both facilities have reduced emissions of trichloroethylene by 51 tons/year since 1992 by performance optimization and equipment upgrades.
- u. Texas Utilities Electric Company has installed a new boiler control system which was fully operational in 1995 and which has reduced NOx emissions by 500 tons/year.
- v. Tyler Pipe Company commits to the following immediate voluntary measures:
 - 1) Tyler Pipe will reduce VOC emissions by replacing solvent reducible pipe coatings with water reducible pipe coatings, and by using coating products with a lower total VOC content. The replacement of product coatings will occur pending compliance certification with ANSI/NSF standards, conformance with Tyler Pipe Company's high standard of quality, product compatibility, and customer approval.
 - 2) Tyler Pipe will eliminate isopropyl alcohol use in all Hot Coat/Shell Core Production Areas, which will reduce VOC emissions by 139.4 tons/year.

Implementation: Affected Entities.

Proposed Air Quality Planning Activities

1. Prepare more comprehensive and up-to-date emissions inventory for the NETAC Region. The results will be utilized in a joint TNRCC-NETAC study to develop focused strategies and priorities for emission reductions and public awareness programs. The emissions inventory project will include tabulation of latest available VOC and NOx emission data from major point sources (already reported to TNRCC), plus estimates of emissions from mobile, off-road, biogenic, small

business, and area sources. To the extent practical, the study will also take into account transport from outside the region of ozone and precursors, and the resultant regional boundary conditions. Primary funding will be from a state grant, with the study to be administered by the East Texas Council of Governments (ETCOG). Details of the inventory project are set out in Appendix D.

Implementation: ETCOG, TNRCC and EPA.

2. Install special purpose monitors to collect additional ozone data, and also obtain additional ambient VOC and NO_x data similar to the 1987 EPA/TACB data collection effort. Depending on cost and available funding, one or more special purpose monitors will be installed to measure ozone concentrations in transport corridors adjacent to the five county area. Results will be evaluated to determine the cause of the NETAC Region's ozone problem, and used in conjunction with the improved inventory data (see 1 above), to develop focused strategies and set priorities. Timing and scope will be dependent on funding and may be influenced by results of the emissions inventory work.

Implementation: ETCOG

3. Investigate the feasibility of limitations on the summertime vapor pressure of gasoline distributed in the area, as a contingent measure to reduce emissions.

Implementation: NETAC Policy Committee.

4. Investigate the feasibility of including Stage I vapor recovery as a voluntary or SIP enforced contingent measure. Stage I vapor recovery is a process by which petroleum vapors displaced in a storage tank during product delivery are recovered rather than emitted into the atmosphere.

Implementation: NETAC Policy Committee.

Findings, conclusions and recommendations will be made regarding the planning activities described above throughout the term of this Agreement. The NETAC Policy Committee will review and evaluate these findings, conclusions, and recommendations when received and will consult with the TNRCC and the EPA to determine whether additional measures should be considered for implementation pursuant to this Agreement.

PART B - Contingent Measures

If exceedances or violations of the Ozone NAAQS occur during the term of this Agreement, then the NETAC Region will implement additional control measures selected by the NETAC Policy Committee, with the agreement and consent of the affected entities.

Exceedances

Within twenty days of a validated exceedance of the Ozone NAAQS, the NETAC Policy Committee will (1) review and select, with the agreement and consent of the affected entities, one or more additional voluntary control measures that will not be incorporated into the SIP from the list of available control measures, and (2) notify EPA and the TNRCC of the control measures selected and the schedule for implementation. The selected measures will be implemented as soon as possible but not later than 30 days or the end of the ozone season during which the exceedance was measured, whichever is later. The selection of additional control measures will be based on where the measured exceedance of the Ozone NAAQS is monitored. Additional control measures in Smith County will be selected only for exceedances measured at the Smith County monitor. It is understood that, if in the interest of improving air quality, the participants implement one or more contingent measures "early" (*i.e.*, before implementation is required by exceedances of the standard), the NETAC Policy Committee may take credit for measures implemented under this Agreement in the event that subsequent exceedances occur. The signatory parties fully recognize that the commitments set forth below are strictly voluntary. Nothing in this Agreement authorizes the EPA or TNRCC to convert the voluntary measures undertaken by an affected entity into state or federally enforceable measures under either state or federal law without the express written consent of the affected entity.

LIST OF EXCEEDANCE CONTINGENCIES

1. Expand upon existing NETAC programs, including a substantial increase in the number of businesses notified on Ozone Action Days and an increase in the number of public announcements about ozone. The expansions of these programs are described in more detail in Appendix B, which is attached to this Agreement.

Implementation: NETAC Policy Committee, ETCOG, City and County Governments.

2. Implement additional voluntary control measures recommended by the NETAC Policy Committee based on the results of the Air Quality Planning Activities described above.

Implementation: NETAC Policy Committee.

3. Establish a Fuel Marketers Committee to promote fuel conservation and optimum timing of vehicle refueling. Examples of promotional activity could be service station posters, gasoline pump tent-cards, etc.

Implementation: NETAC Policy Committee.

4. Establish a NETAC Committee to provide support and coordination for the existing effort to increase the number of CNG-fueled fleet vehicles, where practical and economically feasible.

Implementation: NETAC Policy Committee.

5. Work with NETAC Region utilities on an expanded awareness program focusing on reduced electricity consumption on action days.

Implementation: NETAC Policy Committee, and Southwestern Electric Power Company.

6. Implement quantifiable, voluntary emission reduction programs that will not be incorporated into the SIP by industries and local governments in the NETAC Region listed below. The reductions are described in more detail in the commitment letters in Appendix E.
 - a. Crosby-Lebus Manufacturing will voluntarily implement a completely automated computer controlled painting system which will reduce paint usage and will result in VOC emission reductions of 11.5 tons/year.
 - b. Crosby-Lebus Manufacturing will voluntarily replace the billets forging furnace with a state-of-the-art enclosed forge furnace resulting in NOx emission reductions of 2.52 tons/year.
 - c. La Gloria Oil and Gas Company will route VOC vent streams to a control device by August 1998, which will result in VOC emission reductions of 144 tons/year.

- d. Texas Eastman will voluntarily institute a policy of scheduling, where –practical, all major shutdowns (which require significant flaring or venting) in the time period before June 1 or after October 1.

Implementation: Affected entities.

It is understood that this list is flexible, and is subject to modification, with approval of the parties involved.

Violations

Once the immediate control measures described in Part A have been fully implemented (which will take more than one complete ozone season), and if there is continued deterioration of air quality as evidenced by a confirmed violation of the Ozone NAAQS occurring after the immediate control measures have been fully implemented, then additional control measures will be implemented. Within sixty days of a validated violation, the NETAC Policy Committee will (1) review and evaluate control measures currently being used and existing monitoring results in an open process, (2) develop a recommendation to implement additional control measures in consultation with affected entities, the TNRCC and the EPA, and (3) submit the selected measures to the TNRCC for incorporation in the SIP. The TNRCC will submit the SIP revision to EPA by May of the following year, and EPA will commence rulemaking action within ninety days of receiving the submittal.

The selection of additional control measures will be based on where the confirmed violation of the Ozone NAAQS is monitored. Additional control measures in Smith County will be selected only if a violation is confirmed at the Smith County monitor. With the express approval of the affected entities, a recommendation will be submitted to the TNRCC for incorporation in the SIP. The signatory parties agree that no violation contingency measure that is specific to only one affected entity will be submitted to the TNRCC or the EPA for incorporation into the SIP without the express written consent of the affected entity.

LIST OF VIOLATION CONTINGENCIES

1. If a violation occurs after the immediate control measures described in Part A have been fully implemented (which will take more than one complete ozone season), the NETAC Policy Committee will submit the following measures to the TNRCC to be included in the SIP.

- a. Eastman Chemical Company, Texas Eastman Division, has significantly modified and will commit to maintain (enforceable basis) an existing flare and vent collection system to capture certain VOC emissions which can occur during routine compressor maintenance, on an intermittent basis, resulting in a reduction of about 200 tons/year of VOC emissions.

Implementation: Texas Eastman, TNRCC, and EPA.

- b. Eastman Chemical Company, Texas Eastman Division, will install a cover on B-107 equalization basins, to reduce VOC emissions by an estimated 26 tons/year.

Implementation: Texas Eastman, TNRCC, and EPA.

- c. Eastman Chemical Company, Texas Eastman Division, will install piping and equipment to depressure residual organics from tank car wash rack to flare, for an estimated VOC emission reduction of 10 tons/year.

Implementation: Texas Eastman, TNRCC, and EPA.

- d. Eastman Chemical Company, Texas Eastman Division will commit (enforceable basis) to operational changes in Acetaldehyde Plants 1 and 2, including routing of off-gas during normal operation to either an incinerator or flare, to reduce VOC emissions. The changes will be largely implemented by July 1, 1996, and are projected to be fully operational by April 1997. The estimated VOC reduction is 150 tons/year.

Implementation: Texas Eastman, TNRCC, and EPA.

- e. Tyler Pipe Company will commit (enforceable basis) to eliminate isopropyl alcohol use in all Hot Coat/Shell Core Production Areas, which will reduce VOC emissions by 139.4 tons/year. If the violation triggering the implementation of control measures is not confirmed at the Smith County monitor, another control measure of equal consequence may be substituted for this measure.

2. If another violation occurs after the measures in item 1 above have been fully implemented (which will take more than one complete ozone season), the NETAC Policy Committee will submit additional measures to the TNRCC to be included in the SIP. These additional mandatory measures will be identified during the term

ATTACHMENT C

1. Arco Permian, a Unit of Atlantic Richfield Company

(a) The company replaced a glycol regenerator at the plant in 1994, operating under Standard Exemption number 66, registration no. 26085. Emissions from the glycol regenerator have been reduced by approximately 45 tons per year.

Copies of ARCO's Form PI-7, Registration Form for Standard Exemption, dated 06/02/94 is attached as Attachment C-1. The attachment to the PI-7 indicates that uncontrolled VOC emissions would be 57 tons per year (tpy), and that the expected emissions with the condenser are expected to be 11.4 tpy.

(b) The company represented that in 1994 it installed Vapor Recovery Units (VRU) at four production tank batteries, and in 1995 installed VRUs at an additional eight production tank batteries (one of which has since been sold), reducing VOC emissions by 1400 tons per year in each of those years. At the remaining eleven production tank batteries, listed in Attachment A, the company commits to reducing VOC emissions by up to approximately 1157 tons per year by VRUs or natural reservoir decline. From and after the date of the Agreed Order, the company will maintain the VRUs in good working order and operate the VRUs properly unless the recovered gas rate drops below five (5) MCFD (thousand cubic feet per day).

At the time the TNRCC was checking the emission reduction commitments, Arco notified the TNRCC that it no longer operated (as of July 29, 1996) one of the twelve leases it included in its list of production tank batteries which would have vapor recovery units installed. Arco supplied information which was reviewed and summarized by TNRCC New Source Review Permit Engineer. Those 13 pages are included as Attachment C-2.

2. Eastman Chemical Company, Texas Eastman Division

(a) The company replaced three gas engines (FIN #s UD042FE1, UD042FE2, and UD042FE3) on Cooling Tower Number 4, Building 69 with electric motors in 1996, resulting in an estimated total reduction of 34 tons per year of NOx emissions at the plant.

(b) The company will route loading emissions of n-butyraldehyde and isobutyraldehyde (VOC) from FIN #SD004LR1 at the B-12 Rail Loading facility and FIN #SD004LT41 at the B-12 Truck Spot 41 facility to a flare (EPN #027FL1), resulting in estimated reduction of 12 tons per year of VOC emissions, and emissions of n-butyraldehyde and isobutyraldehyde (VOC) from these facilities during normal facility operations will be limited to a total of 1.32 tons per year, as required by TNRCC Air Quality Permit No. 1105.

(c) The company will implement a fugitive emission monitoring and maintenance program, as described in 40 CFR Parts 63, Subparts F and H, in Acetaldehyde Plants 1 and 2, resulting in a reduction of VOC emissions by an estimated 75 tons per year. Emissions of VOC will comply with 40 CFR Part 63, Subpart H, including all record keeping requirements in Subpart H.

(d) The company will operate sludge transport trailers (FIN 0X026T579 and FIN 0X016T580) to reduce emissions of VOC related to organic esters production at the plant. The reduction in VOC

of this agreement and may include measures identified by the results of the Air Quality Planning Activities described above. In no event will the selected measures be of less consequence than the measures in item 1 above.

Implementation: NETAC Policy Committee, TNRCC and EPA.

EPA will allow adequate time (a minimum of one complete ozone season) for the implementation and evaluation of the SIP measures implemented as a result of violations of the Ozone NAAQS before designating any part of the region as non-attainment for ozone.

During the term of this Agreement, the NETAC Policy Committee will meet periodically, but at least once annually, to assess the effectiveness of the control measures implemented pursuant to this Agreement. As part of the assessment, the NETAC Policy Committee will consult with the TNRCC and EPA regarding mid-course corrections to the Action Plan.

EXECUTED in multiple copies by the signatory parties to this Memorandum of Agreement. The representatives of the signatory parties executing this Agreement represent that they have the authority to sign the Agreement and to bind the signatory party that they represent to the terms of the Agreement.

Gregg County

By: _____

Date: 9-16-96

Harrison County

By: _____

Date: 9-16-96

Rusk County

By: _____

Date: 9-6-96

Smith County

By: Fancy Coney

Date: 9/16/96

Upshur County

By: Chuck S. Hill

Date: 9/16/96

City of Gilmer

By: Ernest Deane

Date: 9-16-96

City of Henderson

By: Wallace Keel

Date: 9/16/96

City of Kilgore

By: Min

Date: 9/16/96

City of Longview

By: D. Anderson Jr

Date: 9-16-96

City of Marshall

By: Martha Robb

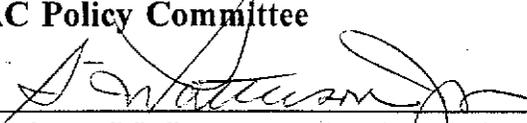
Date: 9/16/96

City of Tyler

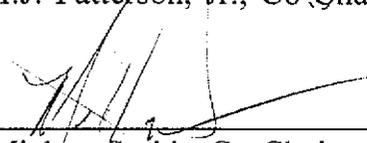
By: [Signature]

Date: 9/16/96

NETAC Policy Committee

By: 
Mayor I.J. Patterson, Jr., Co-Chair

Date: 9/16/96

By: 
Judge Mickey Smith, Co-Chair

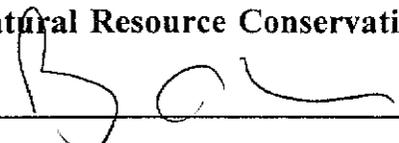
Date: 9-16-96

United States Environmental Protection Agency

By: 

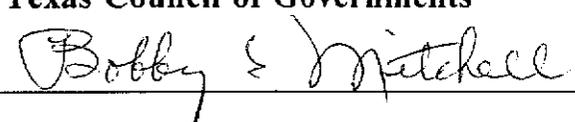
Date: 9-16-96

Texas Natural Resource Conservation Commission

By: 

Date: 9/16/96

East Texas Council of Governments

By: 

Date: 9/16/96