

US EPA ARCHIVE DOCUMENT

December 19, 2003

Mr. J. I. Palmer, Jr., Regional Administrator  
USEPA, Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303

Dear Mr. Palmer:

As a requirement for continued participation in South Carolina's 8-Hour Ozone Early Action Compact, enclosed you will find the December 2003 Progress Report completed by participating counties and the South Carolina Department of Health and Environmental Control (DHEC). Enclosure 1 includes the report for DHEC and Enclosure 2 includes the report for each participating county, grouped by the following areas:

Appalachian: Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg  
Catawba: Chester, Lancaster, Union, York  
Pee Dee: Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro  
Waccamaw: Georgetown, Horry, Williamsburg  
Santee Lynches: Clarendon, Kershaw, Lee, Sumter  
Berkeley-Charleston-Dorchester: Berkeley, Charleston, Dorchester  
Low Country: Beaufort, Colleton, Hampton, Jasper  
Lower Savannah: Aiken, Allendale, Bamberg, Barnwell, Calhoun, Orangeburg  
Central Midlands: Fairfield, Lexington, Newberry, Richland  
Upper Savannah: Abbeville, Edgefield, Greenwood, Laurens, Saluda

The modeling and emissions inventory components of the early action process remain on schedule. Meetings continue to be held with local stakeholder groups to assist in determining the emission reduction strategies that will be included in the final local Early Action Plans due to EPA in March 2004. DHEC has requested assistance from EPA, Region 4 in determining emission reductions from proposed strategies.

Thank you for the assistance and support EPA has provided in this process. We look forward to continuing to work with EPA as we implement measures to achieve cleaner air sooner for South Carolina and our neighboring states. Should you have questions or desire additional information, please do not hesitate to contact Jim Joy, Chief of DHEC's Bureau of Air Quality at (803) 898-4123 or Henry Phillips of his staff at (803) 898-3260.

Sincerely,

R. Lewis Shaw, P.E.  
Deputy Commissioner  
Environmental Quality Control

Enclosures: 1. South Carolina DHEC December 2003 Progress Report  
2. December 2003 Progress Reports for Participating Local Areas

cc: Kay Prince, EPA Region 4  
County Officials (no attachments\*)  
Ron Methier, GA Dept. of Natural Resources (no attachments\*)  
Keith Overcash, NC Dept. of Environmental and Natural Resources (no attachments\*)  
EQC District Directors (no attachments\*)

\*All those not receiving attachments will be notified when materials are placed on website.

## Statewide Initiatives and Emission Reduction Strategies

Early Action Compact Milestone December, 2003  
 List of Emission Reduction Strategies Under Consideration  
 Bureau of Air Quality – DHEC  
 State of South Carolina

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist South Carolina in achieving and/or maintaining the 8-hour ozone standard by 2007 and beyond.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Ozone Forecast/Outreach and Education	The Division of Emissions, Modeling and Support develops a forecast for the 8-hour ozone standard. The forecast is for four areas within South Carolina. These areas include the Upstate, Central Midlands, Central Savannah River and Pee Dee. The Catawba area, including Chester, Lancaster and York counties is included in North Carolina's forecast through a cooperative partnership. A link for the Catawba forecast is included on DHEC's website. This year, 2003, was the first year that South Carolina forecasted for the Pee Dee area. The Division of Air Planning, Development and Outreach is responsible for disseminating the ozone forecast to interested individuals and groups across the state, primarily during the summer months. The forecast serves as a public health advisory to protect those persons who are most at risk to the effects of ozone.	Directionally Sound	Ongoing	Forecast Areas: Upstate area - Anderson, Oconee, Pickens, Greenville, Abbeville, Laurens, Greenwood, Spartanburg, Cherokee, and, Union counties.  Central Midlands area – Newberry, Fairfield, Kershaw, Lexington, Richland, Calhoun, Kershaw, and, Sumter.  Central Savannah River area – Allendale, Barnwell, Aiken, Saluda, Edgefield, and, McCormick.  Pee Dee area – Lee, Darlington, Florence, and, Chesterfield
Support activities implemented by local areas participating in the EAC	SC has been and will continue to work with EPA to assist local areas in determining the emission reduction strategies that will assist the area in achieving emission reductions needed for attaining and maintaining the 8-hour ozone standard within their respective area.  The Division of Air Planning, Development and	Directionally Sound	Ongoing	Statewide

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
	<p>Outreach continues to develop a Resource Guide for Air Quality Improvement that contains useful information to assist counties in planning for cleaner air sooner. This guide is a work-in-progress in which DHEC will continue to search for new information and ask that any information gathered and/or found by counties be shared so that it can be added and used for the benefit of everyone. This guide consists of informational text, pamphlets, hand-outs, useful websites, and other resources that will serve as a tool for county planning.</p> <p>Fact sheets have either been developed or revised to assist with understanding ozone, ozone monitoring and the ozone design value. Copies of these fact sheets were included in the June 2003 submittal.</p> <p>Forms for the milestones have been developed by the Division and provided to the participating areas to assist with the reporting aspect of the EAC. These forms were approved by EPA and were shared with other states involved in the EAP process.</p>			
Open Burning	Revise the existing state regulation (R.61-62.2, Prohibition of Open Burning) to reduce statewide NOx/PM/CO emissions. The DHEC Board granted initial approval of the proposed regulation on October 9, 2003. An informational forum was held on November 24, 2003. Final approval by the DHEC Board will be requested January 8, 2004, for submittal to the state legislature.	Currently Evaluating	Promulgation should occur by June 2004. Implementation expected by 2005.	Statewide
South Carolina NOx Control Regulation	This proposed regulation is designed to help control the growth of NOx emissions statewide and focuses on sources currently not subject to NOx control requirements. This proposed regulation would apply to new NOx sources but would exempt units that are regulated by other NOx regulations with equivalent requirements. The DHEC Board granted initial approval of the proposed regulation on October 9, 2003. An informational forum was held on November 24, 2003.	Currently Evaluating (See Attachment 1)	Promulgation should occur by June 2004. Implementation expected by 2005.	Statewide

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

Measure under Consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
	Final approval by the DHEC Board will be requested January 8, 2004, for submittal to the state legislature.			
CAIGE	Develop, implement and market a plan for reducing ground-level ozone precursors by state government.	Voluntary efforts Directionally Sound	April 2005	Statewide
Smart Highways	A plan to ensure transportation plans, programs and projects consider statewide and local air quality goals. Certain aspects of the Transportation Conformity regulations may be incorporated into such a plan.	Not applicable		Statewide
Initiative to reduce NOx emissions from large facilities within South Carolina	Staff within the Bureau of Air Quality, have met with some of the "larger" facilities in South Carolina to negotiate NOx emissions through the permitting process. Those reductions will be made available once they are finalized.	Currently Evaluating	April 2005	Statewide
Tier 2 standards	Federal emission standard for passenger cars, light trucks, and larger passenger vehicles. Program designed to focus on reducing the emissions most responsible for the ozone and particulate matter impact from these vehicles, including NOx and VOCs.	Currently Evaluating (See Attachment 2)	Phase in period 2004-2007	Statewide
Low Sulfur	Program to reduce average gasoline sulfur levels nationwide	Currently Evaluating (See Attachment 2)	Phase in period 2004-2007	Statewide
NOx SIP Call	Federal Rule calling for SIP revision that requires sources in 17 states, including South Carolina to reduce summertime NOx emissions.	18 percent reduction in NOx (See Attachment 2)	2004	Statewide

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

## Estimated Reductions Achieved by NOx Control Standards from Uncontrolled Levels

Source Type	Control Technology and/or Emission Limit	Percent Reduction from Uncontrolled
<b>Boilers and Water Heaters</b>		
<b>Natural Gas Fired Boilers</b>		
≥10mmBTU/hr and < 100mmBTU/hr	Low NOx Burners or equivalent technology capable of achieving 30ppmv @ 3% O2 Dry (0.036 lb/mmBTU)	50% <sup>1</sup>
≥100mmBTU/hr	Low NOx Burners + Flue Gas Recirculation or equivalent technology capable of achieving 30 ppmv @ 3% O2 Dry (0.036 lb/mmBTU)	50- 60% <sup>1</sup>
<b>Distillate Oil Fired Boilers</b>		
≥10mmBTU/hr and < 100mmBTU/hr	Low NOx Burners or equivalent technology capable of achieving 0.15 lb/mmBTU	50% <sup>1</sup>
≥100mmBTU/hr	Low NOx Burners + Flue Gas technology capable of achieving 0.14 Recirculation or equivalent lb/mmBTU	60% <sup>1</sup>
<b>Residual Oil Fired Boilers</b>		
≥10mmBTU/hr and < 100mmBTU/hr	Low NOx Burners or equivalent technology capable of achieving 0.3 lb/mmBTU	50% <sup>1</sup>
≥100mmBTU/hr	Low NOx Burners + Flue Gas Recirculation or equivalent technology capable of achieving 0.3 lb/mmBTU	60% <sup>1</sup>

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

<b>Multiple Fuel Boilers</b>		The emission limits for boilers burning multiple fuels are calculated in accordance with the formulas below. Additional fuels shall be addressed on a case-by-case basis.
≥10mmBTU/hr and < 100mmBTU/hr	$E_n = [(0.036 \text{ lb/mmBTU } H_{np}) + (0.15 \text{ lb/mmBTU } H_{do}) + (0.3 \text{ lb/mmBTU } H_{ro}) + (0.35 \text{ lb/mmBTU } H_c) + (0.2 \text{ lb/mmBTU } H_w)] / (H_{np} + H_{do} + H_{ro} + H_c + H_w)$ <p>where:  <math>E_n</math> is the nitrogen oxides emission limit (expressed as NO<sub>2</sub>), ng/J (lb/million Btu)  <math>H_{np}</math> is the heat input from combustion of natural gas,  <math>H_{do}</math> is the heat input from combustion of distillate oil  <math>H_{ro}</math> is the heat input from combustion of residual oil,  <math>H_c</math> is the heat input from combustion of coal,  <math>H_w</math> is the heat input from combustion of wood residue.</p>	≈50% <sup>1</sup>
≥100mmBTU/hr	$E_n = [(0.036 \text{ lb/mmBTU } H_{np}) + (0.14 \text{ lb/mmBTU } H_{do}) + (0.3 \text{ lb/mmBTU } H_{ro}) + (0.25 \text{ lb/mmBTU } H_c) + (0.2 \text{ lb/mmBTU } H_w)] / (H_{np} + H_{do} + H_{ro} + H_c + H_w)$ <p>where:  <math>E_n</math> is the nitrogen oxides emission limit (expressed as NO<sub>2</sub>), ng/J (lb/million Btu)  <math>H_{np}</math> is the heat input from combustion of natural gas,  <math>H_{do}</math> is the heat input from combustion of distillate oil  <math>H_{ro}</math> is the heat input from combustion of residual oil,  <math>H_c</math> is the heat input from combustion of coal.  <math>H_w</math> is the heat input from combustion of wood residue.</p>	≈60% <sup>1</sup>
<i>Wood Residue Boilers</i>		
All types	Combustion controls to minimize NOx emissions or equivalent technology capable of achieving 0.20 lb/mmBTU	0-50% <sup>2</sup>
<b>Coal Fired Stoker Fed Boilers</b>		
< 250 mmBTU/hr	Combustion controls to minimize NOx emissions or equivalent technology capable of achieving 0.35 lb/mmBTU	34% <sup>3</sup>

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

≥ 250 mmBTU/hr	Combustion controls to minimize NO <sub>x</sub> emissions or equivalent technology capable of achieving 0.25 lb/mmBTU	53% <sup>3</sup>
<b>Pulverized Coal Fired Boilers</b>		
< 250 mmBTU/hr	Low NO <sub>x</sub> Burners + Combustion controls to minimize NO <sub>x</sub> emissions or equivalent technology capable of achieving 0.35 lb/mmBTU	50% <sup>1</sup>
≥ 250 mmBTU/hr	Low NO <sub>x</sub> Burners + Combustion controls to minimize NO <sub>x</sub> emissions + SCR or equivalent technology capable of achieving 0.14 lb/mmBTU	70%+ <sup>1</sup>
<b>Municipal refuse fired boilers</b>		
< 250 mmBTU/hr	Combustion modifications to minimize NO <sub>x</sub> emissions + Flue Gas Recirculation or equivalent technology capable of achieving 200 ppmv @12% CO <sub>2</sub> (0.35 lb/mmBTU)	12% <sup>3</sup>
≥ 250 mmBTU/hr	Staged Combustion and Automatic Combustion Air Control + SCR or equivalent technology capable of achieving 0.18 lb/mmBTU	55% <sup>3</sup>
<b>Internal Combustion Engines</b>		
Compression Ignition	Timing Retard ≤ 4° + Turbocharger w/ Intercooler or equivalent technology capable of achieving 490 ppmv @ 15% O <sub>2</sub> (7.64 gm/bhp-hr)	20-30% <sup>1</sup>
Spark Ignition	Lean Burn Technology or equivalent technology capable of achieving 1.0 gm/bhp-hr	87% <sup>1</sup>
Landfill or Digester Gas Fired	Lean Burn Technology or equivalent technology capable of achieving 1.25 gm/bhp-hr	≈50% <sup>EST</sup>

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

<b>Gas Turbines</b>		
<b>Simple Cycle – Natural Gas</b>		
< 50 Megawatts	Combustion Modifications (e.g. dry low-NOx combustors) to minimize NOx emissions or equivalent technology capable of achieving 25 ppmv @ 15% O <sub>2</sub> Dry (0.054 lb/mmBTU)	81% <sup>4</sup>
≥ 50 Megawatts	Combustion Modifications (e.g. dry low-NOx combustors) to minimize NOx emissions or equivalent technology capable of achieving 9.0 ppmv @ 15% O <sub>2</sub> Dry (0.033 lb/mmBTU)	84% <sup>1</sup>
<i>Combined Cycle – Natural Gas</i>		
< 50 Megawatts	Dry Low-NOx Combustors or equivalent technology capable of achieving 9.0 ppmv @ 15% O <sub>2</sub> Dry (0.033 lb/mmBTU)	84% <sup>1</sup>
≥ 50 Megawatts	Dry Low-NOx Combustors + SCR or equivalent technology Capable of achieving 3.0 ppmv @ 15% O <sub>2</sub> Dry (0.011lb/mmBTU)	94% <sup>1</sup>
<i>Simple Cycle - Distillate oil combustion</i>		
< 50 Megawatts	Combustion Modifications and water injection to minimize NOx emissions or equivalent technology capable of achieving 42 ppmv @ 15% O <sub>2</sub> Dry Basis (0.16 lb/mmBTU)	68% <sup>1</sup>
≥ 50 Megawatts	Combustion Modifications and water injection to minimize NOx emissions or equivalent technology capable of achieving 42 ppmv @ 15% O <sub>2</sub> Dry Basis (0.16 lb/mmBTU)	68% <sup>1</sup>
<i>Combined Cycle - Distillate oil combustion</i>		
< 50 Megawatts	Dry Low-NOx Combustors with water injection, or equivalent technology capable of achieving 42 ppmv @ 15% O <sub>2</sub> Dry Basis (0.16 lb/mmBTU)	68% <sup>1</sup>

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

≥ 50 Megawatts	Dry Low-NOx Combustors, water injection, and SCR or Equivalent technology capable of achieving 10.0 ppmv @ 15% O <sub>2</sub> Dry Basis (0.038 lb/mmBTU)	90% <sup>1</sup>
Landfill Gas Fired	Water or steam injection or low NOx turbine design or equivalent technology capable of achieving 25 ppmv @ 15% O <sub>2</sub> (0.097 lb/mmBTU)	48% <sup>4</sup>
<b>Cement Kilns</b>		
All	Low NOx Burner or equivalent technology capable of achieving a 30% reduction from uncontrolled levels	30%
<b>Fluidized Bed Combustion (FBC) Boiler:</b>		
Coal Fired	SNCR- Urea (Selective Noncatalytic Reduction - Urea) capable of achieving 0.07 lbs/mmBTU (51.8 ppm @ 3% oxygen)	75% <sup>1</sup>
Wood Fired	SNCR- Urea (Selective Noncatalytic Reduction - Urea) capable of achieving 0.07 lbs/mmBTU (51.8 ppm @ 3% oxygen)	55% <sup>1</sup>
<b>Recovery Furnaces</b>		
All	4 <sup>th</sup> level or air to recovery furnace/good combustion practices or equivalent technology capable of achieving 100 ppm @8% oxygen	0-30% <sup>5</sup>
<b>Lime Kilns</b>		
All	Combustion controls or equivalent technology capable of achieving 175 ppm @ 10% oxygen	25% <sup>3</sup>
<b>Fuel Combustion Sources Not Otherwise Specified: (Examples include but are not limited to process heaters, dryers, furnaces, ovens, duct burners, incinerators, and smelters)</b>		

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

All	Low NOx Burners or equivalent technology capable of achieving 30 ppmv @ 3% O <sub>2</sub> Dry (0.036 lb/mmBTU)	0-60% <sup>1</sup>
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- <sup>1</sup> – EPA 456/F-99-066R “EPA Technical Bulletin – Nitrogen Oxides (NO<sub>x</sub>), Why & How they are Controlled”, Nov. 1999.
- <sup>2</sup> – EPA 453/R-94-022 “Alternative Control Techniques Document – NO<sub>x</sub> Emissions from Industrial/Commercial/ Institutional Boilers”, March 1994
- <sup>3</sup> – Compared with emissions from EPA’s AP-42 “Compilation of Air Pollutant Emission Factors”
- <sup>4</sup> – EPA’s “Emission Factor Documentation for AP-42 Section 3.1 Stationary Gas Turbines”, April 2000
- <sup>5</sup> - Information found on EPA’s RACT/BACT/LAER Clearinghouse plus information found in the Willamette PSD permit review (SC).

### Utility Reductions from EGUs in the NOx SIP Call

<i>Utility</i>	<i>1998 Emissions<sup>1</sup> (tons/day)</i>	<i>2007 Emissions (tons/day)</i>	<i>2012 Emissions (tons/day)</i>
Progress Energy	13.76	30.97	30.97
SCE&G	147.8	84.06	84.06
Santee Cooper	151.65	21.34	30.97
Duke Power	17.21	13.70	13.70
<b>Total</b>	330.42 tons/day	150.07	159.70
Reduction from 1998 Levels	-	54.6%	51.7%

<sup>1</sup> - Emission data represents modeling episode only.

Note: Data is for the EGU units under the NOx Trading Program Only.

**Reductions from Tier II and Low Sulfur Fuel Regulatory Changes**  
 (For May 1998 Episode & Future Years Using Mobile6 Model)

<b>Year</b>	<b>Mobile On-Road Emissions (tons/day)</b>	<b>% Reduction from 1998 Levels</b>
1998	345	-
2007	153	55.6%
2010	128	62.9%
2012	116	66.3%

Refer to the December 2003 Progress Reports submitted by individual areas for additional activities.

**These are the Draft Plans of Emission Reduction Strategies for the Lower Savannah Region submitted for the December 10, 2003 Early Action Compact Milestone.**

Early Action Compact Milestone – December 10, 2003  
Draft Plan of Emission Reduction Strategies

Aiken County

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist Aiken County in achieving and/or maintaining the 8-hour ozone standard by 2007.

Measure under Consideration	Description of measure (A more detailed description will be included in the Early Action Plan.)	Estimate of emission reductions (if available)	Proposed date for implementation	Geographic area and/or local government
Air Quality Contact	One person will be identified as the Air Quality Contact for Aiken County. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast. Each participating industry and municipality will also have an Air Quality Contact	Not available	March 2003	Countywide
Support state-wide efforts	Aiken County will support the efforts of SC DHEC regarding statewide emission reduction strategies.	Not available	When Available	Countywide
Alternative Fuels	<ul style="list-style-type: none"> <li>- Switch Aiken County Transit Fleet to Bio-diesel.</li> <li>- Convert SCE&amp;G Power Plant from Coal Burning to Gas Turbine Generators.</li> <li>- Switch diesel vehicles to bio-diesel.</li> </ul>	Not available Not available	<ul style="list-style-type: none"> <li>- June 2002</li> <li>- 2002</li> </ul>	<ul style="list-style-type: none"> <li>- Transit service area</li> <li>- SCE&amp;G Aiken Power Plant</li> <li>- Aiken County Industries</li> </ul>
Type II Fuels	Use low-sulfur Type II fuels in all vehicles	Not Available	When Available in Aiken County	Countywide
Community Awareness and Education	Promote the Aiken County Early Action Plan at meetings where the public is invited. Issue press releases to the local media. SCE&G is promoting an energy conservation awareness program.	Not available	July 2003	Countywide

Commuter Choice Program	Promote transit as a mode of transportation to get to the workplace through employer incentives.	Not Available	May 2003	Transit Service Area
Intelligent Transportation Systems	Install ITS equipment along major routes within the urbanized portion of Aiken County that follows the guidelines of our Advanced Traffic Management System Master Plan.	Not Available	Master Plan completed May 2002.  Equipment installation post FY2007.	Urbanized area of Aiken County
Promote Multi-modal Land Use	Revise ordinances to promote bicycle and pedestrian facilities and establish minimum tree planting requirements.	Not Available	Aiken County ordinance revision started June 2003	Countywide
Open Burning Ordinance	Ban or limit open burning within city limits.	Not Available	Implemented	City of Aiken City of North Augusta
Mid-day Carpooling	Encourage employees to carpool to lunch.	Not Available	2003	Aiken County Industries
Occupancy Sensors	Install workspace occupancy sensors to reduce energy consumption.	Not Available	2003-2004	Aiken County Industries
Reflective Surfaces	Paint exposed surfaces of building with reflective paint to reduce energy consumption.	Not Available	2003-2004	Aiken County Industries
High Efficiency Equipment	Purchase Energy Star products when appropriate.	Not Available	2003	Aiken County Aiken County Industries

Allendale County Early Action Compact  
List of Emission Reduction Strategies

Emission Reduction Strategy	Description and analysis of how strategy will be implemented	Estimate of emission reductions (if available)	Date for implementation	Resource Concerns/ Constraints	Geographic area and/or local government
Air Quality Contact	One person will be identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast.	<i>Not available</i>	March 2003	County wide	Air Quality Contact

Support state-wide efforts	Allendale County will support the efforts of SC DHEC regarding state-wide emission reduction strategies.	Not available		County wide	Support state-wide efforts
Measures taken to present	Allendale County Emergency Management Agency distributed to all county employees, information about Air Quality basics and protective measures.		Completed on May 20, 2003.	Allendale County Government	Measures taken to present

Bamberg County Early Action Compact  
List of Emission Reduction Strategies

Emission Reduction Strategy	Description and analysis of how strategy will be implemented	Estimate of emission reductions (if available)	Date for implementation	Resource Concerns/ Constraints	Geographic area and/or local government
Air Quality Contact	One person will be identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast.	<i>Not available</i>	March 2003	.	County wide
Support state-wide emission reduction efforts	Bamberg County will support the efforts of SC DHEC regarding state-wide emission reduction strategies	Not available	Upon implementation by state		County wide

Barnwell County Early Action Compact  
List of Emission Reduction Strategies

Barnwell County

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist Barnwell County in achieving and/or maintaining the 8-hour ozone standard by 2007.

Measure under Consideration	Description of measure (A more detailed description will be included in the Early Action Plan.)	Estimate of emission reductions (if available)	Proposed date for implementation	Geographic area and/or local government
Air Quality Contact	<p>During the peak Ozone months Barnwell County will have a designated Ozone Action Coordinator (OAC). His\her responsibility will be to monitor Ozone Forecast and implement Ozone Reduction Action Plan. High Ozone Alerts will be available from local television and radio news/weather broadcast and E-mail alerts from DHEC. Barnwell County will form a county ozone committee, consisting of all county department heads, to develop and implement a countywide Ozone Reduction Action Plan.</p> <p>Actions may include:</p> <ul style="list-style-type: none"> <li>Stricter fuel conversation measures</li> <li>Restrict or change time of landscaping and lawn mowing equipment</li> <li>Restrict unnecessary use of on-road vehicle usage</li> <li>Encourage employees to eat lunch in-house</li> <li>Restrict using cleaning chemicals and non-latex paint</li> <li>Employ stricter building conservation measures</li> <li>Promote and encourage car-pooling</li> </ul>	Not available	2003	County wide
Support state-wide efforts	Barnwell County will support the efforts of SC DHEC regarding state-wide emission reduction strategies.	Not available	Still under review	County wide
Bio-Diesel/ Alternative Fuels:	Barnwell County will be seeking information on Alternative Fuels.	Not available	Still under review	County wide
Reduction of Idling or No-Idle Policy for County Vehicles:	Department Heads will develop and implement inter-departmental plans to reduce or eliminate idling times on vehicles and ground maintenance equipment. This policy will contain stricter guidelines for use during high ozone days.	Not available	Still under review	County wide

<p>Stricter Controls of Illegal/ Unauthorized Outdoor Burning:</p>	<p>Barnwell County's Fire Districts, Emergency Services and Sheriff's Department will work in combination with State Agencies to develop this action. This action will focus on issues dealing with illegal burning, tires, plastics, roofing materials and hazardous substances.</p>	<p>Not available</p>	<p>Still under review</p>	<p>County wide</p>
<p>Vehicle Replacement:</p>	<p>Barnwell County's Business Manager will develop a plan to purchase replacement vehicles with a priority on vehicles and equipment with the latest emission reduction standards. Over a five to seven year period our present fleet can be replaced with a cleaner burning and better fuel-efficient fleet.</p>	<p>Not available</p>	<p>Still under review</p>	<p>County wide</p>
<p>Community Awareness and Education:</p>	<p>Enhancing Ozone awareness and education will be a vital part of our Early Action Plan. Aggressive A/E programs to motivate individuals, business, industries and organization to take actions to minimize ozone pollution. A/E will include public speaking, distribution of educational materials and increased media alerts promoting Clean Air Awareness.</p>	<p>Not available</p>	<p>Still under review</p>	<p>County wide</p>
<p>Energy Reduction Plan:</p>	<p>Energy Conservation Plans will be developed that directs county departments to reduce overall yearly energy usage by 5-10 percent per month.</p>	<p>Not available</p>	<p>Still under review</p>	<p>County wide</p>

Early Action Compact Milestone – December 2003  
 List of Emission Reduction Strategies Under Consideration

Calhoun County

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist <insert county name> in achieving and/or maintaining the 8-hour ozone standard by 2007.

Measure under Consideration	Description of measure (A more detailed description will be included in the Early Action Plan.)	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Air Quality Contact	One person will be identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast.	Not available	March 2003	County wide
Support state-wide efforts	<Calhoun County> will support the efforts of SC DHEC regarding state-wide emission reduction strategies.	Not available	August 2003	County wide
Heavy Equipment operation	Delay/Reschedule mowing and motorized construction on Ozone Action Days.	Not available	July 2003	County government
Small Engine operation	Delay/Reschedule landscaping activities with small engine use on Ozone Action Days.	Not available	July 2003	County government
Fueling	Do not 'top off' fuel tanks when refueling.	Not available	July 2003	County government
Buildings	Have employees turn off computers and lights daily.	Not available	July 2003	County government
Painting	Restrict indoor and outdoor painting on Ozone Action Days.	Not available	July 2003	County government
Awareness	Promote employee education/awareness of ozone issues.	Not available	July 2003	County government
Schedules	Change outside employee work hours to accommodate summer temperatures.	Not available	July 2003	County government

Orangeburg County

Measure under Consideration	Description of measure (A more detailed description will be included in the Early Action Plan.)	Estimate of emission reductions (if available)	Proposed date for implementation	Geographic area and/or local government
Air Quality Contact	One person has been identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast. John H. Smith	Not available	March 2003	County wide
Support state-wide efforts	Orangeburg county will support the efforts of SC DHEC regarding statewide emission reduction strategies.	Not available	Ongoing	County wide
<i>Stakeholder development</i>	<i>Identify and expand the stakeholders for the successful implementation of this program. Initial contact has been made through the county's Local Emergency Planning committee (LEPC)</i>	<i>Not available</i>	<i>June 2003</i>	<i>County wide</i>
<i>Integrate notification procedure</i>	<i>Integrate the notification procedure into existing Notification procedures using organic resources of the Emergency services dept/EOC.</i>	<i>Not available</i>	<i>June 2003</i>	<i>County wide</i>
<i>Public education program</i>	<i>Utilize existing public education programs to include ozone program using organic resources of OES dept and Project Impact program</i>	<i>Not available</i>	<i>July 2003</i>	<i>County-wide</i>
<i>Vehicle operations</i>	<i>Vehicle maint. Department is planning to purchase test alternative fuel vehicles, if results are good County may be able to replace 10% of fleet within Five years</i>	<i>Not available</i>	<i>June 2004</i>	<i>County wide</i>
<i>Vehicle operations tracking</i>	<i>County is installing GPS/vehicle monitors which Will also monitor all engine idling time and Miles driven. Will help identify options to reduce Vehicle idling and unneeded mileage.</i>	<i>Not available</i>	<i>June 2004</i>	<i>County wide</i>