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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

JUL 16 2003

Mr. Eddie Terrill, Director  
Air Quality Division  
Oklahoma Department of Environmental Quality  
P.O. Box 1677  
Oklahoma City, OK 73101-1677

Dear Mr. Terrill:

I am pleased to inform you that we received your letter dated June 4, 2003, forwarding the list of potential control measures for Oklahoma City, Oklahoma. The first important milestone under the 8-hour Ozone Early Action Compact program is to identify and describe local control measures being considered during the local planning process by June 16, 2003. Your list of potential control measures was received on time and meets the milestone requirement specified in the *Compact* guidance issued by Assistant Administrator Jeff Holmstead on November 14, 2002.

The U.S. Environmental Protection Agency recognizes that the 8-hour Ozone Early Action Compact program is ongoing and that the Oklahoma Department of Environmental Quality, in partnership with the local communities, continues to make good progress. We appreciate your commitment to the *Compact* program and to achieving cleaner air sooner. My staff and I are always available to assist you as we work together towards that goal.

Should you have any questions, please feel free to call me or Mr. Thomas Diggs of my staff at (214) 665-7214.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Richard E. Greene".

Richard E. Greene  
Regional Administrator

cc: Mr. Zach Taylor  
Association of Central Oklahoma Governments

June 4, 2003

Richard E. Greene 6RA  
Regional Administrator  
USEPA Region 6  
1445 Ross Ave, Suite 1200  
Dallas, TX 75202-2733

Dear Mr. Greene:

On behalf of the Association of Central Oklahoma Governments and the Oklahoma Department of Environmental Quality, please find enclosed a list and description of candidate local control measures that may be considered for future modeling and possible implementation for the Central Oklahoma (Oklahoma City MSA) Early Action Compact (EAC). This submittal is made to meet the June 16, 2003, EAC milestone requirement.

These measures were selected through stakeholder involvement at a series of workgroup and public meetings (see attachments). They were evaluated considering numerous factors including political, geographic and economical constraints, their feasibility of implementation, and their range of potential emission reductions. We understand that any final control strategy chosen may include, but would not be limited to, these candidate measures. We plan that some of these potential control measures be more fully evaluated during the upcoming months.

We appreciate the opportunity to participate in the EAC process as a means of achieving and maintaining the 8-hour ozone standard for the Oklahoma City area. If you have any questions concerning this submittal, or desire further information, please contact Scott Thomas of my staff at (405) 702-4157.

Sincerely,

Eddie Terrill  
Division Director  
Air Quality Division

cc: Tom Diggs, EPA Region 6  
Zach Taylor, ACOG  
Scott Thomas, DEQ

ET:dgc

Enclosures (2)

# Control Measure Development Schedule for Central Oklahoma EAC Area (Oklahoma City MSA)

- **December 31, 2002**  
EAC signed by all parties
- **April 15, 2003**  
1<sup>st</sup> meeting of ACOG'S Air Quality Workgroup
- **April 30, 2003**  
2<sup>nd</sup> meeting of ACOG's Air Quality Workgroup
- **May 8, 2003**  
ACOG'S Intermodal Transportation Tech. Committee
- **May 22, 2003**  
Technical Advisory Committee meeting/ Public Meetings
- **June 16, 2003**  
Preliminary list of local control measures to EPA

## Central Oklahoma Early Action Compact - Control Measures (Preliminary)

Control	Emissions Reduction (%/Day)	Cost Effectiveness (\$/ton)	Description	Additional Information
<b>Fuels</b>				
Stage I Vapor Recovery	0% to 5% VOC Mobile Emission Reduction	< \$5000 <sup>1</sup>	Recovering hydrocarbon vapors generated when gasoline is transferred from a gasoline tank truck into a stationary storage tank at a dispensing facility. Usually 90% of these vapors can be reclaimed. The equivalent to Stage 1 vapor recovery is currently required in Tulsa County (OAC 252:100-39-41(e)) and could be revised to cover other areas of the State or the entire State.	<a href="http://www.daq.state.nc.us/enf/vapor/">www.daq.state.nc.us/enf/vapor/</a> <a href="http://www.des.state.nh.us/ard/vapor.htm">www.des.state.nh.us/ard/vapor.htm</a> <a href="http://www.beourguest.org/ppi93919.pdf">www.beourguest.org/ppi93919.pdf</a> <a href="http://www.azdeq.state.az.us/ars/41/02132.htm">www.azdeq.state.az.us/ars/41/02132.htm</a> <a href="http://www.tnrcc.state.tx.us/oprd/rules/pdflib/115c.pdf">www.tnrcc.state.tx.us/oprd/rules/pdflib/115c.pdf</a>
Mandatory Reduced RVP	5% to 10% VOC Mobile Emission Reduction	\$2,200 - \$4,000 <sup>1</sup>	Low RVP gasoline is fuel that is refined to have a lower evaporation rate and lower volatility than conventional gasoline. It also reduces the evaporative emissions generated during vehicle refueling and therefore decreases the emissions of volatile organic compounds (VOCs) and other ozone-forming emissions	<a href="http://www.in.gov/idem/air/standard/control/m05.pdf">http://www.in.gov/idem/air/standard/control/m05.pdf</a> <a href="http://www.ozonealert.com/o3flex.htm">www.ozonealert.com/o3flex.htm</a> <a href="http://www.tnrcc.state.tx.us/air/ms/fuelprograms.html#rvp1">http://www.tnrcc.state.tx.us/air/ms/fuelprograms.html#rvp1</a> <a href="http://www.raqc.org/ozone/Workshop/October%2029,%202002/Fuels%20Evaporative%20Emissions.pdf">http://www.raqc.org/ozone/Workshop/October%2029,%202002/Fuels%20Evaporative%20Emissions.pdf</a>
<b>Mobile</b>				
Clean Fleet Program (Private & Public Sector)	< 1% NOx Mobile Emission Reduction	\$7400 <sup>2</sup>	<p>Implementing a Clean Fleet vehicle program could include, but would not be limited to, the following: Implementing the Federal Clean Fleet Program which requires percentages of government and private fleets to purchase low emission vehicles when adding or replacing vehicles in their fleet.</p> <p>Texas has instituted these programs in the Houston and El Paso non-attainment areas. A certain percentage of local governmental fleets with more than 15 vehicles, and private fleets with more than 25 fleet vehicles, must meet low-emission vehicle (LEV) standards beginning September 1, 1998. Standards may be met with a variety of alternative or reformulated fuels. In addition, statewide, 50 percent of all mass transit vehicles and state agency vehicles had to meet or exceed the federal low emission vehicle standards by September 1, 1996. Similar legislation and/or rules, binding agreements could possibly be implemented in Oklahoma's part of our EAC SIP submittal.</p>	<a href="http://www.tnrcc.state.tx.us/air/ms/tcf.htm#background">www.tnrcc.state.tx.us/air/ms/tcf.htm#background</a>

Control	Emissions Reduction (%/Day)	Cost Effectiveness (\$/ton)	Description	Additional Information
Idling Restrictions	0% to 5% NOx Mobile Emission Reduction	\$30,000 <sup>3</sup> (Houston)	Imposing idling restrictions could include, but would not be limited to, the following: Motor vehicles with a gross vehicle weight rating of greater than 14,000 pounds to restrict engine idling to five (5) consecutive minutes in the Oklahoma City and/or Tulsa MSAs; Prohibition on engine idling in parking lots; Restricting or prohibiting drive through window operation on Ozone Alert! Days; Restricting or prohibiting engine idling at airport curbsides; and Electrification of truck stops.	<a href="http://www.tnrcc.state.tx.us/updated/oprd/rule_lib/hga-appj.pdf">www.tnrcc.state.tx.us/updated/oprd/rule_lib/hga-appj.pdf</a> <a href="http://www.landlinemag.com/Archives/2001/Jun2001/Your_Equipment/truckstop_electrification_2.htm">www.landlinemag.com/Archives/2001/Jun2001/Your_Equipment/truckstop_electrification_2.htm</a> <a href="http://www.transportation.anl.gov/idling.html">www.transportation.anl.gov/idling.html</a>
Vehicle Inspection and Maintenance Program - Basic (I/M)	10% to 15% NOx Mobile Emission Reduction	\$5,500 <sup>1</sup>	Implementing a vehicle inspection and maintenance program (I/M) could include, but would not be limited to, the following: Visual anti-tampering inspections; Tailpipe emissions testing; and other emission maintenance inspections programs.	<a href="http://www.epa.gov/otaq/im.htm">www.epa.gov/otaq/im.htm</a> <a href="http://www.cleanairforce.org/AgendaVehicleInspection4-6-02IM.html">www.cleanairforce.org/AgendaVehicleInspection4-6-02IM.html</a>
Various Transportation Control Measures	0% to 5%	\$25,000 <sup>1</sup>	Implementing various transportation control measure strategies could include, but would not be limited to the following: high occupancy lanes, carpooling, park and ride lots, arterial traffic management and other traffic flow improvements.	<a href="http://www.epa.gov/otaq/transp/traqtcms.htm">http://www.epa.gov/otaq/transp/traqtcms.htm</a> <a href="http://yosemite.epa.gov/aa/tcmsitei.nsf/9bd6f3b7217f80c28525652f0053e105/a952e65d4f9d09df852566de000ff77a?OpenDocument">http://yosemite.epa.gov/aa/tcmsitei.nsf/9bd6f3b7217f80c28525652f0053e105/a952e65d4f9d09df852566de000ff77a?OpenDocument</a>
Speed Limit Reduction	10% to 15% NOx Mobile Emission Reduction	\$20,000 - \$30,000 <sup>3</sup>	To aid ozone reduction in the metropolitan areas, local speed limit reductions and/or enforcement can be implemented through action by the Oklahoma Transportation Commission (OTC). Speed limit reductions for ozone reduction purposes will only be considered by the OTC upon local government and MPO request	<a href="http://www.hgac.cog.tx.us/transportation/pdfs/newsletters/cleanair0801.pdf">http://www.hgac.cog.tx.us/transportation/pdfs/newsletters/cleanair0801.pdf</a>
Control Clauses for Construction Contracts	NOT AVAILABLE		<p>Oklahoma federal, state and municipal contracts could require bidders to agree to specifications that address ozone formation. Example specification could include:</p> <ul style="list-style-type: none"> <li>• Lane Closures;</li> <li>• Observation of Ozone Alert Days;</li> <li>• Carpooling; Night construction projects;</li> </ul>	<a href="http://www.dcs.state.ok.us">www.dcs.state.ok.us</a> <a href="http://www.okladot.state.ok.us">www.okladot.state.ok.us</a>
<b>Area</b>				
NOx Reductions for New Gas-Fired Water Heaters, Small Boilers & Process Heaters	5% to 10% NOx Area Emission Reduction		Implementing NOx reduction programs could include, but would not be limited to, the following: Requiring NOx emission reduction from new natural gas-fired water heaters, small boilers and process heaters sold and installed. Potential application could be for each new water heater, boiler or process heater with a maximum rated capacity of up to 2.0 MMBtu/hr.	<a href="http://www.tnrcc.state.tx.us/oprd/sips/waterheater.html#intro">www.tnrcc.state.tx.us/oprd/sips/waterheater.html#intro</a>

Control	Emissions Reduction (%/Day)	Cost Effectiveness (\$/ton)	Description	Additional Information
Glycol Dehydrators	1% to 10% VOC Area Emission Reduction	\$6400 <sup>4</sup>	Implementing Glycol Dehydrators could include, but would not be limited to, the following: Requiring installation of condensers or other controls on glycol dehydration units. Glycol dehydration units remove water from natural gas streams to prevent the formation of hydrates and corrosion in pipelines.	<a href="http://www.epa.gov/gasstar/convertgas.htm">www.epa.gov/gasstar/convertgas.htm</a> - Emissions reduction and cost are determined by the amount of throughput. (ie. The higher the throughput, the higher the emissions reduction and the lower the cost)
Convert Natural Gas Compressor Engines to Electric	NOT AVAILABLE	NOT AVAILABLE	To reduce NOx emissions from pipeline compressor station motors, this strategy would identify and replace natural gas engines at pipeline compressor stations. Options include sending natural gas to a combined-cycle power plant to generate electricity and transmit it back to the pipeline compressor station than top burn the natural gas directly in gas-fired compressors.	Capital costs may be 40% less than those of gas turbines. This measure is feasible is facility is on an electric line. One large electric engine could do the work of 5 natural gas engines with significantly less emissions.  <a href="http://www.memagazine.org/backissues/december96/features/gaspipe/gaspipe.html">www.memagazine.org/backissues/december96/features/gaspipe/gaspipe.html</a>
<b>Stationary</b>				
NOx Reductions From Electric Generating Facilities & Gas Turbines	10% to 20% NOx Stationary Emission Reduction	\$2,000 - \$10,000 <sup>2</sup>	The purpose of the strategy is to reduce overall background levels of ozone to assist in keeping ozone attainment and near non-attainment areas in compliance with federal ozone standards. The following NOx reduction strategies could be adopted for specific areas of Oklahoma as part of the EAC SIP submittal, and may include, but would not be limited to: Emission reductions strategies from electric utility and gas turbine facilities; Emission reduction strategies from other major NOx emission stationary sources.	<a href="http://www.tnrcc.state.tx.us/oprd/sips/01026sip_ado.pdf">www.tnrcc.state.tx.us/oprd/sips/01026sip_ado.pdf</a>
Emissions Cap & Trade Program	NOT AVAILABLE	NOT AVAILABLE	Cap and trading of Nitrogen Oxide (NOx) and/or Volatile Organic Compound (VOC) emission allowances in a designated area, along with emission reduction requirements, provide a way to make compliance more economically feasible for affected businesses. The trading of these allowances takes place under an area-wide cap on NOx and/or VOC emissions established under the State Implementation Plan in order to meet the national ambient air quality standard for ozone. Each allowance is equal to the emission of one ton of NOx and/or VOC per year. The program could require incremental reductions in emissions every year until the full reductions of the program are achieved. The trading program is intended to provide as much flexibility as possible in meeting these limits.	<a href="http://www.tnrcc.state.tx.us/oprd/sips/capandtrade.html">www.tnrcc.state.tx.us/oprd/sips/capandtrade.html</a>

Control	Emissions Reduction (%/Day)	Cost Effectiveness (\$/ton)	Description	Additional Information
Expand Existing Non Attainment Requirements	NOT AVAILABLE		Currently the requirements in state DEQ air regulation OAC 252:100-39 apply only to what were once the former nonattainment areas of Tulsa County and/or Oklahoma County. This rule contains additional requirements for control of VOCs from: petroleum refining operations; petroleum processing and storage; cutback asphalt; storage, loading and transport of VOCs; metal cleaning; graphic arts systems; manufacture of pneumatic rubber tires; petroleum dry cleaning; coating of parts and products; aerospace industries coating operations; vapor recovery systems; and manufacturing of fiberglass reinforced plastic products. These additional requirements could be expanded to be applicable in other areas of the State.	<a href="http://www.deq.state.ok.us/rules/100-EME-03.pdf">www.deq.state.ok.us/rules/100-EME-03.pdf</a>

**Reference**

1. “Cost-Effectiveness of Various Emission Control Strategies”, Ohio EPA, 3/94
  - <http://www.coax.net/croe/tab1-314.htm>
2. “Evaluation of Attainment Control Strategies for the Dallas-Fort Worth State Implementation Plan”, 3/2000. Prepared by ENVIRON International Corporation
3. “Clearing Houston's Air: An Economic Evaluation of Clean Air Act Compliance Strategy Alternatives”, 2/2001
  - <http://www.tppf.org/environment/clearing/toc.html>
4. Oklahoma Department of Environmental Quality (ODEQ)