

US EPA ARCHIVE DOCUMENT

# Georgia Department of Natural Resources

## Environmental Protection Division, Air Protection Branch

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Phone: 404/363-7000 FAX: 404/363-7100

Lonice C. Barrett, Commissioner

Harold F. Reheis, Director

June 16, 2003

Ms. Kay Prince  
Chief, Air Planning Branch  
U.S. EPA, Region IV  
Air, Pesticides & Toxics Management Division  
61 Forsyth Street, SW  
Atlanta, Georgia 30303-8909

RE: June 16, 2003 Early Action Compact milestone submittal

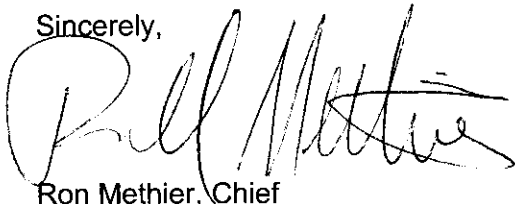
Dear Ms. Prince:

With this letter, the Georgia Environmental Protection Division (EPD) is submitting a list of candidate local control measures for Augusta's Early Action Compact (EAC). This fulfills the requirements of the June 16, 2003 milestone under the EAC agreement.

The attached list of potential local control measures has been developed by working very closely with various stakeholders. We will continue with the stakeholder participation process for the EAC and are confident that this list will be sufficient to ensure development of a control strategy to achieve attainment of the 8-hour ozone standard by 2007.

Should you or your staff have any questions regarding our submittal, please contact Dipan Shah at (404) 363-7014.

Sincerely,



Ron Methier, Chief  
Air Protection Branch

Enclosures

cc: James Joy  
South Carolina Bureau of Air Quality

Honorable Bob Young  
Mayor, City of Augusta

Honorable James Whitehead  
Chairman, Board of Commissioners  
Columbia County

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**AUGUSTA'S EARLY ACTION COMPACT**  
**LIST OF POTENTIAL LOCAL CONTROL MEASURES**

POTENTIAL LOCAL CONTROL MEASURES	EXAMPLES	DESCRIPTION
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**INDUSTRIAL POINT SOURCES**

Add-on Control Devices	Selective Catalytic Reduction (SCR) for NO <sub>x</sub>	SCR is an add-on control device that destroys NO <sub>x</sub> that is formed during the combustion process using a catalyst-impregnated bed.
	Thermal or Catalytic Oxidation for VOCs	Thermal or catalytic oxidation converts VOCs formed during the combustion process to harmless substances such as CO <sub>2</sub> and water.
Combustion Modifications	Low-NO <sub>x</sub> Burners	The use of low-NO <sub>x</sub> burners as a control device reduces the amount of thermal NO <sub>x</sub> formation by controlling the mixing of fuel and air to keep low flame temperature.
	Staged Combustion	Staged combustion is a method of combustion where air is released incrementally with the fuel to achieve oxygen-depleted conditions, which limits the formation of NO <sub>x</sub> .
Fuel Switching	Coal → Fuel Oil → Natural Gas	Switching from coal or fuel oil to cleaner-burning natural gas will result in a reduction in NO <sub>x</sub> emissions.
Restrictions on Peaking/Peak Shaving	Limit usage of emergency power generators	

**AREA SOURCES**

Open & Managed Burning	Ban or restrict open burning during the ozone season	Banning open and managed burning during the ozone season will greatly reduce NO <sub>x</sub> , VOCs and PM emissions in the restricted area.
Industrial Natural Gas Combustion	Low-NO <sub>x</sub> Burners, Other Controls	Manipulating the combustion process using low-NO <sub>x</sub> burners reduces NO <sub>x</sub> formation. The burners keep the flame temperature low and quickly dissipate the heat by controlling the mixing of fuel and air, thereby reducing NO <sub>x</sub> emissions.
Residential Natural Gas Combustion	Low-NO <sub>x</sub> Water Heaters and Furnaces	The use of low-NO <sub>x</sub> water heaters and furnaces rather than traditional water heaters and furnaces will reduce NO <sub>x</sub> emissions.
	Incentives for more efficient appliances	Incentives can be given for the purchase and use of more efficient appliances (e.g., EnergyStar) through rebates or tax incentives.
Consumer & Commercial Products	Reformulation to reduce VOCs	Consumer and commercial products such as paints, cleaners, chemicals and solvents, can be reformulated to reduce VOC emissions during use.

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Stage I Vapor Recovery	Reduces emissions from bulk gas terminals and service stations	Requiring bulk gas terminals and service stations to implement Stage 1 controls for bulk gasoline loading and transfer into the underground storage tanks helps control VOCs.

**ON-ROAD MOBILE SOURCES**

Cleaner Fuels	Ultra-Low Sulfur Diesel Fuel	Lowering the sulfur content and controlling the cetane level of the diesel fuel would result in a reduction in emissions of nitrogen oxides (NOx) and particulate matter (PM).
	Low Reid Vapor Pressure (RVP) Gasoline	Lowering the RVP of the gasoline would result in a reduction of Volatile Organic Compounds (VOC) and air toxics emissions from vehicles relative to conventional gasoline sold in the area.
Vehicle Inspection & Maintenance (I/M)	Basic I/M Program	An Inspection and Maintenance (I/M) Program is a vehicular smog check program for all vehicles manufactured since a specified date that are registered within a specified Augusta area.
	Enhanced I/M Program	
Speed Limit Reduction/Enforcement		Mobile source emissions vary with vehicle speeds. NOx and carbon monoxide (CO) emissions increase above average speeds of about 35 mph. Lowering the speed limit and enforcing the lower limit on major roadways will potentially reduce harmful motor vehicle emissions and can also increase the overall safety of roadways.
Incentives for Cleaner Vehicles	Low-Emission Vehicles	In general, low emission and alternative fuel/hybrid vehicles emit less harmful pollutants such as NOx, VOC and CO than the typical motor vehicles. Examples of these types of vehicles are electric vehicles, vehicles that burn natural gas only or both natural gas and gasoline, and vehicles that have a high fuel economy rating.
	Alternative Fuel/Hybrid Vehicles	
	Retrofit diesel vehicles with oxidation catalysts and/or particulate filters	Oxidation catalysts and/or particulate filters are emissions control devices that can be retrofitted/added on to diesel vehicles to reduce VOC & PM emissions from these vehicles.

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Scrappage Program for Old or Dirty Cars		A vehicle scrappage/retirement program would pay owners of eligible vehicles to voluntarily retire their older, higher-emitting vehicles. This would reduce ozone-forming emissions by accelerating normal fleet turnover so that newer, cleaner vehicles would be used sooner than would naturally occur.
Travel Demand Management (TDM)	Carpools/Vanpools/Rideshare	Single Occupancy Vehicle (SOV) commuters can carpool, vanpool, or rideshare instead of commuting alone, thereby reducing daily Vehicle Miles traveled (VMT) and vehicle emissions from SOVs.
	High-Occupancy Vehicle (HOV) Lanes	HOV lanes are lanes whose use is restricted to vehicles having 2 or more persons. Installation of these lanes will promote carpooling, vanpooling, and ridesharing and will potentially reduce SOVs.
	Mass Transit Improvements & Incentives	Mass Transit improvements and incentives are programs designed to improve transit and reduce the cost (whether in direct monetary cost or travel time savings) of using transit.
	Bike/Pedestrian Projects	Bike/pedestrian projects will improve the bike/pedestrian system and will encourage biking or walking versus commuting in a vehicle. Projects could include shared use paths, bike lanes, sidewalks, and signage and striping along designated bike routes.
	Economic Incentives such as Parking Cash-Out	Economic incentives, such as parking cash out, will potentially incline more commuters to use modes of travel other than the SOV.
Teleworking and Compressed Work Weeks		Workers that choose teleworking and compressed work week schedules rather than commuting to work 5 days per week can potentially reduce the average daily VMT and vehicle emissions.

**NON-ROAD MOBILE SOURCES**

Construction Equipment	Cleaner Fuels	The usage of cleaner fuels in construction equipment can significantly reduce harmful emissions of VOCs, NOx, PM, and other air toxics. An example of cleaner fuels is ultra-low sulfur diesel.
	Operating Restrictions	Imposing operating restrictions will prevent construction equipment from emitting ozone precursors during critical times of the day when those emissions would otherwise contribute to peak ozone concentrations.

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Lawn and Garden Equipment	Incentives for Electric Mowers	Incentives for electric mowers could include monetary incentives, where a purchaser would receive a rebate or tax incentive for purchasing an electric mower, and could include disincentives for using gasoline-powered mowers, such as time-of-day restrictions.
	"Smog Alert" Day Voluntary Use Reductions	Voluntary reductions in the use of lawn and garden equipment can be encouraged on "smog alert" days to prevent contribution of NOx and VOCs from these sources during critical times of day when those emissions would otherwise contribute to peak ozone concentrations.
Airport Ground Support Equipment (GSE)	Switch to Electric or Cleaner Equipment	Airport ground support equipment fleets can switch from diesel or gasoline to cleaner equipment, such as electricity-powered vehicles to reduce emissions of NOx, VOCs and PM.
	Cleaner Fuels	Operating airport ground support equipment with cleaner fuels such as ultra-low sulfur diesel, natural gas, or electricity can reduce harmful emissions from these sources.