US EPA ARCHIVE DOCUMENT

Dick

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 30, 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 30, 2003 Progress Report for Augusta's Early Action Compact

Dear Ms. Prince:

With this letter, the Georgia Environmental Protection Division (EPD) is submitting the first six-month progress report for Augusta's Early Action Compact (EAC). This fulfills the requirements of the June 30, 2003 milestone under the EAC agreement.

The attached June 30, 2003 Progress Report 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 our continued cooperation will be sufficient to ensure the successful development of an Early Action Plan for the Augusta Area that will 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

AIR PLANNING BRANCH
RECEIVED
JUL 1 2003
REGION #4
ATLANTA, GA.

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

Augusta's Early Action Compact
June 30, 2003 Progress Report

Background Information

On December 31, 2002, the Georgia Environmental Protection Division (EPD) submitted an 8-Hour Ozone Early Action Compact (EAC) for the Augusta area to the U.S. Environmental Protection Agency (EPA). The EAC is a Memorandum of Agreement between the local governments representing the Augusta area [Local], the Georgia EPD [State], and the EPA [Federal]. Participation in the EAC was approved by Richmond County government and by the City of Augusta. Columbia County has also agreed to support the compact at the same time. By signing the EAC, Georgia has agreed to assess progress towards developing and implementing an Early Action Plan (EAP) and report to the EPA every six months. The purpose of this report is to update the EPA on the current EAC progress and to satisfy the June 30, 2003 milestone and reporting requirements.

Research on air quality issues in the Augusta area actually began in the summer of 2000, with the kickoff of the Fall-line Air Quality Study (FAQS). FAQS is a multi-year study commissioned to assess urban and regional air pollution; identify the sources of pollutants and pollutant precursors; and recommend solutions to the current and potential poor air quality in the Fall-line cities of Augusta, Macon and Columbus. Researchers at Georgia Tech have directed the FAQS study in cooperation with EPD, EPA, Georgia Regional Transportation Authority (GRTA), the U.S. Department of Defense (DOD), Georgia Department of Transportation (DOT), the State of South Carolina, the State of Alabama, and all local stakeholders.

The FAQS has been implemented in 4 phases. Phase 1 was the preliminary assessment and pilot field study. Phase 2 was the emissions inventory development and inceptive field study. Phase 3 was the air quality modeling and corroborative field study. Finally, Phase 4, which is the current phase, is devoted to analysis, recommendations, and technology transfer. It is this FAQS research that has become the foundation of the Augusta's EAC. EPD will continue working with FAQS researchers and will utilize and build upon the FAQS organizational structure and success to implement the Augusta area EAC. While the FAQS has local stakeholder involvement in all three areas, the following paragraphs describe the Augusta's stakeholder involvement process under FAQS/EAC.

Local Stakeholder Process

The lead contact for the Augusta EAC is Dipan Shah, with EPD's Air Protection Branch. The lead local Augusta contact is Scott MacGregor, Vice President Community Development, Metro Augusta Chamber of Commerce. Attachment 1 contains a list of stakeholders and the FAQS Coordinating Council. The list of stakeholders includes people who have been involved in previous FAQS/EAC meetings and individuals who have signed up to be on the FAQS Listserv. This list is constantly updated with the names of individuals who attend EAC/FAQS meetings or who simply request to be added to the Listserv. The FAQS Coordinating Council list is a list of the individuals who have furnished oversight on the FAQS study that will provide significant research results for the EAP.

Meetings for the FAQS study began as early as the year 2000. The kickoff meeting for FAQS was held on March 2, 2000. Since it's inception, there have been numerous meetings, workshops, briefings, and outreach and education events in the three cities. A list of these meetings and their dates are listed in Attachment 2, and can also be found on the FAQS website: http://cure.eas.gatech.edu/faqs/index.html. Even prior to signing the Augusta Early Action Compact, the FAQS meetings did involve public participation. The local media have regularly been notified of FAQS activities. The local media in particular have focused on FAQS throughout its campaign and have provided significant coverage of each event. After signing the EAC, EPD is making a significant effort to generate even more public involvement at meetings to be held in the future. An invitation to upcoming meetings will be sent via press releases through the local officials and through EPD, and will be sent to the Listserv, which contains many local government, local business, and local industry contacts.

Several stakeholders have attended the FAQS/EAC meetings. These stakeholders include representatives from the following: state and local officials, state and local planning agencies, industry representatives, local environmental groups, environmental consultants, and the Augusta Metropolitan Planning Organization (MPO). Attachment 1 contains the FAQS/EAC listserv, the list of FAQS Coordinating Council Members, and an example of the sign-in sheet that is posted at each meeting. The sign-in sheets are used to update the list of stakeholders on the listserv after each meeting.

The FAQS/EAC meetings have all been held in the Augusta area. Several meetings have been held since FAQS commenced in 2000. A kickoff meeting was held, several Coordinating Council meetings were held, there have been several meetings for each phase of the project, and there have also been several outreach and education meetings. A list of the meeting dates that have taken place thus far can be found in Attachment 2. Meetings for FAQS/EAC have been advertised by sending an e-mail through the FAQS Listserv and by notifying the environmental reporting contact for the Augusta Chronicle.

The current website for information on the FAQS/EAC program is: http://cure.eas.gatech.edu/faqs/index.html. EPD is also working on establishing an Augusta area EAC webpage on the EPD website.

Emissions Inventory and Photochemical Modeling for Attainment Demonstration

Georgia Tech has developed the base year emissions inventory (1999) and future year (2007) emissions inventory under FAQS. Georgia Tech is conducting detailed meteorology, emissions, and air quality modeling as part of the Fall line Air Quality Modeling Study. They are also performing sensitivity analysis on major sources and/or source categories to evaluate emission control strategies for the region. The results of this work, together with the databases used to develop the input files required for modeling, will be used by EPD to perform air quality modeling simulations in an effort to demonstrate attainment of the 8-hour ozone standard in Augusta area. At EPD, Dr. Maudood Khan will be the engineer-in-charge and will be assisted by Dr. James Boylan under the guidance of Mr. Dale Kemmerick who is responsible for schedule, documentation, and use of modeling results in attainment tests.

The modeling episodes were selected using the Classification and Analysis Regression Tree (CART) analysis. Observed air quality and meteorological data for years 1998 to 2001 was used in this analysis. The base year for modeling is 2000 with August 12-20 being the episode. All sensitivity and emission reduction runs will be evaluated using this episode. We will have another episode, August 1-11 1999, which will be available in February 2004 that will be used to test the controls determined by the first episode.

The meteorological modeling is complete for both episodes and Georgia Tech has completed a draft report on the modeling results for August 2000 episode. This was made available to Georgia EPD on March 30, 2003. The modeling report for the August 1999 episode is expected to be available for review by the end of July 2003.

Georgia Tech has completed both the base and the future year air quality modeling for the August 2000 episode. The draft air quality and emissions modeling report will be available for review by the end of July 2003. EPD has completed the second future year 2012 simulation for the August 2000 episode. The base and both future years, 2007 and 2012, for the August 1999 episode are currently in progress and are expected to be completed by August 15, 2003. A draft air quality report and emissions modeling report for the 1999 episode are expected to be available by the end of September 2003.

Although the modeling results meet the EPA acceptable model performance criteria, there is room for improvement in the modeling results. We are evaluating EPA's NEI99 version 2 Emission Inventory for possible errors. We also have concerns about the accuracy of control and projection factors for sources outside of Georgia that have been compiled from various documents and reports. These include neighboring State's controls that are planned and are likely to be in place by 2007 and 2012 and yet we have no information on these controls. Accurate projection and control factors for mobile and Electric Generating Units in these areas would enhance our confidence in our modeling results.

Geographical Area for Control Measures

A list of control measures being considered for the Augusta area EAP was submitted to EPA on June 16, 2003. This list of controls can be found in Attachment 3. It is anticipated at this time that some controls will be adopted throughout the Augusta EAC. The control measures and their implementation area will be finalized in the future, subsequent to the modeling effort which will provide key information as to what controls will be necessary and effective.

Early Anticipated Resource Constraints

At this time, EPD does not anticipate and resource constraints in carrying out the Augusta area EAC. The FAQS study has provided EPD with significant, key research results thus far and EPD has the staff and resource needs available to develop and implement the EAP.

ATTACHMENT 1

Home

Key Contacts
Coordinating Council
Listserv
- Subscribers
Project Director
- Michael E. Chang
Ambient Monitoring
- Karsten Baumann
- Rodney Weber
- Mike Bergin
Emissions & Modeling
- Ted Russell

Document Archive
(Proposals, contracts, presentations, and reports)

Emissions Survey

Air Quality Data
Terms of Use
Real-time
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- 2000
- 2001
- 2002

In the News

Last updated: 06/03/03

Fall line Air Quality Study (FAQS) Listserv Subscribers

Note: All messages posted to the FAQS listserv (tricity@lists.gatech.edu) will be automatically sent to the addressees listed below. To subscribe or unsubscribe, send a message to Michael Chang (chang@eas.gatech.edu).

Email Address	First Name	Last Name
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ptopping@maconedc.org	Patrick	Topping
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bturner@cwwga.org	Billy	Turner
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Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch

Augusta's Early Action Compact / Fall-line Air Quality Study Meeting
May 30, 2003

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2	ART Rider	P&G CONSULTANT	706-793-5396	
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4	Beth Connell	DSM Chemicals	706-849-6395	beth.connell@dsm.com
5	Steve Ewald	Georgia Power	404-506-7710	scewald@southernco.com
6	Randy Barrs	Rocke + Gamble	706-796-4638	barrs.rr@pg.com
7	TOM TRAINOR	DSM Chemicals	706-849-6829	tom.trainor@dsm.com
8	DERRICK HALTIWANGER	FT GORDON	706-791-4957	haltiwd@gordon.army.mil
9	RUSS FOULKE	INTERNATIONAL PAPER	706 796 5305	russell.foulke@ipaper.com
10	Jeff Henderson	CH2M-Hill	706-303-2926	jhenders@ch2m.com
11	Paul DeCamp	Augusta MPO	706-821-1796	pd9004@augustaga.gov
12	Sangeetha Rao	" " "	" "	srao@augustaga.gov
13	Daniel Cohan	GA Tech	404-385-4565	dcohan@eas.gatech.edu
14	Greg Dowlee	IFF	706-560-3622	greg.dowlee@iff.com
15	Michele Barkley	IFF	706-560-3623	michele.barkley@iff.com
16	GEORGE PATTY	AUGUSTA	706 821 1796	GPATTY@co.richmond.ga
17	CORA Cook	GADOT-Planning	404 657 6687	cora.cook@dot.state.ga.us
18	HAMEED MALIK	CITY OF AUGUSTA	706-821-1706	hm8053@AugustaGA.Gov
19	Jim Leiper	Columbia County	706 868-3407	JLeiper@co.columbia.ga.us
20	John Burnham	" "	706 312 7278	JBurnham@ " " " "

Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch

Augusta's Early Action Compact / Fall-line Air Quality Study Meeting
May 30, 2003

	Name	Affiliation	Phone	E-mail
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2	Keith Melton	" "	404.657 6911	Keith.melton@dot.state
3	John Hewson	PCS Nitrogen	(706)849-6229	John.hewson@pcsnitrogen.com
4	Ken Hiltgen	Mactec	770 4213339	KDHILTGEN@MACTEC
5	Michael Cheng	GA Tech	404-385-0573	cheng@eas.gatech.edu
6	Dale Kemmerick	GA EPD	404 363 7092	dale.kemmerick@dnr.state.ga.us
7	Brian A. Hill	Georgia Iron Works	706-863-1011	bhill@GIWINDUSTRIES.COM
8	Doug Boardy	Kendall	706 771 2210	doug.boardy@tycohealthcare
9	Jim Granade	Ga Power	706 667-5616	JGRANADA@SouthernCo.com
10	David Johnson	Boral Bricks	334-480-2487	david.johnson@boral.com
11	Brenda Johnson	US EPA Region 4	404-562-9037	johnson.brenda@epa.gov
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Home

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Document Archive
(Proposals, contracts, presentations, and reports)

Emissions Survey

Air Quality Data
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- 2001
- 2002

In the News

Last updated: 09/20/02

Fall line Air Quality Study (FAQS) Coordinating Council

Ron Methier (Chair)
Chief, Air Protection Branch, Georgia Environmental Protection Division

Jack Ellis
Mayor, City of Macon

Bob Fountain
Bibb County Engineer

Billy Turner
President, Columbus Water Works

Art Cleveland
Dean of the College of Sciences, Columbus State University

Bill Price
President, DSM Chemicals and Chair, Augusta Air Quality Task Force

Scott MacGregor
Vice President Community Development, Metro Augusta Chamber of Commerce

Catherine Ross
Executive Director, Georgia Regional Transportation Authority

George Carellas
Department of Defense Regional Environmental Coordinator, Department of the Army, Southern Regional Environmental Office

Ex Officio (non-voting):

Kay Prince
US Environmental Protection Agency, Region IV

Renee Shealy
Director, Air Planning, Development, and Outreach, South Carolina Department of Health & Environmental Control

Ken Barrett
Chief of Air Planning, Alabama Department of Environmental

Management

ATTACHMENT 2

Home

Key Contacts
- Coordinating Council
- Listserv
  - Subscribers
- Project Director
  - Michael E. Chang
- Ambient Monitoring
  - Karsten Baumann
  - Rodney Weber
  - Mike Bergin
- Emissions & Modeling
  - Ted Russell

Document Archive
- **Project Initiation**
  - FAQS Kickoff
  - Coordinating Council
    - 9 May 2000
    - 1 June 2000
    - 31 August 2000
- **Phase I**
  - Workshops
  - Emissions Survey
  - Critical Review
  - Report
- **Phases II & III**
  - Briefings (2002)
    - EPD
    - Augusta
    - Macon
    - Columbus
    - Atlanta Trans & AQ
  - Emissions Survey
  - Briefings (2003)
    - Augusta
    - Columbus
    - Macon
- **Outreach & Education**
- **Publications**

Emissions Survey

Air Quality Data
- Terms of Use
- Real-time
- Archive
  - 2000
  - 2001
  - 2002

Fall line Air Quality Study (FAQS) Document Archive

pdf = Adobe Acrobat
doc = Microsoft-Word
ppt = Microsoft-Powerpoint
xls = Microsoft-Excel

Project Initiation

Kickoff Meeting March 2, 2000

Minutes	doc	pdf		
Project History and Overview		pdf	ppt	
Chemical Monitoring & Measurements Overview		pdf		
Emis. Inventories & Atmos. Modeling Overview		pdf	ppt	
Original FAQS Proposal	doc	pdf		
Original FAQS Memorandum of Understanding	doc	pdf		
Summary of Georgia Tech Qualifications	doc	pdf		
Ted Russell's Preliminary Report re: Columbus	doc	pdf		

Coordinating Council Meetings

May 9, 2000

Minutes	doc	pdf		
Summary of Site Scouting Visits	doc	pdf		

June 1, 2000

Minutes	doc	pdf		
FAQS Contract between EPD & Georgia Tech	doc	pdf		
Explanation of EPD Criteria for Non-attainment	doc	pdf		
EPD Non-attainment Spreadsheet		pdf		xls
Draft Coordinating Council Policy Statement	doc	pdf		
Summer 2000 Calendar	doc	pdf		

August 31, 2000

Minutes	doc	pdf		
Summer 2000 Data Preview		pdf	ppt	
YTD Accomplishments and FY01-02 Budget	doc	pdf		

In the News

Last updated: 05/30/03

Phase I

Science and Policy Workshop October 19-20, 2000

Summary of Accomplishments & Findings	doc	pdf		
FY01-02 Budget Request	doc	pdf		
Pilot Study Analyses		pdf	ppt	
Developing the Emission Inventory		pdf	ppt	

Emissions Survey

Cover Letter	doc			
Instructions	doc			
Plant General Info	doc			
Additional Info	doc			
Survey Worksheet				xls
Workshop	doc			

Critical Review February 25, 2001

Independent Critical Review	doc	pdf		

Report: Initial Impressions of Air Quality in Augusta, Macon, and Columbus, Georgia

~~Draft Executive Summary April 17, 2001~~ (See Final Executive Summary below)	doc	pdf		
~~Draft Full Report April 17, 2001 (caution file size ~10Mb)~~ (See Final Full Report below)	doc	pdf		
Columbus Env. Task Force Briefing 5/17/2001		pdf	ppt	
Augusta Air Quality Task Force Briefing 5/22/2001		pdf	ppt	
Bibb County Board of Commissioners Briefing 7/24/2001		pdf	ppt	
Final Executive Summary July 16, 2001	doc	pdf		
Final Full Report July 16, 2001 (caution file size ~10Mb)	doc	pdf		

Phases II & III

Briefings 2002

EPD Regulatory Briefing (same for all briefings)		pdf	ppt	
Augusta Environmental Task Force Briefing 5/22/2002		pdf	ppt	
Macon Chamber of Commerce Briefing 6/6/2002		pdf	ppt	
Columbus Environmental Task Force Briefing 6/14/2002		pdf	ppt	
Georgia and Atlanta Transportation Planners - Air Quality Subcommittee Meeting 6/19/2002		pdf	ppt	

Briefings 2003

Augusta EPD / FAQS / EPA 2/21/2003			ppt	
Columbus EPD / FAQS / Ft. Benning 4/28/2003			ppt	
Macon EPD / FAQS 5/7/2003			ppt	
Augusta EPD / FAQS 5/30/2003			ppt	

Emissions Survey

Cover Letter	doc			
Instructions	doc			
Pre Survey	doc			
Survey Worksheet				xls

Outreach and Education

SCAT El. & Hybrid El. Buses Workshop 10/6/2000		pdf	ppt	
Macon Rotary Club 10/9/2000		pdf	ppt	
GA Transit Assoc. Annual Meeting 11/2/2000		pdf	ppt	
SEMP Research Coordination Meeting 11/14/2000		pdf	ppt	
CEE 6391Advanced Topics In Air Pollution 1/24/2001		pdf	ppt	
CSRA Chapter of AIChE 5/22/01		pdf	ppt	
2001 Region 4 EPA - DOD - States Environmental Conference 6/27/01		pdf	ppt	
~~A Survey of Air Quality Outreach and Education Efforts in Georgia and Elsewhere - draft 8/16/01~~ (See final below)	doc	pdf		
A Survey of Air Quality Outreach and Education Efforts in Georgia and Elsewhere - final 9/24/01	doc	pdf		

Publications

Air Quality Management in Small Markets - preprint for EM - Air & Waste Management Association magazine for Environmental Managers	doc	pdf		

pdf = Adobe Acrobat
doc = Microsoft-Word
ppt = Microsoft-Powerpoint
xls = Microsoft-Excel

ATTACHMENT 3

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

POTENTIAL LOCAL CONTROL MEASURES	EXAMPLES	DESCRIPTION
INDUSTRIAL POINT SOURCES		
Add-on Control Devices	Selective Catalytic Reduction (SCR) for NOx	SCR is an add-on control device that destroys NOx 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_2 and water.
Combustion Modifications	Low-NOx Burners	The use of low-NOx burners as a control device reduces the amount of thermal NOx 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 NOx.
Fuel Switching	Coal → Fuel Oil → Natural Gas	Switching from coal or fuel oil to cleaner-burning natural gas will result in a reduction in NOx 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 NOx, VOCs and PM emissions in the restricted area.
Industrial Natural Gas Combustion	Low-NOx Burners, Other Controls	Manipulating the combustion process using low-NOx burners reduces NOx formation. The burners keep the flame temperature low and quickly dissipate the heat by controlling the mixing of fuel and air, thereby reducing NOx emissions.
Residential Natural Gas Combustion	Low-NOx Water Heaters and Furnaces	The use of low-NOx water heaters and furnaces rather than traditional water heaters and furnaces will reduce NOx 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.

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

POTENTIAL LOCAL CONTROL MEASURES	EXAMPLES	DESCRIPTION
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.

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

POTENTIAL LOCAL CONTROL MEASURES	EXAMPLES	DESCRIPTION
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.

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

POTENTIAL LOCAL CONTROL MEASURES	EXAMPLES	DESCRIPTION
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.