US EPA ARCHIVE DOCUMENT

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December 14, 2007

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

RE: December 2007 Early Action Progress Report

Dear Mr. Palmer:

In the Fall of 2002, the Environmental Protection Agency (EPA) allowed areas the opportunity to enter into an 8-hour Ozone Early Action Compact (EAC). South Carolina led the nation with forty-five counties electing to participate in the EAC process. By signing the EAC, the counties agreed to implement emission reduction strategies in an effort to attain the 1997 8-hour Ozone standard by December 2007, three years earlier than federally required. In April 2004, when EPA issued boundary designations for the 8-hour Ozone standard, only three areas in South Carolina were designated nonattainment. The Rock Hill-Fort Mill Area Transportation Study (RFATS) Metropolitan Planning Organization (MPO) in York County was designated nonattainment due to their inclusion in the Charlotte Metropolitan Statistical Area. The Columbia Area (portions of Richland and Lexington counties) and the Greenville-Spartanburg-Anderson Area (all of the three counties) were designated nonattainment; however, as a result of their participation in the 8-hour Ozone EAC process, the effective date of their designation was deferred.

As a requirement of the EAC, South Carolina is pleased to submit this EAC Progress Report including documentation showing attainment of the 1997 8-hour Ozone standard. Strong commitments by local stakeholders, including local governments, as well as local industry and environmental groups working together, in conjunction with regional and state-wide efforts, have been successful in South Carolina, and we have the data to support the success of these efforts. Most recent data is evidence that at times when the meteorological patterns are conducive to the formation of ozone, the ozone monitors did not reveal elevated readings. While weather is definitely a factor in the formation of ozone, it is one component that we do not have the ability to control. However, local stakeholders given the flexibility to implement programs geared toward reducing oxides of nitrogen emissions do have an impact on the formation of ozone.

On December 6, 2007, Mr. Scott Reynolds, Director of the Division of Air Quality Analysis submitted documentation certifying that all South Carolina SLAMS ozone ambient monitoring and the associated quality assurance data for the 2007 Ozone Season (through October 2007) were completely submitted to AQS and are accurate to the best of his knowledge. The correspondence included a summary report generated through AQS to provide accurate 2007 ozone summary statistics for the State of South Carolina. A copy of this correspondence and report is included as Enclosure 1. Also included in Enclosure 1 is a table which gives the 4th highest 8-hour average for each of the monitoring sites for the years 2003, 2004, 2005, 2006 and 2007 as well as the three year design values for 2003-2005, 2004-2006 and 2005-2007.

In 2005, South Carolina committed to an annual review of growth (highway mobile and stationary NO_x sources) to ensure emission reduction strategies and growth are adequate as well as identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates. Review of this information indicates that for both areas designated nonattainment with the effective date deferred, the actual emissions were lower than the forecasted modeled data and the 2006 VMT was well below the action trigger. Detailed information with supporting graphs is included in Enclosure 2.

As per EPA guidance, the EAC identified eight key milestones that must be met for continued participation. All participating areas in South Carolina, including those areas designated attainment but electing to continue participation have met all milestones. In addition, each of these counties has submitted semi-annual progress reports every year, beginning with the June 2003 report. This document contains the tenth and final EAC progress report. Enclosure 3 includes the table provided by EPA's guidance document of October 17, 2005, for each participating county identifying each of the local measures included in their respective local early action plan. Additionally, a narrative description of activity from the five counties in the deferred nonattainment areas is included. Information regarding activities that have occurred since June 2007 is included for each county and is 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

As pointed out in previous EAC progress reports, the emission reduction strategies submitted by the local areas contain both quantifiable and directionally sound measures. However, it should be noted that none of them were used to demonstrate attainment in 2007. A table and narrative description identifying statewide activities and progress made toward each is included as Enclosure 4 Statewide EAC Activities.

EPA should be commended for allowing areas the opportunity and flexibility to improve air quality by implementing local programs earlier than would be required under federal mandates and for rewarding these areas by deferring the prescriptive requirements of nonattainment. The partnership opportunities developed over the last several years and the awareness of the participants, including local officials, state agencies, universities, organizations, businesses, industries, environmental groups and other stakeholders about air quality issues have resulted in proactive, voluntary and regulatory actions that would not have occurred without the EAC process. The continuing effort of these groups is a marvelous example of partnerships in many directions. Each of these diverse parties has come together for a worthy common goal of providing cleaner air sooner to the citizens of South Carolina. We continue to see activities that remain a part of the EAC process, above and beyond that required of an area with a "traditional" nonattainment designation. These areas could be used as a model to show that implementation of emission reduction strategies earlier than required does bring cleaner air sooner.

South Carolina respectfully requests that EPA review the documentation submitted and expeditiously take final action on the 8-hour Ozone EAC process by re-designating the Columbia Area and the Greenville-Spartanburg-Anderson Area to attainment for the 1997 8-hour Ozone standard.

Thank you not only for the opportunity to participate in the 8-hour Ozone EAC process but for your assistance and support over the last several years. We look forward to continuing to work with EPA and other stakeholders as we continue to encourage implementing measures to achieve cleaner air sooner for our citizens. Should you have questions or desire additional information, please do not hesitate to contact me at (803) 896-8940 or Myra Reece, Chief of the Bureau of Air Quality at (803) 898-4123.

Sincerely,

Robert W. King, Jr., P.E.
Deputy Commissioner
Environmental Quality Control

Enclosures

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*)
Myra Reece (no attachments*)
EQC Regional Directors (no attachments*)
Scott Reynolds (no attachments*)

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

South Carolina's Ozone Early Action Compact
December 2007 Progress Report
Enclosures
December 14, 2007

1. 3-Year Ozone Average Summary to Date, AQS Data
   South Carolina Certification Correspondence (December 6, 2007)
2. South Carolina's Comprehensive Maintenance Plan
3. Local EAC Activities for Participating Areas
4. Statewide EAC Activities

US EPA ARCHIVE DOCUMENT

Enclosure 1

December 2007

FINAL EAC Progress Report Document
3-Year Ozone Average Summary to Date, AQS Data

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US EPA ARCHIVE DOCUMENT

County	Monitoring Site	2003 4th 8-hr Average	2004 4th 8-hr Average	2005 4th 8-hr Average	2006 4th 8-hr Average	2007 4th 8-hr Average	2003-2005 Design Values	2004-2006 Design Values	2005-2007 Design Values
Abbeville	Due West	0.077	0.075	0.082	0.079	0.083	0.078	0.078	0.081
Aiken	Jackson	0.069	0.080	0.077	0.073	0.082	0.075	0.076	0.077
Anderson	Powdersville	0.078	0.076	0.082	0.069		0.078	0.075	
Barnwell	Barnwell	0.073	0.072	0.074	0.074	0.073	0.073	0.073	0.073
Berkeley	Bushy Park	0.070	0.073	0.068	0.064	0.06	0.070	0.068	0.064
Berkeley	Army Reserve	0.070	0.067						
Charleston	Cape Romain	0.074	0.070	0.077	0.078	0.069	0.073	0.075	0.074
Cherokee	Cowpens	0.079	0.068	0.078	0.076	0.067	0.075	0.074	0.073
Chester	Chester	0.078	0.069	0.083	0.073	0.074	0.076	0.075	0.076
Chesterfield	Chesterfield	0.075	0.074	0.078	0.074	0.073	0.075	0.075	0.075
Colleton	Ashton	0.069	0.071	0.072	0.078	0.072	0.070	0.073	0.074
Darlington	Pee Dee	0.075	0.076	0.079	0.076	0.073	0.076	0.077	0.076
Edgefield	Trenton	0.068	0.071	0.071	0.068	0.073	0.070	0.070	0.070
Oconee	Long Creek	0.079	0.075	0.075	0.065	0.076	0.076	0.071	0.072
Pickens	Clemson	0.078	0.074	0.081	0.081	0.081	0.077	0.078	0.081
Richland	Cong. Swamp/ Bluff	0.074	0.067	0.074	0.072	0.071	0.071	0.071	0.072
Richland	Parklane	0.075	0.082	0.082	0.082	0.077	0.079	0.082	0.080
Richland	Sandhill	0.083	0.082	0.086	0.078	0.084	0.083	0.082	0.082
Spartanburg	N. Spartan. FD	0.079	0.082	0.082	0.085	0.083	0.081	0.083	0.083
Union	Delta	0.078	0.072	0.078	0.077	0.076	0.076	0.075	0.077
Williamsburg	Indiantown	0.069	0.069	0.068	0.073	0.071	0.068	0.070	0.070
York	York	0.076	0.071	0.079	0.078	0.08	0.075	0.076	0.079

December 2007

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South Carolina Department of Health and Environmental Control

US EPA ARCHIVE DOCUMENT

South Carolina - 2007 Ozone Summary

(Validated through November 2007)

County	Monitoring Site	Total Hits	Date	1st 8-hr Average	Date	2nd 8-hr Average	Date	3rd 8-hr Average	Date	4th 8-hr Average	Date	5th 8-hr Average
Abbeville	Due West	3	16-Aug	0.09	17-Aug	0.087	15-Aug	0.085	22-Jun	0.083	14-Aug	0.082
Aiken	Jackson	0	21-May	0.084	22-Jun	0.084	23-Jun	0.083	6-Aug	0.082	8-Aug	0.082
Barnwell	Barnwell	0	13-Mar	0.076	21-May	0.076	14-Aug	0.074	2-May	0.073	3-May	0.073
Berkeley	Bushy Park	0	22-Jun	0.072	13-Jul	0.07	21-May	0.065	30-Apr	0.06	1-May	0.06
Charleston	Cape Romain	0	13-Jul	0.079	21-Apr	0.07	20-May	0.07	13-Apr	0.069	17-Apr	0.069
Cherokee	Cowpens	0	16-Aug	0.074	2-May	0.068	22-May	0.067	21-Jun	0.067	22-Jun	0.067
Chester	Chester	2	21-Jun	0.086	14-Aug	0.085	4-Sep	0.083	2-May	0.074	22-May	0.074
Chesterfield	Chesterfield	0	6-Aug	0.081	2-May	0.079	14-Aug	0.074	22-Jun	0.073	17-Aug	0.073
Colleton	Ashton	0	1-May	0.076	14-Aug	0.075	13-Mar	0.073	2-May	0.072	3-May	0.071
Darlington	Pee Dee	0	1-May	0.076	14-Aug	0.076	22-Jun	0.075	21-May	0.073	22-May	0.072
Edgfield	Trenton	0	18-Aug	0.076	15-Aug	0.075	24-Jun	0.074	21-May	0.073	14-Aug	0.073
Oconee	Long Creek	1	1-May	0.09	18-Aug	0.0084	5-Sep	0.084	8-Mar	0.076	23-Apr	0.074
Pickens	Clemson	2	5-Sep	0.093	21-Jun	0.086	1-May	0.083	16-Aug	0.081	1-Aug	0.080
Richland	Congaree Bluff	1	29-Mar	0.091	13-Mar	0.076	23-Jun	0.072	6-Aug	0.071	22-Jun	0.069
Richland	Parklane	1	21-May	0.089	6-Jul	0.084	17-Aug	0.08	27-Jul	0.077	15-Aug	0.077
Richland	Sandhill	3	18-Jun	0.09	21-May	0.087	13-Mar	0.085	6-Jul	0.084	17-Aug	0.084
Spartanburg	N. Spartanburg	3	31-May	0.087	21-Jun	0.086	5-Sep	0.085	22-Jun	0.083	16-Aug	0.082
Union	Delta	0	14-Aug	0.079	17-Aug	0.079	21-Jun	0.078	22-Jun	0.076	11-Aug	0.076
Williamsburg	Indiantown	0	1-May	0.077	22-Jun	0.074	21-May	0.072	2-May	0.071	22-Apr	0.069
York	York	1	30-Aug	0.085	21-Jun	0.083	14-Aug	0.082	4-Sep	0.08	13-Mar	0.074
	2007		Total Hits for all of the Ozone monitors					17				
		Total days above the Ozone standard statewide						14				

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South Carolina Department of Health and Environmental Control

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2600 Bull Street
Columbia, SC 29201-1708

Bureau of Environmental Services
Division of Air Quality Analysis
8231 Parklane Road
Columbia, South Carolina 29223
(803) 896-0902 FAX (803) 896-0980

December 6, 2007

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

Mr. Palmer:

In order to allow all South Carolina Early Action Compact areas to meet the protocol timelines and consistent with the requirements in 40 CFR§ 58.15, with this letter I certify that all South Carolina SLAMS ozone ambient monitoring and the associated quality assurance data for the 2007 Ozone season (through October 2007) are completely submitted to AQS and are accurate to the best of my knowledge, taking into consideration the quality assurance findings. A summary report generated through AQS should provide accurate 2007 ozone summary statistics for the State of South Carolina.

Consistent with the 2006 revisions of §58 , I am also certifying of all South Carolina ozone Special Purpose Monitor (SPM) criteria pollutant data collected using reference or equivalent methods. All South Carolina SPM ozone monitors and sites are operated consistent with the requirements of 40 CFR §58 Appendix A.

Consistent with the requirements for submission for annual data and precision and accuracy summaries, I have attached copies of a recent Quick Look Report (AQS AMP 450 and AMP 450NC) and Precision and Accuracy Reporting Organization Summary (AQS AMP 240) for all SLAMS and SPM ozone monitors operated by South Carolina DHEC through the end of the 2007 ozone season. Please note the Precision and Accuracy Reporting Organization Summary (AQS AMP 240) does not show data for fourth quarter 2007 because that quarter is not yet complete. I have confirmed that all ozone precision and accuracy data for the 2007 ozone season has been correctly entered into AQS. The ozone summary statistics and precision and accuracy summaries for the full calendar year will be included in the submission accompanying the certification of the remainder of the South Carolina data.

Sincerely yours,

Scott A. Reynolds, Director
Division of Air Quality Analysis

Attachments
cc: Mr. David Lutz, Data Certification Contact
Ambient Air Monitoring Group, OAQPS (electronic)
Doug Neeley, Chief, APTMB, US EPA Region IV
Artra Cooper, EPA Region IV (w/o attachments)
Robert J. Brown, Director, DAPDOIS
SC DHEC BAQ (w/o attachments)

SC Ozone CERT 07.doc

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

User ID: DSB

QUICKLOOK CRITERIA PARAMETERS

Report Request ID: 487314 Report Code: AMP450 Dec. 5, 2007

GEOGRAPHIC SELECTIONS

Tribal	State	County	Site	Parameter	POC	City	AQCR	UAR	MSA	CMSA	EPA Region	Method	Duration	Begin Date	End Date
	45			44201										2007	2007

SELECTED OPTIONS

Option Type	Option Value
EVENTS PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS
MERGE PDF FILES	YES

SORT ORDER

Order	Column
1	PARAMETER_CODE
2	STATE_CODE
3	COUNTY_CODE
4	SITE_ID
5	POC
6	DATES
7	EDT_ID

Dec. 5, 2007

EXCEPTIONAL DATA TYPES

EDT	DESCRIPTION
0	NO EVENTS
1	EVENTS EXCLUDED
2	EVENTS INCLUDED
3	EXCEPTIONAL EVENTS EXCLUDED
4	NATURAL EVENTS EXCLUDED
5	EVENTS WITH CONCURRENCE EXCLUDED
6	EXCEPTIONAL EVENTS WITH CONCURRENCE EXCLUDED
7	NATURAL EVENTS WITH CONCURRENCE EXCLUDED

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

1-HOUR

SITE ID	POC	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	VALID DAYS MEAS	NUM DAYS REQ	1ST MAX 1-HR	2ND MAX 1-HR	3RD MAX 1-HR	4TH MAX 1-HR	DAY MAX>/= 0.125	EST DAYS>/= .125	MISS DAYS< 0.125	CERT	EDT
45-001-0001	1	0971	Due West	Abbeville	59 JIM SCOTT LANE	2007	047	213	214	.103	.098	.091	.090	0	0.0	1		0
45-003-0003	2	0971	Jackson	Aiken	8217 ATOMIC ROAD (INDIAN DRIVE - SCHOOL)	2007	047	209	214	.105	.101	.099	.099	0	0.0	1		0
45-011-0001	2	0971	Not in a city	Barnwell	5795 SEVEN PINES ROAD	2007	047	213	214	.084	.081	.081	.080	0	0.0	1		0
45-015-0002	1	0971	Not in a city	Berkeley	River Oak Drive (Goose Creek)	2007	047	196	214	.104	.081	.080	.076	0	0.0	0		0
45-019-0046	1	0971	Not in a city	Charleston	390 BULLS ISLAND ROAD (AWENDAW)	2007	047	209	214	.090	.078	.076	.076	0	0.0	5		0
45-021-0002	1	0971	Not in a city	Cherokee	MCGINNIS ROAD (OLD SC 110)	2007	047	211	214	.085	.082	.077	.076	0	0.0	0		0
45-023-0002	1	0971	Not in a city	Chester	100 LUSCOMBE DRIVE	2007	047	210	214	.093	.092	.090	.084	0	0.0	2		0
45-025-0001	1	0971	Not in a city	Chesterfield	RT 2 BOX 100 MCBEE (SC145)	2007	047	209	214	.093	.086	.080	.079	0	0.0	2		0
45-029-0002	2	0971	Not in a city	Colleton	Ashton Road (Islandton)	2007	047	213	214	.087	.085	.083	.081	0	0.0	1		0
45-031-0003	1	0971	Not in a city	Darlington	2200 POCKET ROAD (DARLINGTON)	2007	047	211	214	.085	.084	.084	.083	0	0.0	3		0
45-037-0001	1	0971	Not in a city	Edgefield	660 WOODYARD ROAD	2007	047	212	214	.088	.083	.081	.081	0	0.0	2		0
45-073-0001	1	0971	Not in a city	Oconee	ROUND MOUNTAIN TOWER ROAD (Mountain Rest, SC)	2007	047	208	214	.104	.093	.091	.082	0	0.0	1		0
45-077-0002	1	0971	Not in a city	Pickens	106 HOPEWELL ROAD	2007	047	212	214	.102	.096	.093	.089	0	0.0	2		0
45-079-0007	1	0971	Dentsville (Dents)	Richland	8311 PARKLANE ROAD	2007	047	210	214	.101	.094	.091	.089	0	0.0	4		0

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

1-HOUR

SITE ID	POC	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	VALID DAYS MEAS	NUM DAYS REQ	1ST MAX 1-HR	2ND MAX 1-HR	3RD MAX 1-HR	4TH MAX 1-HR	DAY MAX>/= 0.125	EST DAYS>/= .125	MISS DAYS< 0.125	CERT	EDT
45-079-0021	1	0971	Not in a city	Richland	1850 SOUTH CEDAR CREEK ROAD (GADSDEN)	2007	047	202	217	.237	.088	.084	.084	1	1.1	3		5
45-079-1001	1	0971	Not in a city	Richland	900 CLEMSON ROAD	2007	047	206	214	.106	.098	.098	.097	0	0.0	3		0
45-083-0009	1	0971	Not in a city	Spartanburg	1556 JOHN DODD ROAD	2007	047	214	214	.098	.096	.095	.095	0	0.0	0		0
45-087-0001	1	0971	Not in a city	Union	1121 DELTA ROAD (WHITMIRE)	2007	047	213	214	.091	.086	.086	.086	0	0.0	1		0
45-089-0001	2	0971	Not in a city	Williamsburg	4951 HEMINGWAY HIGHWAY	2007	047	209	214	.087	.082	.078	.076	0	0.0	0		0
45-091-0006	1	0971	Not in a city	York	2316 CHESTER HIGHWAY (US 321)	2007	047	208	214	.107	.095	.092	.089	0	0.0	1		0

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

8-HOUR

SITE ID	POC	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	%OBS	VALID DAYS MEAS	NUM DAYS REQ	1ST MAX 8-HR	2ND MAX 8-HR	3RD MAX 8-HR	4TH MAX 8-HR	DAY MAX>/= 0.085	CERT	EDT
45-001-0001	1	0971	Due West	Abbeville	59 JIM SCOTT LANE	2007	047	98	210	214	.090	.087	.085	.083	3		0
45-003-0003	2	0971	Jackson	Aiken	8217 ATOMIC ROAD (INDIAN DRIVE - SCHOOL)	2007	047	97	207	214	.084	.084	.083	.082	0		0
45-011-0001	2	0971	Not in a city	Barnwell	5795 SEVEN PINES ROAD	2007	047	99	211	214	.076	.076	.073	.073	0		0
45-015-0002	1	0971	Not in a city	Berkeley	River Oak Drive (Goose Creek)	2007	047	91	194	214	.072	.070	.065	.060	0		0
45-019-0046	1	0971	Not in a city	Charleston	390 BULLS ISLAND ROAD (AWENDAW)	2007	047	95	204	214	.079	.070	.070	.069	0		0
45-021-0002	1	0971	Not in a city	Cherokee	MCGINNIS ROAD (OLD SC 110)	2007	047	98	209	214	.074	.068	.067	.067	0		0
45-023-0002	1	0971	Not in a city	Chester	100 LUSCOMBE DRIVE	2007	047	98	210	214	.086	.085	.083	.074	2		0
45-025-0001	1	0971	Not in a city	Chesterfield	RT 2 BOX 100 MCBEE (SC145)	2007	047	97	207	214	.081	.079	.074	.073	0		0
45-029-0002	2	0971	Not in a city	Colleton	Ashton Road (Islandton)	2007	047	99	212	214	.076	.075	.073	.072	0		0
45-031-0003	1	0971	Not in a city	Darlington	2200 POCKET ROAD (DARLINGTON)	2007	047	99	212	214	.076	.076	.075	.073	0		0
45-037-0001	1	0971	Not in a city	Edgefield	660 WOODYARD ROAD	2007	047	99	212	214	.076	.075	.074	.073	0		0
45-073-0001	1	0971	Not in a city	Oconee	ROUND MOUNTAIN TOWER ROAD (Mountain Rest, SC)	2007	047	97	207	214	.090	.084	.084	.076	1		0
45-077-0002	1	0971	Not in a city	Pickens	106 HOPEWELL ROAD	2007	047	99	212	214	.093	.086	.083	.081	2		0
45-079-0007	1	0971	Dentsville (Dents)	Richland	8311 PARKLANE ROAD	2007	047	98	210	214	.089	.084	.080	.077	1		0
45-079-0021	1	0971	Not in a city	Richland	1850 SOUTH	2007	047	93	202	217	.091	.076	.072	.071	1		5

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

8-HOUR

SITE ID	POC	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	%OBS	VALID DAYS MEAS	NUM DAYS REQ	1ST MAX 8-HR	2ND MAX 8-HR	3RD MAX 8-HR	4TH MAX 8-HR	DAY MAX>/= 0.085	CERT	EDT
45-079-1001	1	0971	Not in a city	Richland	900 CLEMSON ROAD	2007	047	93	217	233	.090	.087	.085	.084	3		0
45-083-0009	1	0971	Not in a city	Spartanburg	1556 JOHN DODD ROAD	2007	047	100	213	214	.087	.086	.085	.083	3		0
45-087-0001	1	0971	Not in a city	Union	1121 DELTA ROAD (WHITMIRE)	2007	047	100	213	214	.079	.079	.078	.076	0		0
45-089-0001	2	0971	Not in a city	Williamsburg	4951 HEMINGWAY HIGHWAY	2007	047	97	208	214	.077	.074	.072	.071	0		0
45-091-0006	1	0971	Not in a city	York	2316 CHESTER HIGHWAY (US 321)	2007	047	94	202	214	.085	.083	.082	.080	1		0

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

METHODS USED IN THIS REPORT

PARAMETER	METHOD CODE	COLLECTION METHOD	ANALYSIS METHOD
44201	047	INSTRUMENTAL	ULTRA VIOLET

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

PQAOS USED IN THIS REPORT

PQAO	AGENCY DESCRIPTION
0971	South Carolina Department Health And Environmental Control

Note: The * indicates that the mean does not satisfy summary criteria.

US EPA ARCHIVE DOCUMENT

User ID: DSB

QUICKLOOK ALL PARAMETERS

Report Request ID: 487321 Report Code: AMP450NC Dec. 5, 2007

GEOGRAPHIC SELECTIONS

Tribal State	County	Site	Parameter	POC	City	AQCR	UAR	MSA	CMSA	EPA Region	Method	Duration	Begin Date	End Date
45			44201										2007	2007

SELECTED OPTIONS

Option Type	Option Value
EVENTS PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS
MERGE PDF FILES	YES

SORT ORDER

Order	Column
1	STATE_CODE
2	COUNTY_CODE
3	SITE_ID
4	PARAMETER_CODE
5	POC
6	DATES
7	EDT_ID

US EPA ARCHIVE DOCUMENT

EXCEPTIONAL DATA TYPES

EDT	DESCRIPTION
0	NO EVENTS
1	EVENTS EXCLUDED
2	EVENTS INCLUDED
3	EXCEPTIONAL EVENTS EXCLUDED
4	NATURAL EVENTS EXCLUDED
5	EVENTS WITH CONCURRENCE EXCLUDED
6	EXCEPTIONAL EVENTS WITH CONCURRENCE EXCLUDED
7	NATURAL EVENTS WITH CONCURRENCE EXCLUDED

QUICKLOOK ALL PARAMETERS

Dec. 5, 2007

Parameter	Unit	POC	PQAO	Year	Meth	# Obs	1st Max Value	2nd Max Value	3rd Max Value	4th Max Value	Arith. Mean	Duration	EDT
Site ID: 45-001-0001 City: Due West	County: Abbeville					Address: 59 JIM SCOTT LANE							
44201 Ozone	Parts per million	1	0971	2007	047	6014	.103	.098	.091	.090	.0609	1 HOUR	0
Site ID: 45-003-0003 City: Jackson	County: Aiken					Address: 8217 ATOMIC ROAD (INDIAN DRIVE - SCHOOL)							
44201 Ozone	Parts per million	2	0971	2007	047	5910	.105	.101	.099	.099	.0586	1 HOUR	0
Site ID: 45-011-0001 City: Not in a city	County: Barnwell					Address: 5795 SEVEN PINES ROAD							
44201 Ozone	Parts per million	2	0971	2007	047	5980	.084	.081	.081	.080	.0541	1 HOUR	0
Site ID: 45-015-0002 City: Not in a city	County: Berkeley					Address: River Oak Drive (Goose Creek)							
44201 Ozone	Parts per million	1	0971	2007	047	5312	.104	.081	.080	.076	.0457	1 HOUR	0
Site ID: 45-019-0046 City: Not in a city	County: Charleston					Address: 390 BULLS ISLAND ROAD (AWENDAW)							
44201 Ozone	Parts per million	1	0971	2007	047	7044	.090	.078	.076	.076	.0517	1 HOUR	0
Site ID: 45-021-0002 City: Not in a city	County: Cherokee					Address: MCGINNIS ROAD (OLD SC 110)							
44201 Ozone	Parts per million	1	0971	2007	047	7174	.085	.082	.077	.076	.0526	1 HOUR	0
Site ID: 45-023-0002 City: Not in a city	County: Chester					Address: 100 LUSCOMBE DRIVE							
44201 Ozone	Parts per million	1	0971	2007	047	6009	.093	.092	.090	.084	.0572	1 HOUR	0
Site ID: 45-025-0001 City: Not in a city	County: Chesterfield					Address: RT 2 BOX 100 MCBEE (SC145)							
44201 Ozone	Parts per million	1	0971	2007	047	7166	.093	.086	.080	.079	.0570	1 HOUR	0
Site ID: 45-029-0002 City: Not in a city	County: Colleton					Address: Ashton Road (Islandton)							
44201 Ozone	Parts per million	2	0971	2007	047	7219	.087	.085	.083	.081	.0522	1 HOUR	0
Site ID: 45-031-0003 City: Not in a city	County: Darlington					Address: 2200 POCKET ROAD (DARLINGTON)							
44201 Ozone	Parts per million	1	0971	2007	047	5956	.085	.084	.084	.083	.0558	1 HOUR	0
Site ID: 45-037-0001 City: Not in a city	County: Edgefield					Address: 660 WOODYARD ROAD							
44201 Ozone	Parts per million	1	0971	2007	047	7236	.088	.083	.081	.081	.0547	1 HOUR	0
Site ID: 45-073-0001 City: Not in a city	County: Oconee					Address: ROUND MOUNTAIN TOWER ROAD (Mountain Rest, SC)							
44201 Ozone	Parts per million	1	0971	2007	047	7143	.104	.093	.091	.082	.0567	1 HOUR	0

Note: The * indicates that the mean does not satisfy summary criteria.

QUICKLOOK ALL PARAMETERS

Dec. 5, 2007

Parameter	Unit	PQAO	Year	Meth	# Obs	1st Max Value	2nd Max Value	3rd Max Value	4th Max Value	Arith. Mean	Duration	EDT
Site ID: 45-077-0002 City: Not in a city	County: Pickens				Address: 106 HOPEWELL ROAD							
44201 Ozone	Parts per million	1 0971	2007	047	5907	.102	.096	.093	.089	.0616	1 HOUR	0
Site ID: 45-079-0007 City: Dentsville (Dents)	County: Richland				Address: 8311 PARKLANE ROAD							
44201 Ozone	Parts per million	1 0971	2007	047	7227	.101	.094	.091	.089	.0592	1 HOUR	0
Site ID: 45-079-0021 City: Not in a city	County: Richland				Address: 1850 SOUTH CEDAR CREEK ROAD (GADSDEN)							
44201 Ozone	Parts per million	1 0971	2007	047	6658	.237	.088	.084	.084	.0556	1 HOUR	5
Site ID: 45-079-1001 City: Not in a city	County: Richland				Address: 900 CLEMSON ROAD							
44201 Ozone	Parts per million	1 0971	2007	047	5971	.106	.098	.098	.097	.0608	1 HOUR	0
Site ID: 45-083-0009 City: Not in a city	County: Spartanburg				Address: 1556 JOHN DODD ROAD							
44201 Ozone	Parts per million	1 0971	2007	047	5719	.098	.096	.095	.095	.0623	1 HOUR	0
Site ID: 45-087-0001 City: Not in a city	County: Union				Address: 1121 DELTA ROAD (WHITMIRE)							
44201 Ozone	Parts per million	1 0971	2007	047	5679	.091	.086	.086	.086	.0579	1 HOUR	0
Site ID: 45-089-0001 City: Not in a city	County: Williamsburg				Address: 4951 HEMINGWAY HIGHWAY							
44201 Ozone	Parts per million	2 0971	2007	047	5845	.087	.082	.078	.076	.0516	1 HOUR	0
Site ID: 45-091-0006 City: Not in a city	County: York				Address: 2316 CHESTER HIGHWAY (US 321)							
44201 Ozone	Parts per million	1 0971	2007	047	5814	.107	.095	.092	.089	.0570	1 HOUR	0

Note: The * indicates that the mean does not satisfy summary criteria.

QUICKLOOK ALL PARAMETERS

Dec. 5, 2007

METHODS USED IN THIS REPORT

PARAMETER	METHOD CODE	COLLECTION METHOD	ANALYSIS METHOD
44201	047	INSTRUMENTAL	ULTRA VIOLET

Note: The * indicates that the mean does not satisfy summary criteria.

PQAOS USED IN THIS REPORT

PQAO	AGENCY DESCRIPTION
0971	South Carolina Department Health And Environmental Control

Note: The * indicates that the mean does not satisfy summary criteria.

US EPA ARCHIVE DOCUMENT

User ID: DSB

P/A REPORTING ORG SUMMARY

Report Request ID: 487330 Report Code: AMP240 Dec. 5, 2007

GEOGRAPHIC SELECTIONS

Tribal	State	County	Site	Parameter	POC	City	AQCR	UAR	MSA	CMSA	EPA Region	Method	Duration	Begin Date	End Date
	45			44201										2007	2007

SELECTED OPTIONS

Option Type	Option Value
MERGE PDF FILES	YES

SORT ORDER

Order	Column
1	AGENCY_CODE
2	PARAMETER_CODE
3	DATES

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SUBSYSTEM
P/A REPORTING ORG SUMMARY

Dec. 5, 2007

PLEASE NOTE: Data selection based upon geography may result in output including more reporting organizations than you would expect. When geographic selection is used, every reporting organization that has authority to submit data for the selected geography will be included in the output, if those reporting organizations submitted any precision or accuracy data for any monitors anywhere (not just the geographical selection) during the date range specified.

REPORT ORG: 0971 South Carolina Department Health And Environmental Control AGENCY TYPE: F

PARAMETER CODE / DESCRIPTION / REC MODE / AUDIT CLASS	YEAR	Q	**** PRECISION DATA **** # OF	PRECIS	PROB LIM LO	PROB LIM UP	ACCURACY DATA LOC PRI STD	ACC TYPE	AUDIT TYPE	NO AUDITS L1-3	NO AUDITS L4	PROB LIM LO-L1-UP	PROB LIM LO-L2-UP	PROB LIM LO-L3-UP	PROB LIM LO-L4-UP
44201 Ozone CONTINUOUS ANALYTICAL	2007		4	60	- 5.6	11.5	PHOTOMETER (VERIFIED)	PE	AUDIT ONLY BY RO	446	0	- 6.4 8.6	- 5.2 7.2	- 6.6 9.4	
		1	4	7	- 8.9	19.5	PHOTOMETER (VERIFIED)	PE	AUDIT ONLY BY RO	129	0	- 8.8 8.8	- 7.0 7.0	- 8.2 9.5	
		2	4	26	- 5.7	11.2	PHOTOMETER (VERIFIED)	PE	AUDIT ONLY BY RO	212	0	- 5.2 7.9	- 4.6 7.4	- 6.6 9.8	
		3	4	27	- 4.9	9.9	PHOTOMETER (VERIFIED)	PE	AUDIT ONLY BY RO	105	0	- 4.6 8.8	- 3.3 6.5	- 4.7 8.1	

US EPA ARCHIVE DOCUMENT

Enclosure 2

December 2007

FINAL EAC Progress Report Document
South Carolina's Comprehensive Maintenance Plan

D H E C

PROMOTE PROTECT PROSPER

Enclosure 2
South Carolina's Ozone Early Action Compact
December 2007 Progress Report
Comprehensive Maintenance Plan

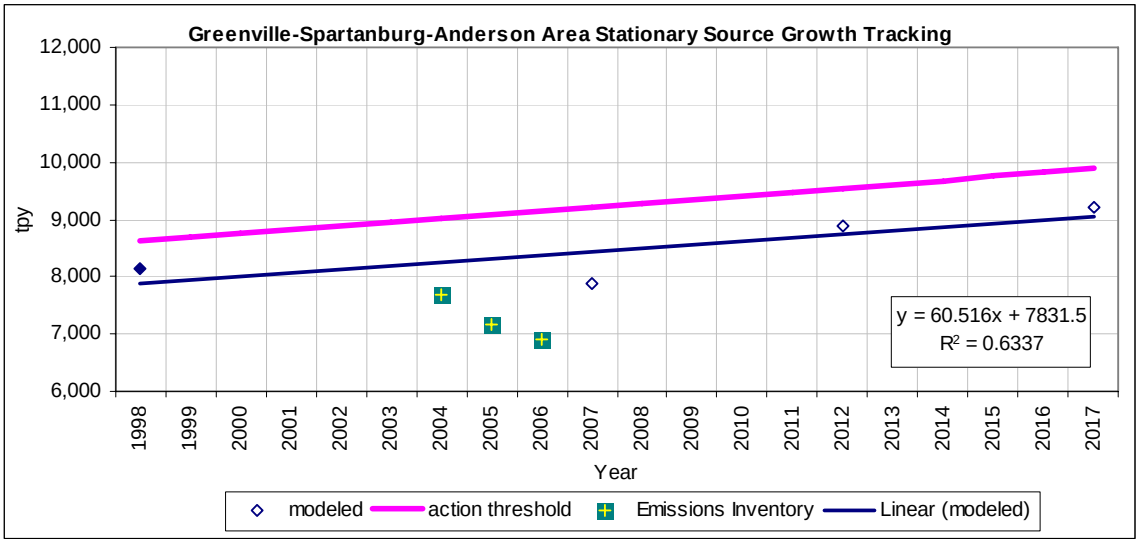
South Carolina has committed to a comprehensive maintenance plan. This commitment far exceeds the maintenance requirements in the EAC protocol. The South Carolina EAC maintenance plan is similar to the requirements for section 175A of the Clean Air Act, none of which are required for EAC areas. A Notice of General Public Interest was published in the *State Register* on May 27, 2005, scheduling a thirty-day public notice and comment period. A public hearing was held on June 30, 2005.

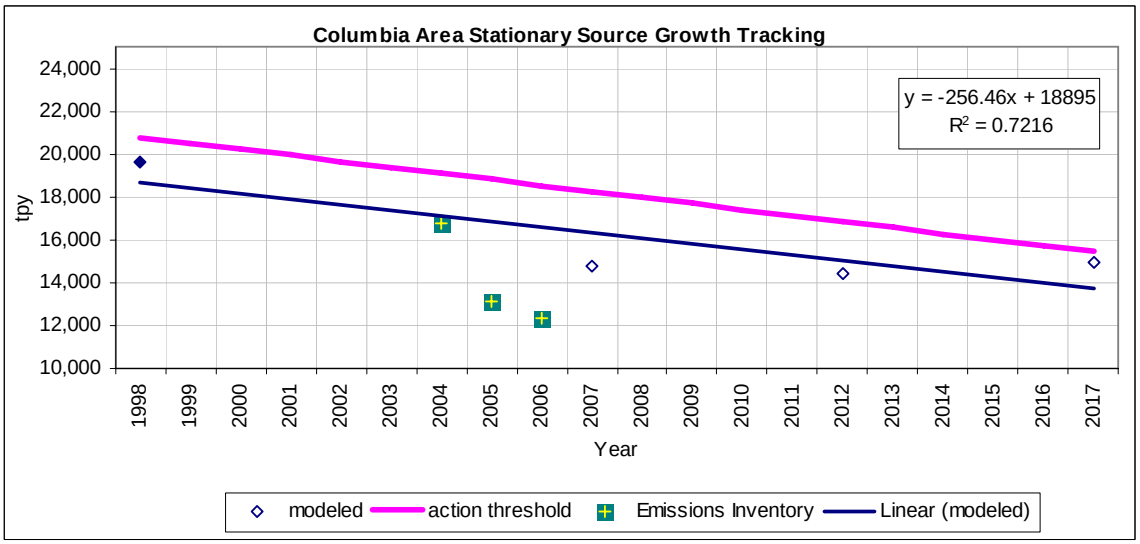
South Carolina's commitment included an annual review of growth (highway mobile and stationary NO_x sources) to ensure emission reduction strategies and growth are adequate as well as identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates. Results of the first annual review, (December 2005) revealed that for both areas designated nonattainment with the effective date deferred, the actual emissions were lower than the forecasted modeled data and the 2004 VMT was well below the action trigger. The second annual review (December 2006) for both deferred areas, revealed the actual emissions remained lower than the forecasted modeled data and the 2005 VMT remained well below the action trigger. The third annual review (December 2007) for both deferred areas, once again revealed that the actual emissions remained lower than the forecasted modeled data and the 2006 VMT remained well below the action trigger.

US EPA ARCHIVE DOCUMENT

Annual Review of Growth

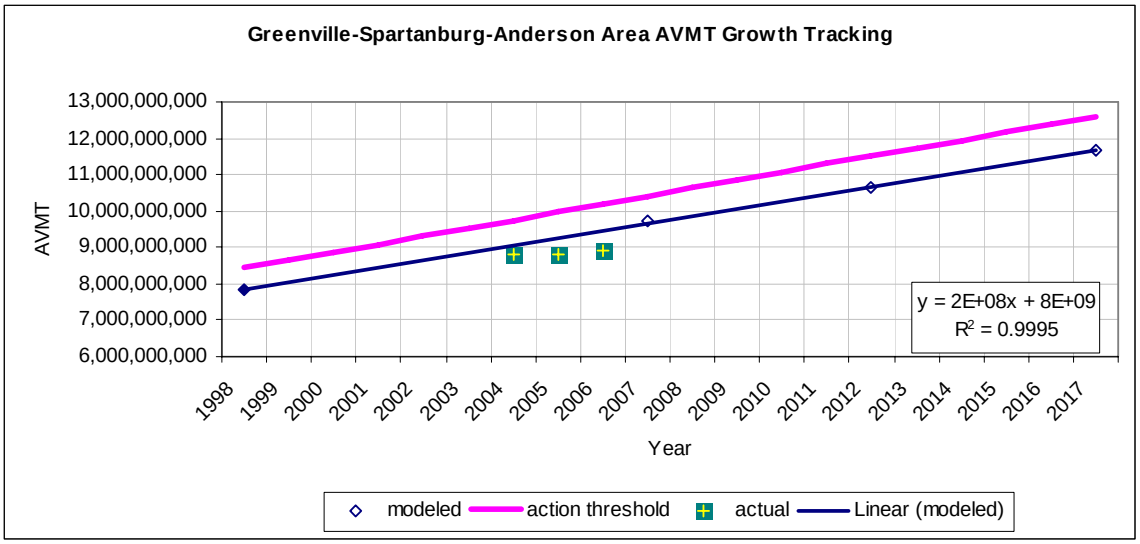
The most recent emissions inventory (2006) was compared to the emissions used in the ozone modeling analysis with a base year of 1998. In order to compare the annual emissions to the assumptions made in the model, a regression equation for each deferred area was developed in order to forecast the emissions for years not modeled. The modeled data, forecasted data, the 10 percent "action level" and actual emissions for 2004, 2005 and 2006 were then plotted in order to determine whether the actual emissions were still comparable to the ozone modeling assumptions. For both deferred areas, the actual emissions were lower than the forecasted modeled data. The ozone modeling analysis could not be run on partial counties, so for the Columbia deferred area, the review of growth took the county wide emissions into account. Therefore, the number for the Columbia deferred area represents a conservative estimate of the emissions.

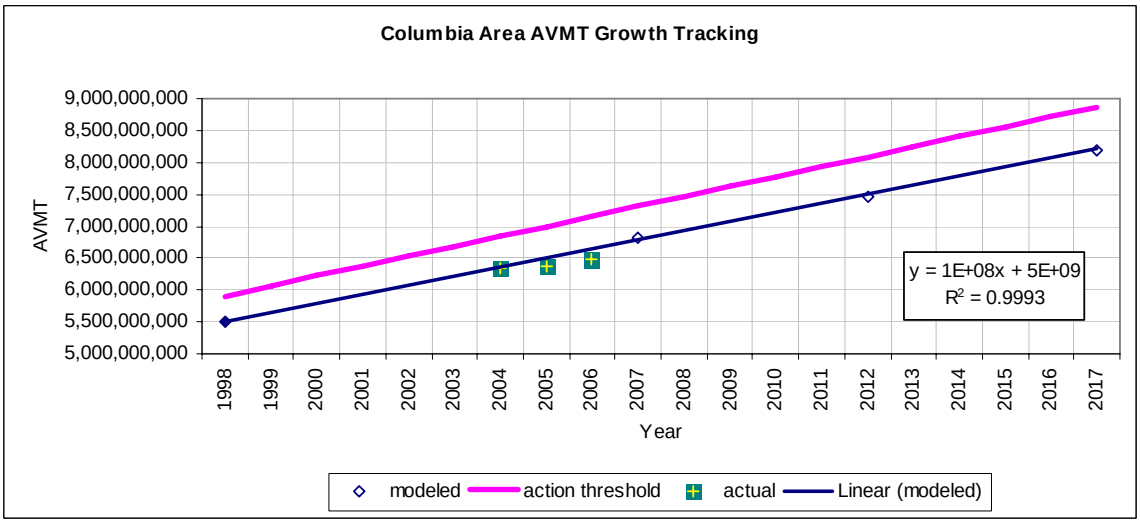




US EPA ARCHIVE DOCUMENT

The most recent annual VMT (2006) was compared with the projected VMT from the ozone modeling analysis with a base year of 1998. The VMT for analysis years 1998, 2007, 2012 and 2017 for Greenville, Spartanburg and Anderson Counties was combined and a trend line established. The actual 2004, 2005 and 2006 VMT for the three-counties was slightly below the trend line and well below the action trigger. Because full county VMT data was used for the ozone modeling analysis, it was necessary to use combined full county data from Richland and Lexington Counties to represent the Columbia nonattainment area. For the Columbia and Greenville deferred areas, the review revealed that the 2004, 2005 and 2006 VMT was slightly below the modeled trend line.





US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Attachment 8

Lower Savannah Area

December 2007
FINAL EAC Progress Reports

D H E C

PROMOTE PROTECT PROSPER

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Lower Savannah, SC (Designated - Attainment)							
DECEMBER 2007 AIKEN COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
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	Complete - Stephen Strohminger was appointed as air quality contact .	Mar-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Support state-wide efforts	Aiken County will support the efforts of SC DHEC regarding statewide emission reduction strategies.	Complete - Supported DHEC regularions: SC 61-62.2 and SC62-62.5	Jun - 04 and Sept - 04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Alternative Fuels	- Switch Aiken County Transit Fleet to Bio-diesel.	Complete	Jun-02	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Alternative Fuels	Make alternative fuels available to the citizens of Aiken County	Waiting on availability in Aiken County	2005	n/a directionally sound	n/a directionally sound	n/a	
Stakeholder Group to Discuss Increasing Local Actions to Reduce PM 2.5	Stakeholders present represented: Department of Health and Environmental Control staff, Kimberly Clark, Milliken Co., Southeastern Clay Co., Bridgestone Firestone SC, Cong. Barrett, Economic Development Partnership, Savannah River Site, Department of Energy (DOE) –NNSA, Edgefield County, DOE-SR, Aiken County, Clemson Extension, Garvin Oil Co., SCE&G, USCA, Three Rivers, and SCANA Corporation.	Meetings have been held and future meetings are planned. The meetings were also covered in an article in the Augusta Chronicle.Group meetings were held on 1/10/2007, 2/22/07, 3/29/07, 5/3/07, and 8/8/07. Technical group meetings were held for the Diesel and Regulatory groups on 7/26/07 and for the Regulatory and Education & Outreach groups on 9/27/07 and the Education and Outreach group on 10/30/07.	1/10/2007, 3/29/07, 5/03/07, 8/8/07, 7/26/07, 9/27/07, 10/30/07	n/a directionally sound	n/a directionally sound	n/a	
Fall Line Clean Air Information Exchange	The purpose of the meeting is to learn more about the the air quality issues impacting the Fall Line metropolitan areas and to explore the value of creating a collaborative organization to address these issues.	Tuesday, October 23, 2007 from 10:00 AM to 2:00 PM at Centerville City Hall, 300 Church Street, Centerville, Georgia. It is being hosted by the Hon. Bubba Edwards, the Mayor of Centerville and current Chairman of the Middle Georgia Clean Air Coalition. Centerville is located in central Georgia adjacent to Warner Robins.	October 23, 2007				
Global Nuclear Energy Partnership	Currently, EnergySolutions and the Savannah River National Laboratory, which is partnered with the Economic Development Partnership of Aiken and Edgefield counties, are working to complete applications by May 30 to be one of the sites selected for the nuclear recycling program.	Under the figures released by DOE January 30th, SRNL's project will receive $468,420 and EnergySolutions will receive $963,151 for its Barnwell project.	2007	n/a directionally sound	n/a directionally sound	n/a	
Open Space Forum	During a series of Tuesday meetings, Carol Harris Mayes and Sara B. Wilson of Mayes/Wilson & Associates recommended that city and county officials, business leaders and landowners work together on a carefully planned network of parks, greenways and conservation easements. The Open Space Forum was sponsored by the City of Aiken, Aiken County, the City of North Augusta, the Greater Aiken Chamber of Commerce and the Aiken County Open Land Trust.	After small-group meetings earlier at the Aiken Municipal Center, about 110 people attended a public discussion at the Washington Center for the Performing Arts. Bill Reynolds, the task force chairman, reported Tuesday that his group had completed a formal definition of the term "open space" and a site evaluation model. The City plans to host a series of public meetings this fall with both City Council and the Planning Commission and expects final approval for a comprehensive open space plan by the end of the year.	January 16, 2007	n/a directionally sound	n/a directionally sound	n/a	
Electronics Recycling Event	Workers with the City of Aiken Public Works and Engineering and workers with Clean Lights Recycling help local residents recycle old electronic equipment.	The City of Aiken was basing the possibility of future electronic recycling days on the outcome of this event. The City was considering holding a similar event every six months and now after the success of this even "that is pretty much secured" according to Sarah Herring with the City of Aiken's Public Works and Engineering department.	January 13, 2007	n/a directionally sound	n/a directionally sound	n/a	
Biodiesel Plant	Farmers & Truckers Biodiesel announced March 13th it will locate its new manufacturing facility in Aiken County. The $1.4 million investment is expected to bring 15 new jobs within six months and an additional 45 jobs within three years.	Production of biodiesel at the Warrenville facility is expected to replace more than 100,000 barrels of imported oil each year.	2007	n/a directionally sound	n/a directionally sound	n/a	
Type II Fuels	Use low-sulfur Type II fuels in all vehicles	When Available in Aiken County	When Available in Aiken County	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
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.	Complete - Air Quality agenda item added to all MPO committee agendas, Cities both held Earth Day activities	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Commuter Choice Program	Promote transit as a mode of transportation to get to the workplace through employer incentives.	Complete - Commuter Choice program distributed to local employers	May-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
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.	When funding becomes available. The Transportation Department announced a total of $2.7 million for eight U.S. cities Jan. 8 to demonstrate how Intelligent Transportation Systems (ITS) can improve access to transit services for older Americans and persons with disabilities. Aiken, SC will receive funds through the Federal Transit Administration to plan and design the demonstration projects, which may be eligible for additional deployment funding.	Master Plan completed May 2002.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Promote Multi-modal Land Use	Revise ordinances to promote bicycle and pedestrian facilities and establish minimum tree planting requirements.	Aiken County ordinance revision started June 2003 (effective upon County Council approval and set effective date). Bicycle and Pedestrian adopted by MPO. Participated in Bicycle and Pedestrian Webcast. Participated in Bicycle and Pedestrian Conferences.	effective upon County Council approval, Plan adopted 2004, Webcast May 06, Conferences 2003, 2004, & 2005	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Open Burning Ordinance	Ban or limit open burning within city limits.	Complete - Aiken and North Augusta adopted burning bans within the city limits	Implemented	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Mid-day Carpooling	Encourage employees to carpool to lunch.	Complete - information distributed to local employers and available at all public meetings	2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Occupancy Sensors	Install workspace occupancy sensors to reduce energy consumption.	Complete - Installed in laocal manufacturing facilities	2003-2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Reflective Surfaces	Paint exposed surfaces of building with reflective paint to reduce energy consumption.	Complete - Installed in laocal manufacturing facilities	2003-2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
High Efficiency Equipment	Purchase Energy Star products when appropriate.	Complete - local government agencies and businesses participate in the program	2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Methane to Gas Project	Kimberly-Clark said it'll use methane gas from a landfill to power a paper products plant in Beech Island, South Carolina. The renewable energy project will capture gas generated from the Three Rivers Regional Landfill and transport it through a 15-mile pipeline to the factory, where it'll be used to make Kleenex facial tissue, Cottonelle and Scott bathroom tissue, Huggies diapers and Pull-Ups training pants.	The project becomes operational in April 2008.	Announced in 10/1/2007, to be completed by April 2008	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Green Habitat for Humanity House	Habitat for Humanity recently unveiled its first "green" house in Aiken County, which was built with environmentally friendly and energy-saving materials.	The house's features include: Framing that offsets both heating and cooling costs, Insulated siding, 24-inch roof overhang to shield the interior, Aluminum sheathing in the attic to repel heat, A solar tube skylight in the bathroom to bring in natural light, Solar panels on the roof to help heat water. The green home was sponsored by Washington Savannah River Co., which donated about $50,000. President Leo Sain said the company has sponsored other Habitat homes and was pleased when the nonprofit organization decided to make this one a green house.	Oct-07				
Euchee Creek Greenway trail	The trail will be about 8 to 10 feet wide and will be accessible for those looking to walk or bike. It would be constructed in phases over a 15- to 20-year span at a cost of about $20 million. County officials also are seeking land acquisitions for future phases of the trail, as well as land donations or public-private partnerships.	Columbia County commissioners approved a master plan for the trail, which eventually will stretch almost 14 miles from Riverside Park at the Savannah River to the old landfill area near Grovetown.	May, 2007	All Pollutants*	Aiken and Edgefield		
SRS/DOE Replace the A-area Power House boilers with Bio-Mass Boiler	Savannah River Site (or SRS) has shown leadership by replacing the A-area Power House boilers with these new boilers. The Bio-Mass Boiler and the associated emissions control device will reduce PM10 emissions by 98% and NOX emissions by 82%. This is a big step towards reaching the Aiken/Augusta area objective of meeting and maintaining EPA's National Ambient Air Quality Standards.	Ground Breaking Ceremony held June 12, 2007		Expected reductions: PM10 - 98% Nox - 82%	Aiken and Edgefield		
SRS/DOE Peak Alert Program	A SRS Peak Alert Program checklist has been issued to all SRS employees during 2005.	Peak alerts are announced during the summer months requesting energy conservation on those Peak Alert checklist items, e.g., adjusting thermostats and turning off lights.	Implemented	All Pollutants*	Aiken, Savannah River Site		
SRS/DOE Tree Planting	Areas of the site are planted with species of trees best suited to grow in the soil being reforested.	Trees are not being planted as part of the air quality program. It is estimated that SRS planted 800,000 trees during 2005.	Implemented	All Pollutants*	Aiken, Savannah River Site		
SRS/DOE Alternative Fuel Boiler	The SRS is currently in the planning stages of a new project to replace the coalfired AArea Powerhouse with a new, smaller plant that would use alternative fuel (wood products/biomass) for the primary boiler and fuel oil for the backup boiler.	The benefits of the project are that it will greatly reduce emissions and meet all Maximum Achievable Control Technology (MACT) requirements that have been mandated by the EPA. Construction of the new plant is scheduled to start in February of 2007, with startup in April of 2008.	To be completed April 2008	All Pollutants*	Aiken, Savannah River Site		
SRS/DOE Alternative Fuel Vehicles	SRS will maintain a relative proportion of AFVs in fleet in FY07 and FY08.	There are currently 521 Alternative Fuel Vehicles (AFV) in the fleet. The total number of vehicles in the fleet is 1055. Four AFVs will be added to the fleet in FY06. There are two E85 stations at SRS. SRS used 292,000 gallons of E85 in 2005.	Implemented	All Pollutants*	Aiken, Savannah River Site		
SRS/DOE Other Energy Efficiency	SRS implemented two energy retrofit programs in 2005.	Boiler controls for the #2 A-Area boiler were upgraded from old pneumatic controls to new state-of-the-art multi-loop digital controls. The installation for the new controls saves approximately $200,000/year. In 2005, SRS implemented an ultra-violet lighting improvement project at the Central Sanitary Waste Treatment Facility that will reduce the number of UV lamps needed. UV lighting is used to disinfect the wastewater stream. The project will be completed in 2006 with savings of over $10,000/year and a simple payback of about 4years.	The project was to be completed in 2006	All Pollutants*	Aiken, Savannah River Site		

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
SRS/DOE Car Pooling	SRS has an extensive car pool network where employees can hook up electronically to find individuals seeking to car pool throughout the Aiken/Augusta area.		Implemented	All Pollutants*	Aiken, Savannah River Site		
SRS/DOE SRS in-house energy conservation program	Implements measures to meet the energy efficiency goals established by the Department of Energy (DOE) and Executive Order.	Most Site computers are leased and the lease contract specifically states that all computers must be Energy Star compliant. In 2005, an initiative was implemented to obtain an Energy Star rating for a 3 story 100,000 square foot building located onsite. First year energy savings are estimated to be $20,497.00 which will be validated in 2006 following the obtainment of 11months of system monitoring data.	Implemented	All Pollutants*	Aiken, Savannah River Site		
SRS/DOE Global Nuclear Energy Partnership	Currently, EnergySolutions and the Savannah River National Laboratory, which is partnered with the Economic Development Partnership of Aiken and Edgefield counties, are working to complete applications by May 30 to be one of the sites selected for the nuclear recycling program.	Under the figures released by DOE January 30th, SRNL's project will receive $468,420 and EnergySolutions will receive $963,151 for its Barnwell project.	2007	All Pollutants*	Aiken and Edgefield		
SRS/DOE Recycled Nuclear Facilities	Savannah River National Laboratory (SRNL), which is partnered with the Economic Development Partnership of Aiken and Edgefield counties will receive a part of the $10 million in Global Nuclear Energy Partnership grants to allow for detailed studies of the plant presented including site and nearby land uses; demographics; ecological and habitat assessment; threatened or endangered species; historical, archaeological and cultural resources; geology and seismology; weather and climate; and regulatory and permitting requirements.	SRNL proposes its program to be located at the Savannah River Site. Under the figures released by DOE in January , SRNL's project will receive $468,420. Currently the Savannah River National Laboratory, which is partnered with the Economic Development Partnership of Aiken and Edgefield counties, is working to complete an application by May 30 to be one of the sites selected for the nuclear recycling program.	May 2007	All Pollutants*	Aiken		
Aiken Electric Cooperative and Santee Cooper announce Green Power Solar Schools program New Ellenton Middle School selected	Aiken Electric Cooperative and Santee Cooper announced the formation of the Green Power Solar Schools program in the cooperative territory, and that New Ellenton Middle School has been selected as the Green Power Solar Schools program participant. The initiative is designed to encourage interest in the environment and demonstrate the feasibility and limitations of renewable power generation. Each school will receive a 2 kilowatt solar power system, which will provide a teaching, research and hands-on demonstration opportunity for students. A focus of the project is the use of a new renewable energy curriculum endorsed by the South Carolina Department of Education. The program continues the Electric Cooperatives of South Carolina's and Santee Cooper's efforts to promote renewable energy, and fulfill Santee Cooper's commitment to reinvest Green Power funds back into renewable resources across South Carolina. Four additional schools, served by Palmetto Electric Cooperative, Berkeley Electric Cooperative, Blue Ridge Electric Cooperative and Laurens Electric Cooperative will also begin the solar schools program the next calendar year.		August 1, 2007	All Pollutants*	Aiken and Edgefield		
W.W. Long Leadership Center	The facility on Wire Road, also known as Camp Long, has implemented a new theme called Energy Work Day. Teams from Clemson University, the Aiken Electric Cooperative and the South Carolina Energy Office will work to make the campus more energy efficient, beginning with new light bulbs.	Compact fluorescent bulbs will save Camp Long more than $7,000 a year, based on eight-hour-a-day usage, according to an audit of the 41 metered buildings on campus. Other energy efficient measures include installing six transformer pads that will raise the heating, ventilation and air conditioning units to minimize the sand and dirt that collect at their base. Caulking and installation of weather-stripping around windows and doors. Caulking for all log cabins on site. Installation of solar water-heating systems at the dining hall. Restoration of a grist mill on site to generate the electricity.	Oct-07				

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

FY 2007

Energy Management Annual Report

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FY 2007 Annual Energy Management Report
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I. Management and Administration

A. Management Tools

1. Awards (Employee Incentive Programs)

The employee suggestion system at Savannah River Site continued its strong tradition of being a model employee incentive program during FY 2007. The IDEAS (Individuals Developing Effective Alternative Solutions) program generated at least 78 employee suggestions during the year that were related to energy savings and water conservation initiatives. Under the IDEAS program, employees are rewarded with a gift certificate for initiating a suggestion when the suggestion becomes an implementable initiative. All IDEAS are screened by the WSRC IDEAS Office. If the IDEA is approved by management, the employee is eligible to receive a special award of up to $3,000. Many of the IDEAS included suggestions on how energy use, water consumption, and vehicle fuels use could be minimized. A special focus was held in January 2007 in the IDEAS program to specifically target energy savings (see Attachments in section V). Many of the energy-related IDEAS included suggestions that the Energy Services Company (ESCO) at SRS (Honeywell Building Solutions) has already evaluated and incorporated into Task Orders. It was very positive to see employees responding with potential energy saving ideas.

2. Performance Evaluations

The SRS (WSRC) Energy Manager was evaluated during FY 2007 as part of the Consolidated Assessment Process, or CAP. The primary purpose of the CAP is to provide an annual assessment of performance that identifies strengths and areas for improvement related to job responsibilities. The emphasis of the CAP is overall employee competency and development, in addition to the completion of time-based objectives. During FY 2007, the WSRC Energy Manager took on individual responsibilities defined in the CAP directly related to the expectations identified within the Energy Management Program.

3. Training and Education

Offsite training dollars were expended for energy management activities in FY 2007. David Wolfe completed the Association of Energy Engineer's "Fundamentals of Business Energy Management" training course in December. He passed the associated exam and received the Business Energy Professional (BEP) accreditation. Also, Mr. Wolfe continued to retain Certified Energy Manager (CEM) and Certified

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Lighting Efficiency Professional (CLEP) accreditation from the Association of Energy Engineers as part of meeting training requirements for federal energy managers. He is also a lifetime member of the Association of Energy Engineers. He participated in Energy Efficiency Working Group teleconference meetings during the course of the year.

Energy awareness was heightened at the Savannah River Site in FY 2007 by the following means:

- A focus on employee IDEAs was incorporated sitewide in January 2007 (see Section V, Attachments)
- Several site and local newspaper articles were distributed to employees at the site as well to the area citizens concerning the installation of a new biomass-fired steam plant in A-Area to be implemented using an existing Energy Savings Performance Contract (see Section V, Attachments)
- An article was distributed to all site employees which discussed the integrated ESPC approach being taken to replace steam plants across the site via ESPCs (not just the A-Area steam plant) (see Section V, Attachments)
- The Department of Energy's Change a Light campaign was well-publicized repeatedly across the site (see Section V, Attachments)
- Site assistance in the construction of a "Green Build" house as part of a local Habitat for Humanity effort was publicized (see Section V, Attachments)
- Several articles were provided in site news and off-site news sources concerning SRS-led research into the use of hydrogen-based energy sources to replace fossil fuels (See Section V, Attachments)
- Various tips or reminders for saving energy, water, or petroleum were included in site-wide announcements (See Section V, Attachments, for examples of this)
- An Earth Day celebration was held that included energy conservation (See Section V, Attachments)
- "Peak Alert" announcements were prepared for periods of peak electrical demand in the summer months to all employees over Area public address systems requesting voluntary energy conservation
- "Peak Alert" flyers were emailed to all employees on the site (See Section V, Attachments)
- "Peak Alert" news articles were emailed to employees site-wide (See Section V, Attachments)
- Posters relating to energy conservation were placed in various locations throughout the site

In FY 2007, national scientists from the Savannah River National Laboratory worked together with researchers from industry and academia to further develop hydrogen as a

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practical power source for automobiles. The Center for Hydrogen Research is the third star of the automotive constellation in the state's high-technology universe, joining the National Science Foundation Center for Fuel Cell Excellence at the University of South Carolina and the International Center for Automotive Research at Clemson University. Section V, Attachments, contains numerous articles related to hydrogen efforts at SRS.

Additionally (with respect to training and education), all operations at the Savannah River Site are concerned with increasing Pollution Prevention (P2) awareness and the implementation of waste management and resource conservation improvement opportunities. Pollution Prevention is integral to the SRS Environmental Management Policy, Environmental Management System (EMS), and Integrated Safety Management System (ISMS). The Waste Minimization/Pollution Prevention Program provides SRS a safe, effective, and environmentally responsible strategy to implement specific waste reduction techniques based on current and projected information on waste generation, waste characterization, and ultimate waste disposal costs. SRS embraces pollution prevention as a primary strategy to operate in a compliant, cost-effective manner that protects the environment and the safety and health of employees and the public. The SRS P2 Program establishes the environmental management preference of source reducti on and recycling over treatment, storage, and disposal and the preferred use of energy efficient and resource conservative practices and operations.

The SRS Pollution Prevention Program is mature and well integrated with operations and cleanup activities. Accomplishments in FY 2007 include:

- SRS documented 34 P2 projects resulting in a DOE-SR approved annualized avoidance of 1,736 cubic meters of hazardous and radioactive waste. WSRC exceeded its FY 2007 P2 Program waste avoidance performance goal of 995 cubic meters by over 80%. Annual cost avoidance resulting from the 34 documented P2 projects is $22.7 million. All required Site waste generators demonstrated active participation in the P2 Program through documented pollution avoidance and/or direct mission support for site recycling.

- SRS has comprehensive industrial and office waste recycle programs that recycled over 2,380 metric tons of office and industrial waste, 44% of these being combined waste streams.

- DOE-HQ announced that Savannah River won five National DOE P2 Awards. These winning awards were forwarded to next tier competiti ons with one nomination winning a P2 STAR Honorable Mention Award. Winning nominations were: *SRS ALARA Center – Models EMS Excellence, SRS F&H Area Barrier Wall Project, SRS Chemical Management Center, SRS TRU Waste Remediation, and Tritium Operations Reduces Glove Box Waste*. Based on the STAR award nomination, a

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slide presentation discussing SRS chemical management was presented to the DOE Field Office Managers. The SRS P2 Program continues its legacy of being a top Program in the DOE complex.

- SRS completed site testing of waste refuse fuel program and presented the program results and status to the Citizen Advisory Board (CAB). The CAB agreed to close Recommendation 180, "Burning Paper Pellet Update" and for property transfer of the waste extruder to the on-site Three Rivers Landfill to support expanded utilization of the equipment. Program implementation at the landfill is scheduled for the first quarter of CY 2008

The Savannah River Site's educational awareness and community outreach program provides education related to the Savannah River Site and the programs the site supports. The P2 Program actively participates by highlighting energy and waste savings and conservation principals.

All site employees and contractors are required to take training that includes P2 principles as a condition of employment at the site.

The P2 Program also promotes P2 concepts at special events, through the news, and by e-mails to site employees. The SRS Pollution Prevention Team participated in and hosted various types of events to spread the "Prevent Pollution" message in the two state areas of South Carolina and Georgia. Conservation and Pollution Prevention were the two main topics for events held during FY 2007. Supported events included:

- Provided handout items promoting pollution prevention to the SRS Safety Conference Family Night event.
- Provided financial and voluntary support for the North Augusta Kids Earth Day that hosted over 30 separate exhibits to educate and share with the over 2,000 attendees.
- Provided financial and voluntary support for the Environmental Science Educator's Cooperative (ESEC). WSRC P2 Program sponsored a graded session at the 2007 ECOMEET. The ECOMEET is an environmental competition for middle school students. This year's event was held at the Watson Brown Foundation Center with 26 teams participating. In addition, the P2 Program supported the ESEC Electronics Recycle Day, Environmental Teachers Workshop, and Teacher of the Year Awards that were all held in Augusta, Georgia.
- Hosted the Environmental Science Education Cooperative (ESEC) display for the National Science Center's Education Expo Workshop.

As the Site continues to face loss of funds and associated reductions in staff, the P2 Team

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is challenged to continue to implement pollution reduction projects and to promote awareness and education of energy and waste savings opportunities along with the conservation, reuse and recycling of resources. SRS strives to continue to be a vital resource to DOE and the community for its Pollution Prevention program.

4. Showcase Facilities

There were no showcase facilities to report during FY 2007. SRS is considering the possibility of requesting showcase facility status in the future for the new Biomass Cogeneration Facility which will be replacing the aging 484-D powerhouse. This ESPC project is scheduled to begin construction in late 2008.

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II. Energy Efficiency Performance

A. Energy Intensity Reduction Performance

1. Goal Subject Buildings

The Energy Policy Act of 2005 (EPACT '05) establishes new annual energy reduction goals for fiscal years 2006 through 2015. An annual energy reduction goal of 2% is mandated. Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management", which was approved in January 2007, increased this reduction requirement from 2% to 3% annually, or 30% by the end of FY 2015. These annual goals measure performance against a 2003 base year (FY). This is a change from the previous baseline year of FY 1985 for the buildings category and FY 1990 for the Industrial (previously Metered Process) category. With the additional requirements brought forth by EPACT and E.O. 13423, the following comparison table is provided to show energy reduction performance in FY 2007 versus the new baseline of FY 2003. It also combines the previous Buildings and Industrial categories into a grand total, referred to as Goal Subject Buildings (as shown below). Attachment A, "FY 2007 Annual Energy Management Data Report", displays commodity specific information for FY 2007 such as actual megawatt hours and gallons of fuel oil used, along with the associated costs. Note that these figures do not include 484-D steam and electricity generation (and, consequently, coal consumption) as that facility is separately reported (site 6018).

For FY 2007, the Savannah River Site decreased energy consumption intensity (BTUs per gross square foot) by 17.2% compared to the baseline year of FY 2003. This reduction to date is more than half of the total reduction required by FY 2015. The site maintained a cumulative reduction in FY 2007 which continues to far exceed the Executive Order 13423 and DOE Order 430.2 goal.

Goal Subject Buildings (Combined Buildings and Metered Process)

Fiscal Year	Electricity Mbtu/Sqft.	Fuel Oil Mbtu/Sqft.	LPG Mbtu/Sqft.	Coal Mbtu/Sqft.	Steam Mbtu/Sqft.	Total Mbtu/Sqft.
2007	0.1450	0.0073	0.0000	0.0554	0.1299	0.3376
2003	0.1759	0.0156	0.0000	0.0375	0.1786	0.4076
% Diff	-17.6%	-52.9%	0.1%	47.5%	-27.3%	**-17.2%**

The following chart compares FY 2007 energy use versus FY 2006. The site energy use decreased by 8.9% from FY 2006 to FY 2007.

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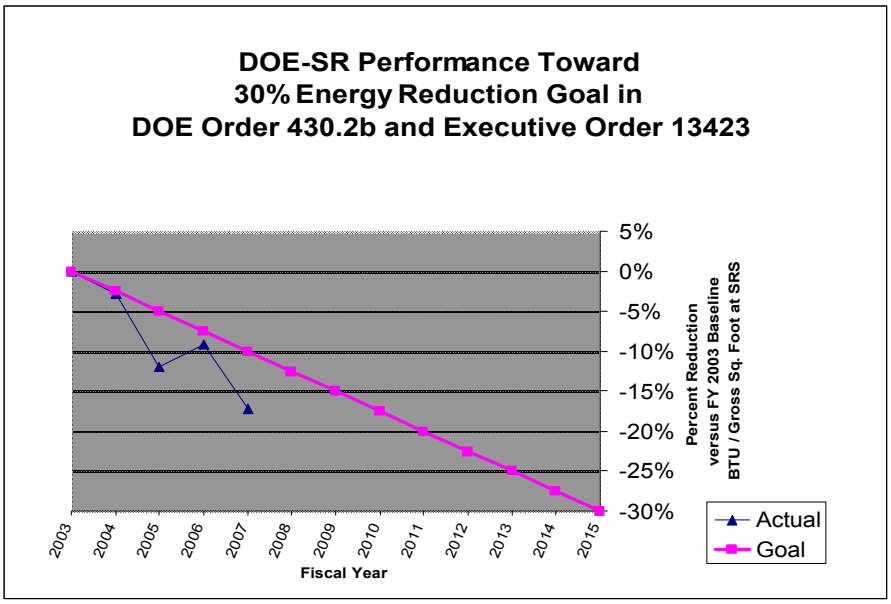
Goal Subject Buildings (Combined Buildings and Metered Process)

Fiscal Year	Electricity Mbtu/Sqft.	Fuel Oil Mbtu/Sqft.	LPG Mbtu/Sqft.	Coal Mbtu/Sqft.	Steam Mbtu/Sqft.	Total Mbtu/Sqft.
2007	0.1450	0.0073	0.0000	0.0554	0.1299	0.3376
2006	0.1487	0.0086	0.0000	0.0589	0.1542	0.3704
% Diff	-2.5%	-15.1%	167.6%	-6.0%	-15.8%	**-8.9%**

The following graph shows the annual energy intensity reduction performance from FY 2003 through FY 2007.



During FY 2007, site energy consumption in the previous Buildings category (E.O. 13123 and DOE Order 430.2a) decreased 81.2% as compared to the previous baseline year of FY 1985. The site maintained a cumulative reduction in FY 2007 which continues to show the positive trend at the site; namely, energy use is reducing versus increasing. The following graph and table summarize this information. It is provided for the reader to view long-term energy reduction performance.

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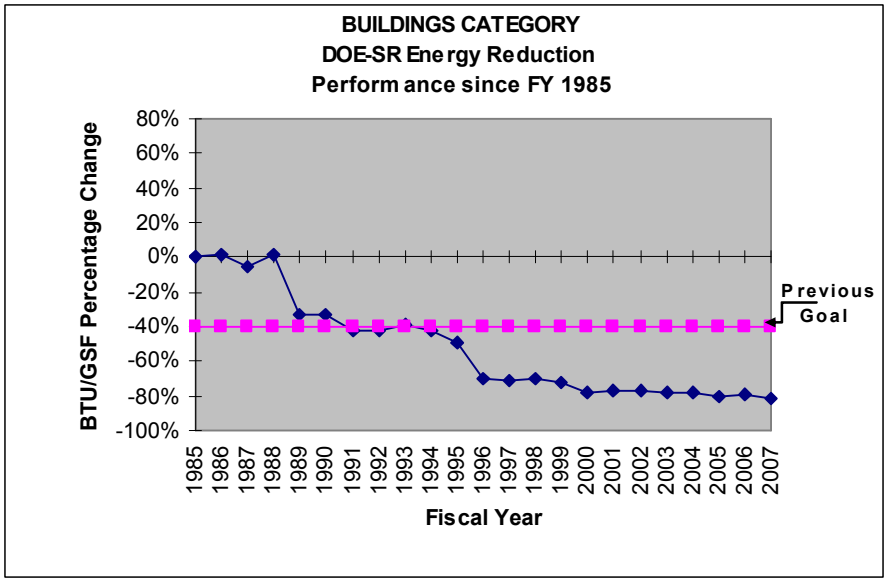

Buildings

Fiscal Year	Electricity Mbtu/Sqft.	Fuel Oil Mbtu/Sqft.	LPG Mbtu/Sqft.	Coal Mbtu/Sqft.	Steam Mbtu/Sqft.	Total Mbtu/Sqft.
2007	0.1507	0.0040	0.000016	0.0619	0.1453	0.3619
1985	0.1621	0.0331	0.0000	1.7329	0.0000	1.9281
% Diff	-7.0%	-88.0%	0.0%	-96.4%	0.0%	**-81.2%**

Fiscal Year	Electricity Mbtu/Sqft.	Fuel Oil Mbtu/Sqft.	LPG Mbtu/Sqft.	Coal Mbtu/Sqft.	Steam Mbtu/Sqft.	Total Mbtu/Sqft.
2007	0.1507	0.0040	0.000016	0.0619	0.1453	0.3619
2006	0.1584	0.0040	0.000005	0.0656	0.1718	0.3999
% Diff	-4.9%	-0.8%	212.7%	-5.6%	-15.4%	**-9.5%**

During FY 2007, site energy consumption in the previous Industrial Facilities category (E.O. 13123 and DOE Order 430.2a) (previously Metered Process) decreased 78% as compared to the baseline year of FY 1990. Below is a graph of site energy performance since FY 1990 for this previous category, along with a chart that details the site's energy use by fuel category. The three facilities currently included in this category are: 681-3G (River Water Pumphouse @ 12,843 square feet), 105-K (Reactor building @ 385,010 square feet), and 105-L (Reactor building @ 385,010 square feet). The following graph and table are provided for the reader to view long-term energy reduction performance in this previous category.

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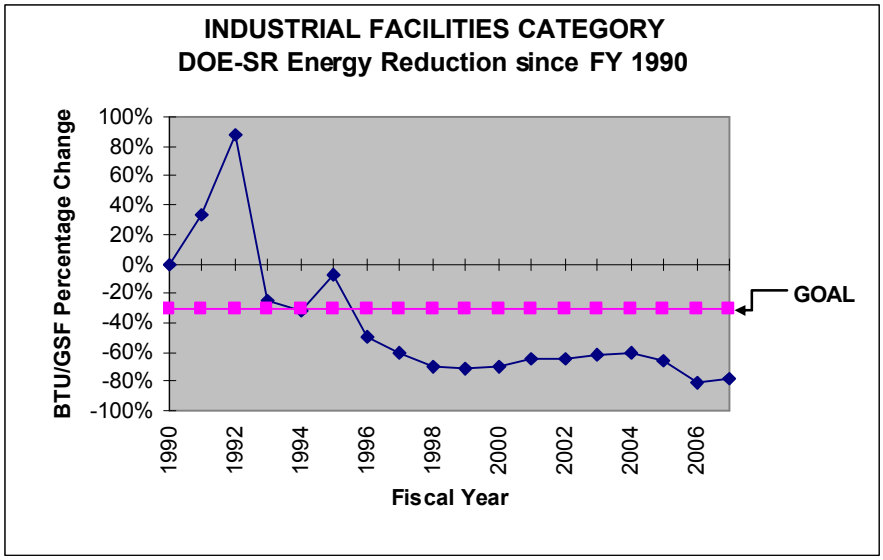

Metered Process

Fiscal Year	Electricity Mbtu/Sqft.	Fuel Oil Mbtu/Sqft.	LPG Mbtu/Sqft.	Coal Mbtu/Sqft.	Steam Mbtu/Sqft.	Total Mbtu/Sqft.
2007	0.0973	0.0356	0.0000	0.0000	0.0000	0.1329
1990	0.2590	0.0151	0.0022	0.3270	0.0000	0.6033
% Diff	-62.4%	136.1%	-98.8%	-100.0%	0.0%	**-78.0%**

Fiscal Year	Electricity Mbtu/Sqft.	Fuel Oil Mbtu/Sqft.	LPG Mbtu/Sqft.	Coal Mbtu/Sqft.	Steam Mbtu/Sqft.	Total Mbtu/Sqft.
2007	0.0973	0.0356	0.0000	0.0000	0.0000	0.1329
2006	0.0638	0.0491	0.0000	0.0000	0.0000	0.1129
% Diff	52.6%	0.0%	50.0%	0.0%	0.0%	**17.7%**

In FY 2006, site data showed that the energy consumption had drastically increased. The primary reason for this significant increase was that operation of the 484-D steam plant / powerhouse had been transferred from a local utility to the site in February 2006. Since 1995, energy consumption associated with this plant had been in the form of purchased steam. Beginning February 1, 2006, the energy consumption began to be in the form of coal to provide steam. This resulted in the efficiency loss of 484-D being included in the consumption figures for coal, whereas the BTUs associated with the purchased steam did not include the energy conversion (i.e., a source versus site issue). This significantly increased the apparent consumption when compared to the baseline year of FY 2003. Note that the electrical generation produced from the coal at 484-D had not been included as a commodity, as the energy used to produce the electricity was included in

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the coal consumption figures. As a result, a separate reporting site (6018) was initiated for this facility to resolve the source versus site use issue. EMS4 data was modified in FY 2006 for the Savannah River Site entries, and data specific to the 484-D plant was entered into site 6018. The FY 2007 figures followed this format.

The following is a summary of the 484-D (site 6018) data entered into the EMS4 HQ energy use database for FY 2007:

SITE 6018 (484-D Powerhouse)

		Electricity Exported (MWH)	Pulverized Coal Consumed (Tons)	Steam Exported (Billion BTU)
	1st Qtr	-29,538	38,603	239.940
	2nd Qtr	-28,284	39,874	291.191
	3rd Qtr	-30,983	36,576	238.205
	4th Qtr	-28,637	39,707	187.641
FY 2007	**Totals**	**-117,442**	**154,760**	**956.977**

2. Excluded Facilities

The Savannah River Site has excluded no facilities as part of energy use reporting. All facilities labeled in the FIMS database as energy consuming, whether formerly in the buildings or industrial categories (formerly Metered Process), have been included when totalizing energy intensity.

3. Non-Fleet Vehicle and Equipment Fuel Use

During FY 2007, a 10.1% decrease in Vehicle and Equipment fuel use (for non-fleet vehicles and site equipment only) was realized in comparison with FY 2006. This was due primarily to the significant decrease in use of diesel fuel associated with site D&D efforts which were greatly reduced from FY 2006.

Reportable vehicle use in FY 2007 has been limited to equipment fuel consumption and cost only. The passenger fleet motor vehicle fuel consumption and cost is reported through the Federal Automotive Statistical Tool (FAST). FAST eliminates the need to report fuel consumption data for fleet motor vehicles to FEMP on the Data Report.

Savannah River equipment consumption is shown in the table below.

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Non-Fleet Vehicle & Equipment Fuel Use

Fiscal Year	Gasoline Gbtu	Diesel Gbtu	Jet Fuel Gbtu	Total Gbtu
2007	2.59	51.27	5.11	58.97
2006	2.57	57.55	5.44	65.57
% Diff	0.6%	-10.9%	-6.1%	**-10.1%**

On a sitewide basis, SRS has purchased alternative fueled vehicles (AFV) using ethanol E85 fuel for over 75% of it qualified light-duty fleet vehicles. SRS uses an onsite, automated fuel dispensing system that allows only E85 fuel for AFVs. This achieves a 100% usage of alternative fuel in site AFVs, meeting the Executive Order 13423 goal. In FY 2007, SRS consumed about 300,000 gallons of the clean-burning E85 fuel reducing petroleum use. The site used more ethanol than gasoline in both FY 2006 and FY 2007.

In comparison to the baseline year of FY 2005, SRS has reduced petroleum usage by 19.8%. This already exceeds the Executive Order 13423 goals. The site will continue to realize additional petroleum savings, however, as more ethanol is utilized in subsequent years.

B. Renewable Energy

1. Self-generated renewable energy

Task Order 4 of the site-specific Energy Savings Performance Contract (approved in November 2006) with Honeywell Building Solutions, when complete, will utilize renewable energy in the form of biomass (wood) for use in the new A-Area steam plant for steam production to the Savannah River National Laboratory. It is estimated as part of this ESPC task that nearly 27,000 tons per year of wood will be required to meet the steam demand. It is anticipated that the majority of this wood supply will come directly from Forest Service operations at SRS.

In addition, the site is currently in the DES (Detailed Energy Study) phase of another ESPC project which will be the largest ESPC project ever implemented at a DOE facility. Coupled with the current effort to replace 784-A as cited above, the site will be installing four new wood-fired biomass plants (renewable energy) as part of an integrated plant to replace aging steam infrastructure and meet goals established by congress as part of the Energy Policy Act of 2005 and new Executive Order 13423. Biomass is a renewable fuel source, whereas the current plants utilize coal and fuel oil. Minimizing

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the use of petroleum fuel sources is a priority, and maximizing the use of renewable energy sources is a greater priority.

The Savannah River Site covers an area of over 300 square miles. The Site's use of other self-generated renewable energy in FY 2007 was relegated to remote locations across the Site where utilities were not available. Small photovoltaic arrays were used in applications such as traffic signals, railroad crossings, and environmental monitoring stations.

2. Purchased renewable energy

The Savannah River Site procured 100% of its purchased site electrical consumption from South Carolina Electric and Gas (SCE&G) during FY 2007. Power is continuously wheeled through the SCE&G distribution system.

During FY 2007, SCE&G use of hydroelectric plants accounted for approximately 3.8% of the company's energy production. The hydro-electric plants are usually utilized during peaks and scheduled maintenance periods.

SRS will investigate the purchase of renewable energy credits in FY 2008 to meet requirements in the Energy Policy Act and Executive Order 13423. This would ensure that greater than 3% of the electricity purchases are from renewable/green energy sources.

C. Petroleum

Through FY 2007, the Savannah River Site has realized a 54.3% decrease in fuel oil since FY 2003. These figures are for EPACT 2005 Goal Subject Buildings, which includes all facilities on the site which utilize fuel oil. The site realized a significant reduction in fuel oil use in FY 2006 due to implementation of the Presidential Energy and Fuel Reduction Initiative, and that trend remained throughout FY 2007. Implementation was accomplished primarily by reducing the hours of operation of the K-Area package boilers. Fuel oil use has been significantly decreased in the Separations Areas since FY 2003 as well.

Petroleum - Goal Subject Buildings

Fiscal Year	Fuel Oil Thou. Gals.	Fuel Oil Mbtu/Sqft.
2007	390	0.0073
2003	853	0.0156
% Diff	**-54.3%**	**-52.9%**

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D. Water Conservation

As shown below, water consumption at the Savannah River Site decreased 22.95% in FY 2007 as compared to the base year of FY 2000. This is a significant reduction. The baseline year, however, is changing from FY 2000 to FY 2007 as directed in Executive Order 13423. Future reporting will be against the FY 2007 baseline, which has unfortunately already been considerably reduced over the course of time.

Fiscal Year	Million Gallons
2007	326.4
2000	423.6
% Diff	-22.95%

WSRC and DOE-SR continued a number of water conservation activities in FY 2007. The site Comprehensive Water Management Plan continued to be used as the basis for programmatic activity. This Plan was prepared by the WSRC Site Utilities Department (Infrastructure Operations) and issued as final in FY 2001. The water conservation program at the Savannah River Site was enhanced through the continued implementation of five Best Management Practices (BMPs) as specified by FEMP guidance documents. The five BMPs are:

BMP #1 – Public Information and Education Programs
BMP #2 – Distribution System Leak Detection and Repair
BMP #3 – Water Efficient Landscaping
BMP #4 – Toilets and Urinals
BMP #5 – Faucets and Showerheads

A list of action items to address implementation of the BMPs was jointly developed with DOE-SR. All commitments related to BMPs #1, #2, and #3 were completed in FY 2001; however, additional efforts involving BMPs #1 and #2 continued into subsequent fiscal years. Water consumption is detailed each day in a routine morning report. The daily consumption is then recorded onto a spreadsheet and monitored monthly for indications of a significant leak. Employees have been encouraged through sitewide communications to report leaks.

For BMPs #4 and #5, faucets, showerheads, toilets, and urinals continued to be replaced with new low-flow models when replacement is required. All replacements of these devices are now accomplished using efficient models.

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E. Metering of Electricity Use

EPACT ’05, Section 103, requires all Federal agencies to install metering and advanced metering where found to be cost-effective, according to guidelines developed by DOE. Agencies are required to install standard or advanced meters at all Federal buildings to the maximum extent practicable by October 1, 2012.

The Savannah River Site currently operates and utilizes an extensive metering system comprised of over 190 electrical meters that are read monthly. These are standard meters, and the meters are read manually by a meter reader each month. Many of these meters are not building-specific but rather are associated with transformers which may serve various loads (i.e., more than just a specific facility), and many are associated with busses/feeders in substations which are supplying specific transformers.

The Site has an extensive and thorough cost distribution system in place whereby customers/organizations are billed for their electricity use. The primary purpose of the electrical meters is to provide the needed data for the sitewide billing. The site system is referred to as the Power Quantity & Cost Distribution System, or PQCD. The meter data is collected in a central location where it is evaluated by a financial analyst who validates both the incoming purchased power utility contract figures as well as using the cost allocation system (PQCD) to ensure the various organizations across the site are billed appropriately for their electrical consumption.

SRS prepared a Metering Plan in FY 2007 and submitted it to DOE-HQ. In summary, a total of 27 new advanced meters are recommended for installation. A completion date of May 30, 2010 has been established for meters associated with this plan. This completion date assumes provision of funding for design and installation of the new meters. It also allows sufficient time for design, procurement, and installation activities, and, in particular, allows sufficient time for modifications to be made to this plan in the event of mission or priority changes.

F. Federal Building Energy Efficiency Standards

EPACT 2005, Section 109, requires that new Federal buildings be designed to achieve energy consumption levels that are at least 30 percent below the levels established in the ASHRAE Standard or the International Energy Conservation Code, as appropriate, if life-cycle cost-effective. The prevailing private sector standard referenced is ANSI/ASHRAE/IESNA Standard 90.1-2004. This standard has been incorporated by reference into the new Federal standards. The new standards may be found in 10 Code of Federal Regulations (CFR) Part 433 for commercial buildings.

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Much progress was made at the site in FY 2007 with regard to incorporating federal building energy efficiency standards. SRS project planning procedures already contain Sustainable Design instruction, along with previous procedures involving Energy Conservation Reporting requirements. For example, the Tritium Extraction Facility is recognized as a showcase project for the DOE complex in this regard. The site's Standards Requirements Identification Document (S/RID), and in particular the Engineering Program Functional Area, was revised in August 2007 to incorporate requirements for federal building performance standards. WSRC is currently working to revise applicable design-related procedures. There has been great priority placed on this subject within the site engineering standards organization, and much discussion has taken place to ensure proper application of new requirements.

Because SRS is primarily an Environmental Management site and has been in a clean-up posture, the site has shifted its strategic direction and resources through time from nuclear materials production to cleanup. An integral part of the cleanup mission has been decommissioning of facilities constructed in support of nuclear materials production as well as those facilities constructed in support of cleanup. There has not been substantial new construction of facilities; rather, buildings have been deactivated and removed. Exceptions to this are new process facilities such as MOX, PDCF, and the Waste Solidification Building. These projects have been in process for many years and designs have been ongoing well before FY 2007. Consequently, there were no designs in FY 2007 which would invoke new requirements.

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III. Implementation Highlights

A. Various Programmatic Strategies / Life-Cycle Cost Analysis

SRS continued utilization of various programmatic strategies during FY 2007 to ensure federal legislation priorities are addressed.

With the approval of Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management", which was approved in January 2007, new requirements were put in place at the site. Requirements specific to the Energy Management program include:

- Improve energy efficiency and reduce greenhouse gas emissions (by reducing energy intensity by 3% annually or 30% by the end of FY 2015)
- Consume renewable energy (by requiring that at least 50% of the required renewable energy consumed comes from renewable sources, and the implementation of renewable energy sources to the extent feasible)
- Reduce Water Consumption (by reducing water consumption intensity by 2% annually through FY 2015)
- Acquire environmentally preferable goods (by expanding purchases of environmentally-sound goods and Energy Star products)
- Construct or renovate buildings in accordance with sustainability standards
- Reduce consumption of fleet petroleum products by 2% annually through FY 2015 and increase non-petroleum based fuel consumption by 10% annually
- Purchase energy efficient electronics (by purchasing products which meet Electronic Product Environmental Assessment Tool standards)

SRS established a cross-functional team of WSRC personnel in July 2007 to evaluate the impacts associated with implementation of this Executive Order. This team consisted of personnel from the following program areas on-site: Energy Management, Procurement, Toxic Chemicals, Fleet Management, Environmental, Pollution Prevention, and Engineering Standards. This team performed a gap analysis to identify potential impacts to site programs and contracts. Another objective was to identify any policy or resource issues that require resolution prior to declaring full compliance. Baselines were established for the target resource areas addressed in the Order, and the gap analysis was performed to determine the status and ability of existing WSRC programs and systems to meet requirements.

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In summary, it was determined that the E.O. goals have been met in one subject area, fleet management, and that partial attainment can be declared in the other areas of the Order. Recommended compliance actions for the various requirements were developed and transmitted to management since additional resources, systems, or strategies are required for the identification and designation of certain objectives into the site budgetary process. Establishment of this group demonstrated the priority being placed on these activities at the site. The status of energy Management programmatic activities are discussed weekly at the WSRC Vice President level.

In addition to this gap analysis team, the site chartered a new Energy Management Council in FY 2007. This Council, consisting of members from DOE & WSRC Energy Management, Procurement, Utilities, Engineering Standards, Facility Planning (FIMS coordinator), Project Management, Electrical Operations, and Facility Operations meets on an as-needed basis to ensure site issues and policy objectives are satisfactorily being achieved.

In FY 2007, SRS began to downscale an aggressive deactivation and decommissioning (D&D) program in various site facilities. The intent of this program has been the accelerated environmental clean-up of the site. The scope of this effort included the decommissioning of 25 facilities in FY 2007 (a total of nearly 122,000 square feet). Many of these were energy-consuming facilities. The square footage figure used in the section IV Data Report reflects the majority of the changes made in the D&D program through FY 2007. The FIMS database was also previously modified following two internal audits to ensure that the system is up-to-date following many changes over recent years. The shutdown and physical removal of site facilities as part of the accelerated D&D program was certainly evidence of life cycle cost analysis at work at SRS.

The SRS 115 kV transmission system is operated and maintained by South Carolina Electric & Gas (SCE&G). The system was evaluated by SRS personnel to determine the feasibility of removing redundant 115kV transmission system lines and transformers from service that no longer serve critical processes designed with redundant electrical feeds during the cold war era. A load flow study was conducted to verify that the system would not be impacted by the proposed change under several scenarios. A scope reduction document was prepared to obtain concurrence from WSRC and DOE. Redundant transformers are currently being removed from service and will achieve energy savings of $242,000 per year. This includes the site's P-Area which is being dismantled and removed, including the transformers which no longer will have energy losses due to magnetizing currents.

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In FY 2007, site personnel continued to investigate and pursuit a number of initiatives that are focused on optimizing the performance of the 484-D cogeneration facility. These initiatives collectively represent a significant opportunity to more cost effectively utilize the steam plant and the site purchased power contract to meet site energy needs. This effort, referred to as "D-Area Performance Optimization", includes:

-Developing and implementing guidance for oxygen control
-Performing a boiler control study to optimize boiler control
-Assessing mill performance and determining potential improvements
-Evaluating burner performance and developing recommendations
-Optimizing electrical energy generation/costs
-Developing a load prediction tool & dispatching guidance

As part of the boiler control improvements, significant upgrades were designed to improve plant operating efficiency and to lower the overall cost. A number of pneumatic controllers and positioners are being replaced with electronic controllers and positioners. These replacements allow the powerhouse to operate with a decrease in coal consumption of between 3% and 10%. Systems being retrofitted include the induced draft fan and forced draft fan dampers, the coal feeders, the exhaust dampers, and the hot air dampers. Replacement of all the pneumatic controllers for a particular system is necessitated (four total boilers) by the interoperability of each boiler subsystem within the boiler control scheme. The combined simple payback of these improvements is under three years.

Through FY 2007, electronic controls have been installed in one of the four D-Area boilers and will contribute to the overall increase in powerhouse efficiency in FY 2008. The remaining three boilers should have the more efficient electronic controls installed and operational by the end of FY 2008.

The purchased power contract with SCE&G has maximum and minimum demand limits. While the site can purchase electricity above or below these limits, higher costs would be incurred. Consequently, site personnel developed a model to predict on a weekly basis what the site load will be, and instruction is provided to the plant control room and dispatchers on what specific generation levels should be in six hour increments for the next week. This allows for maximum cost savings between operation of the plant and purchased power.

SRS continued the longstanding and successful Peak Alert program during FY 2007. This program utilizes an electrical demand prediction algorithm to forecast

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if the site electrical peak will reach a specified level. If so, Peak Alert announcements are made throughout the entire site stating that Peak Alert is being implemented. Personnel are asked to reduce lighting, increase thermostat settings, close outside doors, windows, and blinds, and turn off lights and equipment in unoccupied offices and other work spaces. This program has been effective in reducing utility costs through the years. Demand has been reduced by as much as 10% on a hot day.

The WSRC Water Operations group operated eight 4160V and 480V electric fire water pumps during non-peak times to reduce peak demand. This is an example of how the site works together to make Peak Alert effective.

SRS also has an approved Energy Curtailment Plan in place. This Plan defines the appropriate response measures for declared energy emergencies involving the Savannah River Site. Should DOE-HQ provide direction that curtailment of a specific fuel type is necessary, the Energy Curtailment Plan calls for a site team to be formed at that point in time. This team would evaluate quarterly energy consumption data for the past four quarters by user and would subsequently make recommendations on how energy would be reduced. This Plan provides much flexibility for future site changes and energy loads since decisions would be made at the time of the emergency based on current usage by fuel type.

Startup of the K-Area fuel oil boiler used for building heat in K and L Areas was once again delayed this year, resulting in a sizeable energy reduction. Fuel oil use for this boiler was 277,000 gallons in FY 2006 versus 201,000 gallons in FY 2007, a significant savings of 76,000 gallons (approximately $130,000).

The H-Area service water storage tank and associated pumps were shutdown in FY 2007, which was a notable water savings accomplishment. Continuous overflow is now redirected to a cooling tower for make-up versus being wasted to an outfall. Significant energy savings were also realized by decommissioning the associated pumps.

LCC analyses were also used to determine which Best Management Practices would be pursued as part of the Comprehensive Water Management Plan.

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B. Capital Improvement Projects - Energy Savings Performance Contracts

SRS continued pursuit of ESPC activities in FY 2007 following a multi-year track record of task order implementation.

SRS continued implementation of ESPC project, Task Order #4, in FY 2007. Titled "A-Area Steam Plant Replacement", the current project will provide an efficient, long-term, reliable source of steam to the A-Area. The single-ECM task involves the installation and efficient operation of one new wood-fired steam boiler and one standby fuel oil-fired boiler to serve A-Area. Advantages of the task include 100% compliance with current Clean Air and Water Act standards, a highly cost-efficient scheme, major operating and maintenance cost reductions, and significant energy cost savings over the current approach to steam delivery. An additional benefit is that biomass fuel will be used to generate the steam. The renewable energy aspect of the plant results from changing the fuel source from coal to biomass. A contract is being pursued in FY 2008 to use biomass residue from SRS forestry operations as the primary fuel source for the plant.

The project is expected to generate total annual energy cost savings (first year) of $311,764. Operations and maintenance related savings comprise the primary portion of the savings and are $1,102,548 for the first year. The estimated capital cost of the project is $9.54M.

The following charts summarize utility savings and cost savings associated with the project:

	Electricity (kWh)	Coal (Tons)	Wood (tons)	Fuel Oil (Gal)	Water (kgal)	Coal/Wood Ash Disposal (tons)
ECM 1: New A-Area Boiler Plant						
Utility Savings	(372,755)	12,712	(26,905)	(57,698)	11,304	1,017/(67)
Cost Savings	($16,376)	$962,569	($623,215)	($67,568)	$5,601	$52,488/($1,736)

Negative values in parentheses indicate consumption will increase. Cost savings are in 2008 dollars.

ECM	First Yr Energy Savings (MMBTU/Yr)	First Yr Energy Savings ($)	First Yr O&M Savings ($)	Capital Investment Cost ($)	Simple Payback (Yrs)
A-Area Boilers	84,436	$311,764	$1,102,548	$9,539,868	6.7

Approval of the task was granted by the DOE-HQ ESPC Review Board in November 2006. Design Engineering activities commenced immediately in December following approval. Construction was initiated in August 2007. The project will be completed by September 2008.

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SRS initiated additional ESPC efforts in FY 2007 regarding steam system alternatives. Because the site-specific (WSRC) ESPC has reached the budgetary ceiling set for the contract, IDIQ ESPCs will be pursued in the future. DOE-SR issued an Expression of Interest to ESCOs associated with the southeastern regional super-ESPC and the technology-specific BAMF ESPCin August 2006 to solicit interested parties for a task to evaluate replacement of the D-Area powerhouse previously discussed in this report. SRS received numerous responses to this EOI and conducted evaluations to determine the most qualified ESCO. Ameresco Federal Solutions was chosen as part of the national BAMF ESPC contract.

A kickoff meeting was held in February 2007. Following extensive development at the site, a draft Initial Proposal was received in May. Numerous interactions continued during the summer as the plan was promulgated, and the Initial Proposal was issued for approval by the DOE-HQ Review Board in August. Approval was granted in August.

The Detailed Energy Study phase of the contract development was initiated in September 2007, with an anticipated submission of the Final Proposal scheduled for April 2008.

The scope of this ESPC is for Ameresco to design, build, and operate a new steam plant to replace the existing, oversized cogeneration coal-fired powerhouse in D-Area. Two biomass-fired circulating fluidized bed boilers will be installed, along with a fuel oil-fired boiler for back-up. Electrical generation of 15 megawatts is anticipated. Additionally, the fuel oil boiler in K-Area will be replaced with a new biomass-fired boiler in K-Area and a new installation in L-Area. Fuel from the large plant will be transferred to these smaller satellite areas. The boilers in K and L will also include fuel oil burners for backup.

This project will be the culmination of an integrated site strategy for replacing the SRS steam generation facilities. This strategy, funded fully via ESPC, successfully upgrades critical infrastructure necessary for continued mission support and capitalizes on the use of renewable energy through innovative funding. This integrated plan will replace all the steam sources on site, eliminating use of coal and minimizing the use of fuel oil while maximizing the use of renewable energy. In total, four new biomass steam plants are being installed via ESPC as part of this plan.

The performance periods of ESPC Task Orders #1 and #3 continued in FY 2007. The guaranteed Task 1 savings (year 6) of $269,626 were exceeded, with actual realized annual savings of $318,650. ECMs associated with this task included lighting retrofits and building management system upgrades. The guaranteed Task 3 savings (year 3) of $489,238 were exceeded, with actual realized annual savings of $523,998. ECMs

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associated with this task included lighting retrofits, shutdown of a steam line, and installation of heat pumps.

With a continued focus on ESPCs as part of the DOE TEAM initiative, SRS is embarking on yet another ESPC. In October 2007, SRS conducted on-site interviews with two ESCOs to determine the most qualified for pursuit of additional tasks to upgrade infrastructure and save energy and water in site nuclear processes. These facilities have not been targeted to date due to the process/mission-related aspects which complicate and potentially minimize opportunities, as well as the cost impacts from working in these environments. However, energy conservation measures are possible and will be evaluated in FY 2008 following selection of the preferred ESCO and development of an Initial Proposal.

C. Sustainable Building Design and High-Performance Buildings

Please refer to section II.F for a summary of SRS activity in this area.

D. Energy Star Products

As stated in section III.A, SRS Procurement personnel were highly involved with energy savings strategy in FY 2007 as part of the Executive Order gap analysis conducted to determine programmatic compliance. A major recommendation resulting from this analysis was the retrofitting of the existing site Procurement Systems (referred to as PCS and FMTS). These changes would be made to the procurement systems to allow them to identify, track, and report environmentally preferable procurement transactions. This would be a major milestone for purchases of this type of equipment. Additional funding will be requested to allow for personnel to make these changes in FY 2008.

Energy efficient computer products continued to be purchased at Savannah River. Most site computers are provided to site employees via a lease agreement. This lease contract specifically states that all computers must be Energy Star compliant, as well as meeting low standby power requirements. Evaluation of all site PC leases for FY 2007 revealed that the site is 100% compliant with Energy Star and EPEAT. Site employees have also received requests to utilize the power reduction features of personal computers and monitors.

In addition to the computers, it was determined that 100% of site copier purchases in FY 2007 were EPEAT compliant.

SRS has modified multiple blanket contracts to incorporate low-standby power levels. The following sitewide contracts have been modified:

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-Desktop computers
-Desktop monitors
-Laptop computers
-Printers (leases)
-Xerox copiers
-Canon copiers
-OCE copiers
-Kodak scanners

All products submitted as part of these contracts must comply with Executive Order 13221, "Energy Efficient Standby Power Devices", regarding standby power levels (typically one Watt or less). Also, all associated products must be Energy Star products or FEMP-designated products in the upper 25% of energy efficiency.

IV. Data Tables and Inventories

A. FY 2007 Annual Energy Management Data Report

B. Excluded Facilities Inventory

V. Attachments

Page 1 - Various articles on SRS ESPC steam plant projects
Page 6 - Various articles on WSRC constructing a "Green" Habitat for Humanity house
Page 12 - Numerous articles about ongoing hydrogen (and other energy-related) research at SRS
Page 33 - Samples of SRS Peak Alert information
Page 35 - Sample articles concerning Pollution Prevention, Earth Day, etc.
Page 37 - Various energy awareness articles, including "Change-a-Light" program, IDEAs, etc

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Table A

FY 2007
Annual
Energy Management
Data Report

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FY 2007 ENERGY MANAGEMENT DATA REPORT

Agency: Department of Energy - Savannah River
Prepared by: David S. Wolfe
Date: 1-Nov-07
Phone: 803-557-9911

PART 1: ENERGY/WATER CONSUMPTION AND COST DATA

1-1. EPACT/E.O. 13423 Goal Subject Buildings

Energy Type	Consumption Units	Annual Consumption	Annual Cost (Thou. $)	Unit Cost ($)	Site-Delivered Btu (Billion)	Est. Source Btu (Billion)	Est. GHG Emissions ($MTCO_2e$)
Electricity	MWH	313,158.0	$23,957.6	$0.08 /kWh	1,068.5	3,710.9	207,192
Fuel Oil	Thou. Gal.	389.7	$705.5	$1.81 /gallon	54.1	54.1	3,965
Natural Gas	Thou. Cubic Ft.	0.0	$0.0	#DIV/0! /Thou Cu Ft	0.0	0.0	0
LPG/Propane	Thou. Gal.	1.3	$2.4	$1.85 /gallon	0.1	0.1	8
Coal	S. Ton	16,592.0	$1,394.9	$84.07 /S. Ton	407.8	407.8	39,127
Purch. Steam	BBtu	957.0	$12,879.6	$13.46 /MMBtu	957.0	1,330.2	127,635
Other	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	
		Total Costs:	$38,940.0	Total:	2,487.5	5,503.2	377,927
Goal Subject Buildings (Thou. Gross Square Feet)		7,368.2		Btu/GSF:	337,600	746,880	
				Btu/GSF w/ RE Purchase Credit:	337,600	746,880	
				Btu/GSF w/ RE & Source Btu Credit:	337,600	746,880	

1-2. EPACT/E.O. 13423 Goal Excluded Facilities

Energy Type	Consumption Units	Annual Consumption	Annual Cost (Thou. $)	Unit Cost ($)	Site-Delivered Btu (Billion)	Est. Source Btu (Billion)	Est. GHG Emissions ($MTCO_2e$)
Electricity	MWH	0.0	$0.0	#DIV/0! /kWh	0.0	0.0	0
Fuel Oil	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0.0	0
Natural Gas	Thou. Cubic Ft.	0.0	$0.0	#DIV/0! /Thou Cu Ft	0.0	0.0	0
LPG/Propane	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0.0	0
Coal	S. Ton	0.0	$0.0	#DIV/0! /S. Ton	0.0	0.0	0
Purch. Steam	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	0
Other	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	
		Total Costs:	$0.0	Total:	0.0	0.0	0
Goal Excluded Facilities (Thou. Gross Square Feet)		0.0		Btu/GSF:	#DIV/0!	#DIV/0!	
				Btu/GSF w/ RE Purchase Credit:	#DIV/0!	#DIV/0!	
				Btu/GSF w/ RE & Source Btu Credit:	#DIV/0!	#DIV/0!	

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1-3. Non-Fleet Vehicles and Other Equipment (Does not include Fleet Vehicle Data Captured by FAST System)

	Consumption Units	Annual Consumption	Annual Cost (Thou. $)	Unit Cost ($)	Btu (Billion)	Est. GHG Emissions ($MTCO_2$)
Auto Gasoline	Thou. Gal.	20.7	$42.7	$2.06 /gallon	2.6	184
Diesel-Distillate	Thou. Gal.	369.6	$774.9	$2.10 /gallon	51.3	3,750
LPG/Propane	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0
Aviation Gasoline	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0
Jet Fuel	Thou. Gal.	39.3	$92.8	$2.36 /gallon	5.1	362
Navy Special	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0
Other	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	
		Total Costs:	$910.4		59.0	4,296

Optional 1-3a. Fleet Vehicle Consumption and Costs Captured by the FAST System

(Input reflects format of Section IV, Part C, Annual Fuel Consumption Report, by Fuel Type of FAST SF 82 - Aggregate Combined Report)

Description	Consumption Units	Annual Consumption	Annual Cost (Actual $)	Btu (Billion)
Biodiesel	GEG	0.0	$0.0	0.0
Diesel	GEG	0.0	$0.0	0.0
Electric	GEG	0.0	$0.0	0.0
E-85	GEG	0.0	$0.0	0.0
Gasoline	GEG	0.0	$0.0	0.0
Hydrogen	GEG	0.0	$0.0	0.0
M-85	GEG	0.0	$0.0	0.0
LPG	GEG	0.0	$0.0	0.0
NG	GEG	0.0	$0.0	0.0
Other	GEG	0.0	$0.0	0.0
TOTAL	GEG	0.0	$0.0	0.0

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1-4. RENEWABLE ENERGY GENERATED ON FEDERAL OR INDIAN LAND WHERE RECS ARE RETAINED BY THE GOVERNMENT
(New renewable energy is from projects placed in service after January 1, 1999)

Renewable energy project types in service during FY 2007, by age and source	Number of Projects	Annual Energy Produced	Energy Produced on Federal or Indian Land and Used at a Federal Facility
Electricity from *New* Solar projects (MWH)	0	0.0	0.0
Electricity from *New* Wind projects (MWH)	0	0.0	0.0
Electricity from *New* Biomass projects (MWH)	0	0.0	0.0
Electricity from *New* Landfill Gas projects (MWH)	0	0.0	0.0
Electricity from *New* Geothermal projects (MWH)	0	0.0	0.0
Electricity from *New* Hydro/Ocean projects (MWH)	0	0.0	0.0
Electricity from *Old* Solar projects (MWH)	0	0.0	0.0
Electricity from *Old* Wind projects (MWH)	0	0.0	0.0
Electricity from *Old* Biomass projects (MWH)	0	0.0	0.0
Electricity from *Old* Landfill Gas projects (MWH)	0	0.0	0.0
Electricity from *Old* Geothermal projects (MWH)	0	0.0	0.0
Electricity from *Old* Hydro/Ocean projects (MWH)	0	0.0	0.0
Natural Gas from Landfill/Biomass (Million Btu)	0	0.0	0.0
Renewable Thermal Energy (Million Btu)	0	0.0	0.0
Other Renewable Energy (Specify Type) (Million Btu)	0	0.0	0.0
Total New Renewable Electricity (MWH)	0	0.0	0.0
Total Old Renewable Electricity (MWH)	0	0.0	
Non-Electric Renewable Energy (Million Btu)	0	0.0	
Total Renewable Energy Generation (Million Btu)	0	0.0	

1-5. ON-SITE RENEWABLE ENERGY GENERATION WHERE RECS ARE NOT RETAINED BY THE GOVERNMENT
(This energy is only counted toward the renewable energy goal if the agency has enough new RECs to qualify for the on-site bonus.)

	Amount Produced or Used	Amount Qualified for Goal
Renewable energy reported here comes from projects: 1) placed in service **after 1/1/1999 (New)**; 2) where RECs have not been retained by the government; 3) where the amount has not been reported elsewhere on this data report; and 4) where the energy or RECs have not been sold to another agency that is counting it toward their renewable energy goal. (MWH)	0.0	0.0
Renewable energy reported here must come from projects: 1) placed in service **before 1/1/1999 (Old)**; 2) where RECs have not been retained by the government; 3) where the amount has not been reported elsewhere on this data report; and 4) where the energy or RECs have not been sold to another agency that is counting it toward their renewable energy goal. (MWH)	0.0	0.0

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1-6. RENEWABLE ENERGY/RENEWABLE ENERGY CERTIFICATE PURCHASES IN FY 2007

(New renewable energy is from resources developed after January 1, 1999)

Description of *Each* Renewable Energy Purchase (examples below, insert additional rows as necessary for each separate purchase. Insert rows after the first row of each color-coded category.)	Total Amount Purchased (MWH)	Total Amount Purchased (Million Btu)	Portion of Total Purchased from Projects on Federal or Indian Lands	FY 2007 Goal Application Renewable Energy Goal (RE) Energy Efficiency Goal (EE) Credit	End Use Category (Goal or Excluded)	State or Region of Generation or Source
Electricity from *New* Renewable Source	0.0		0.0	RE: 100% EE-Credit: 100%	Goal	
RECs from *New* Renewable Source	0.0		0.0	RE: 100% EE-Credit: 100%	Goal	
Electricity from *Old* Renewable Source	0.0		0.0	RE: Up to 1.5% of total electricty use EE-Credit: 100%	Goal	
RECs from *Old* Renewable Source	0.0		0.0	RE: Up to 1.5% of total electricty use EE-Credit: 100%	Goal	
Gas from Renewable Source		0.0	0.0	RE: no contribution to goal EE-Credit: 100%	Goal	
Thermal Energy from Renewable Source		0.0	0.0	RE: no contribution to goal EE-Credit: 100%	Goal	
Total Purchases of *New* Renewable Electricity or RECs	0.0					
Bonus for Purchases from New Projects on Federal or Indian Land	0.0					
Total Purchases of *Old* Renewable Electricity or RECs	0.0					
Purchases of Non-Electric Renewable Energy		0.0				
Total Purchases for Goal Buildings	0.0	0.0				
Total Purchases for Excluded Facilities	0.0	0.0				
Total All Purchases	0.0	0.0				

1-7. GOAL-ELIGIBLE RENEWABLE ENERGY USE AS A PERCENTAGE OF FACILITY ELECTRICITY USE

(Calculated from input above per FEMP Renewable Energy Guidance)

Components of Eligible RE Use	Renewable Electricity Use (MWH)	Total Facility Electricity Use (MWH)	RE as a Percentage of Electricity Use
Eligible RE Total	0.0	313,158.0	0.0%
New RE (without Bonus)	0.0		
Bonus, Federal or Indian Land	0.0		
Eligible Old RE	0.0		

1-8. ALL RENEWABLE ENERGY USE (INCLUDING NON-ELECTRIC) AS A PERCENTAGE OF FACILITY ELECTRICITY USE

(Calculated from input above for information only)

All Renewable Energy Use (Billion Btu)	Total Facility Electricity Use (Billion Btu)	RE as a Percentage of Energy Use
0.0	1,068.5	0.0%

1-9. WATER USE INTENSITY AND COST

Potable Water	Annual Consumption (Million Gallons)	Annual Cost (Thou. $)	Facility Gross Square Feet (Thou.)	Gallons per Gross Square Foot
Goal Subject Buildings	326.4	$3,565.8	7,368.2	44.3
Goal Excluded Facilities	0.0	$0.0	0.0	#DIV/0!
Total All Buildings & Facilities	326.4	$3,565.8	7,368.2	44.3
				Percent
Approx. percentage of reported water consumption that is estimated:				0%
Is the FY 2007 agency water intensity baseline preliminary or final?				Final

US EPA ARCHIVE DOCUMENT

PART 2: ENERGY EFFICIENCY IMPROVEMENTS

2-1. DIRECT AGENCY OBLIGATIONS

	FY 2007		Projected FY 2008	
	(Million Btu)	(Thou. $)	(Million Btu)	(Thou. $)
Direct obligations for facility energy efficiency improvements, including facility surveys/audits		$0.0		$0.0
Estimated annual savings anticipated from obligations	0.0	$0.0	0.0	$0.0

2-2. ENERGY SAVINGS PERFORMANCE CONTRACTS (ESPC)

	Annual savings (Million Btu)	(number/Thou. $)
Number of ESPC Task/Delivery Orders awarded in fiscal year & annual energy (MMBTU) savings.	84,436.0	1
Investment value of ESPC Task/Delivery Orders awarded in fiscal year.		$9,539.9
Amount privately financed under ESPC Task/Delivery Orders awarded in fiscal year.		$10,207.8
Cumulative guaranteed cost savings of ESPCs awarded in fiscal year relative to the baseline spending.		$13,840.1
Total contract award value of ESPCs awarded in fiscal year (sum of contractor payments for debt repayment, M&V, and other negotiated performance period services).		$13,840.1
Total payments made to all ESPC contractors in fiscal year.		$741.1

US EPA ARCHIVE DOCUMENT

2-3. UTILITY ENERGY SERVICES CONTRACTS (UESC)

	Annual savings (Million Btu)	(number/Thou. $)
Number of UESC Task/Delivery Orders awarded in fiscal year & annual energy (MMBTU) savings.	0.0	0
Investment value of UESC Task/Delivery Orders awarded in fiscal year.		$0.0
Amount privately financed under UESC Task/Delivery Orders awarded in fiscal year.		$0.0
Cumulative cost savings of UESCs awarded in fiscal year relative to the baseline spending.		$0.0
Total contract award value of UESCs awarded in fiscal year (sum of payments for debt repayment and other negotiated performance period services).		$0.0
Total payments made to all UESC contractors in fiscal year.		$0.0

2-4. METERING OF ELECTRICITY USE

	Standard Meters		Advanced Meters	
FY	Cumulative # of Buildings Metered	Cumulative % of Electricity Metered	Cumulative # of Buildings Metered	Cumulative % of Electricity Metered
2007	0	0.0%		
2008 planned	0	0.0%	0	0.0%
				Percent
Percentage of agency metering plan milestones met in FY 2007:				0%

2-5. FEDERAL BUILDING ENERGY EFFICIENCY STANDARDS

	Number of New Building Designs
Total new building designs started in FY 2007:	0
Total new building designs started in FY 2007 that are expected to be 30 percent more energy efficient than relevant code, where life-cycle cost effective:	0
	Percent
Percent of new building designs started in FY 2007 that are expected to be 30 percent more energy efficient than relevant code, where life-cycle cost effective:	#DIV/0!

2-6. TRAINING

	(number)	(Thou. $)
Number of personnel	1	$2.0

Table B

Excluded Facilities Inventory

The Savannah River Site had no EPACT excluded facilities during FY 2007.

US EPA ARCHIVE DOCUMENT

V. Attachments

Refer to Page 24 for a list of Attachments.

US EPA ARCHIVE DOCUMENT

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

Thursday, June 14, 2007 Page 1A Page 1 of 2

Full steam ahead, SRS says

New steam plant will replace 1950s coal-burning plant

By JOSH VOORHEES
Staff writer

Officials at the Savannah River Site held a ceremonial groundbreaking Wednesday for a new energy efficient steam plant that will replace its vintage coal-powered predecessor from the 1950s.

The new biomass powered plant was trumpeted by high-ranking government and private officials as a giant step toward meeting the nation's goal of moving toward clean, renewable energy.

"President Bush has made increasing the use of clean energy to power our homes, vehicles and businesses a priority," said SRS Manager Jeffrey Allison. "We're furthering the president's priorities by breaking ground on a facility that will provide steam to power industrial processes ... using clean, renewable biomass."

The current coal-burning plant, which was built in 1951, currently consumes around 12,000 tons of coal per year. Due to the high number of decommission projects at SRS in recent years, the plant greatly exceeds the site's current need.

"There is only so low you can turn down the current facility," said Patrick Livengood, Washington Savannah River Company's project manager for the new plant. "As a result, we have to vent a good bit of steam, and that is just a waste of money."

Officials believe the new plant will result in lower environmental emissions, less energy consumption, and lower operating and maintenance costs.

"This is not just about the quantity of (energy) provided, but also the quality of leadership," said Dr. Vince Adams, a high-ranking Department of Energy official who served as the keynote speaker for the groundbreaking ceremony. "Other agencies and the private sector, as well as the nation, will follow" the department's example.

The biomass plant will be primarily powered by burning 22,000 tons of wood chips per year – the majority of which planners believe will come from U.S. Forest Service logging at the complex – and should save an estimated $1.5 million per year in operating costs.

Thanks to a creative third-party financing plan, those savings will be used to pay Honeywell Building Solutions the $14 million it is expected to cost to construct the new plant.

Honeywell officials said that the company aims to draw heavily from the local workforce on all of their projects, and they expect this one to be

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

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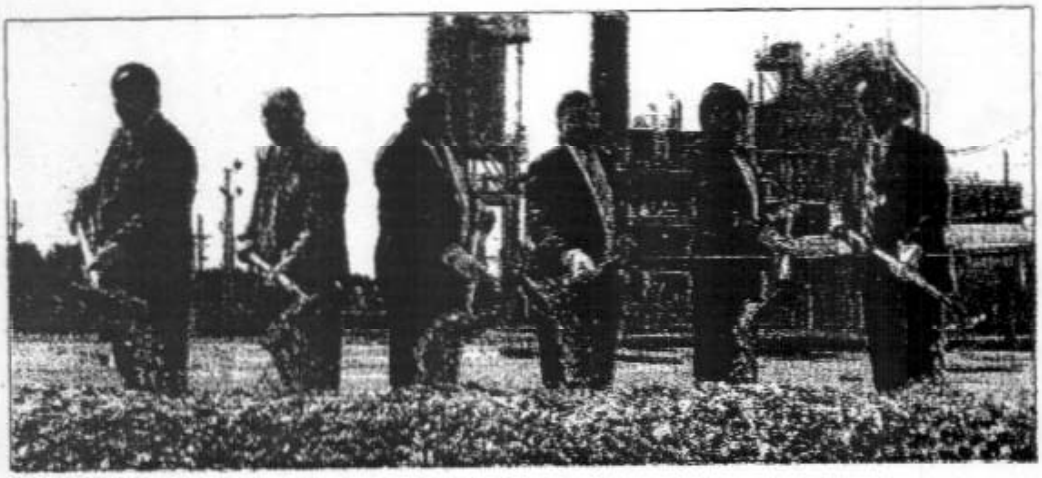
no different.

"With the exception of management personnel during the construction process, we hope to hire pretty much all of the engineers and contractors we need from the area," said John Schelmbauer, Honeywell project manager for construction of the biomass plant.

Construction of the new plant is expected to begin prior to August 2007 with a projected completion date of August 2008.

It will be constructed on the already-existing foundation of a spare maintenance parts warehouse that was torn down last October.



Staff photo by Josh Voorhees

Officials from the DOE, WSRC, SRS, DHEC, EPA, and Honeywell take part in the ceremonial groundbreaking Wednesday. The current coal-powered steam plant can be seen in the background.

SRS To Construct New Energy Efficient Steam Plant

As part of a collaborative process among DOE, WSRC and Honeywell Building Solutions, SRS broke ground on a new clean energy efficient steam plant today, the first of two energy infrastructure upgrade projects.

With a ceremonial tossing of wood chips, a new energy efficient A Area Power House is ready to be built. Participating in the June event are, from left, Dr. Vince Adams, Office of the Groundwater and Soils for the Office of Environmental Management; DOE-HQ; Bill Poulson, Executive Vice President, M&O, WSRC; Jeff Allison, Manager, DOE-SR Operations Office; John Litton, Assistant Bureau Chief for Air Quality, SCDHEC; Beverly Banister, Division Director, Air, Pesticides, and Toxics Management Division, EPA Region 4; and Tom Bowen, General Manager, Honeywell Building Solutions SES.

In support of President Bush's initiatives to increase clean energy use at federal agencies, SRS will replace a 1950s vintage coal-powered steam plant with a clean, renewable plant powered by biomass that will provide an efficient, long-term, reliable source of steam to the Site's A Area. The new plant will contribute significantly toward the Department meeting President Bush's January 2007 Executive Order on Federal Environmental, Energy and Transportation Management.

"President Bush has made increasing the use of clean energy to power our homes, vehicles and business a priority. Today we're furthering the President's priorities by breaking ground on a facility that will provide steam to power industrial processes and provide heat/cooling to part of SRS using clean renewable biomass," said Jeffrey Allison, DOE's Savannah River Operations Office Manager. "The A Area energy improvement project and another one planned for D Area are among the largest within DOE and will contribute significantly toward the goals of the Department to lead by example in the areas of energy management and efficiency. The overall goal of the projects is to make it self sustaining by utilizing only renewable biomass waste products from within the SRS for its fuel sources."

Starting in 2008, the A Area plant will provide stream for industrial uses to the Savannah River National Laboratory, a few administrative facilities and the Dynamic Underground Stripping (DUS) Project, a groundwater cleanup technology.

This construction is being funded and managed under a unique agreement that allows SRS to repay the project costs over a period of nine years. The estimated capital cost of the project is approximately $14 million, with an average projected savings of $1.5 million per year. Savings generated from the new system will be used to pay the total costs of the project.

Construction of the new plant is expected to begin prior to August 2007 with a projected completion date of August 2008. Until that time, the existing coal-fired boilers will continue to supply steam to the site's A Area. The second upgrade project in the D Area and K Area is scheduled for completion in late Fiscal Year 2009.

Honeywell has proposed the A Area Steam Plant replacement as an energy conservation measure, which involves the construction of two new 30,000 lbs/hr steam boilers to replace the existing coal-fired boilers. The current plant, installed in 1951, is too large for today's reduced A Area steam requirements, resulting in venting and reduced plant efficiency; the boiler plant is also past its useful life, requiring additional maintenance and repair.

It is the Site's intent that the biomass or wood-fired boiler will be primarily supplied from wood chips from waste generated by SRS forest management activities, under the direction of the U.S.D.A. Forest Service-Savannah River Site. The new system will result in lower environmental emissions, less energy consumption, lower operating and maintenance costs, and compliance with new Clean Air and Water Act Standards.

One of the new boilers will be wood-fired and will provide the majority of the steam required for the area. The other will be a standby, fuel-oil fired boiler that will operate during maintenance periods for the wood-fired boiler and during peak steam demand times.

But SRS is not stopping there and is continuing growing in the renewable energy initiatives. About 75 percent of our light duty fleet have been converted to alternative fuel (Ethanol). In 1999, we opened two ethanol fueling stations on site. All our alternative fuel vehicles are required to use ethanol when fueling onsite. In addition, the General Service Administration has allocated one of its first hybrid vehicles to SRS. A welcome step to help meet the president's goal to reduce gasoline use 20 percent in 10 years.

THE AUGUSTA CHRONICLE
Augusta, Georgia
Circulation 82,000 Daily
95,000 Sunday

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"The new system will result in reduced emissions, less energy consumption and lower operating and maintenance costs."

– Jeff Allison,
Department of Energy
Savannah River Site manager

Fuel switch to save at SRS

By Julia Sellers
South Carolina Bureau

AIKEN — A change in fuel operations at Savannah River Site will save at least $1.5 million a year by switching from burning coal to cleaner-burning wood chips and biomass.

The site's A Area will receive a new $14 million steam plant that operates on renewable energy from the SRS logging operation. The new plant will replace a 1950s coal-powered steam plant.

"The new system will result in reduced emissions, less energy consumption and lower operating and maintenance costs," said Jeff Allison, the U.S. Department of Energy SRS manager.

Mr. Allison said the current coal plant was too large for the site's needs.

Eventually, the new plant will be self-sustaining from SRS resources. The $1.5 million annual savings will be used by contractors Honeywell to pay for the cost of building the new plant within 10 years, officials said.

The plant will operate on 22,000 tons of wood chips or biomass each year. At least 12,000 tons of coal was used yearly for the current plant.

A change in fuel source not only will save money, but also will reduce air pollution emissions of particulate matter by 95 percent. Particulate matter can affect breathing and cause heart problems.

Nitrogen oxide emissions, or emissions that affect the ozone layer, should decrease by 82 percent.

"We want to reduce those emissions in the Southeast, so by reducing the amount of nitrogen oxide in the air, we reduce particulate matter and improve the air quality," said John Litton, the assistant bureau chief for air quality for the S.C. Department of Health and Environmental Control.

The fuel source change comes as part of President Bush's initiatives to increase clean energy use at federal agencies, Mr. Allison said.

Other SRS energy changes include using ethanol fuel for on-site vehicles.

Construction on the A Area plant will begin in August and should be completed by August 2008.

Mr. Allison said a larger coal-fired boiler in the D Area will be upgraded, but a work schedule has not been set.

Reach Julia Sellers at (803) 648-1395, ext. 106, or julia.sellers@augustachronicle.com.

DBT Development Team Awarded International Lion Award

The SRS Design Basis Threat Development Team was awarded a 2006 Washington Group International Lion Award at a banquet in Aiken in September. The prestigious Lion Award recognizes outstanding performance and celebrates employee successes in team an individual categories.

Other winners were Tommy McCallie, (Construction Excellence); Jack Bullington, Pete Gaillard, Erin Stringfellow, Russ Hughes and Fitz Trumble (Nuclear Criticality Safety); and Charles Nash (Engineering Excellence-Resorcinol Formaldehyde Resin Development Team).

DOE -HQ Approves Next Step in Steam Replacement Projects for Site

In August, DOE- HQ approved the next step in replacing the way steam is provided on SRS. The DOE -HQ review board gave Ameresco Federal Solutions the go-ahead to begin development of the details required for a final contract. This contract is to provide a turn-key package of development, design and installation of three new steam plants. Ameresco will also operate and maintain the plants. This action will be the culmination of an integrated site strategy for replacing the SRS Steam Generation Facilities. This strategy successfully upgrades critical infrastructure, necessary for continued mission support, and capitalizes on the use of renewable energy through innovative funding.

This will be the largest Energy Savings Performance Contract (ESPC) project ever conducted at a DOE facility. This kind of project allows a DOE-selected energy services company to provide all up-front capital funding to build the plants and be paid back over the term of the contract by energy and ancillary savings that are guaranteed to the government. There have been two other DOE- HQ award-winning ESPC projects at the Site in recent years.

We began our 3rd ESPC project in August 2007 to replace the A Area steam plant. The A area replacement project, as well as the future ESPC projects, will use biomass fuel sources (wood- fired plants, which is a renewable energy source and will improve the efficiency of the steam distribution across SRS. The use of biomass fuel is in alignment with goals established by Congress as part of the Energy Policy Act of 2005 and a new Executive Order. This integrated plan will replace all the steam sources in A , K and D areas, which will eliminate use of coal and minimize the use of fuel oil while maximizing the use of renewable energy. The final contract for the remaining three plants is expected in the spring of 2008.

National Diversity Award *(cont from page 1)*

of which $136 million was awarded to small businesses, including small disadvantaged firms, women-owned businesses and HUBZone firms. WSRC has been widely recognized for its support for small and minority businesses.

For employees, WSRC focuses on creating an inclusive environment where every employee can get involved and participate. The company values the differences and cultures of others through teamwork and helping each other succeed.

The WSRC Diversity Policy extends far beyond the letter of the law. Some examples include:

- Establishment of a Diversity Board of Directors in 1997
- Establishment of an EEO/Diversity training component
- Participation in multicultural events.

WSRC News

Washington Savannah River Company, Savannah River Site

June 21, 2007

Breaking ground are from left, Keith Wood (WSRC Director of Public Affairs), Chuck Campbell (WSRC Habitat Green Build Project Lead), Bill Poulson (WSRC Executive Vice President for M&O); Lessie Price (WSRC Manager, Community Assistance); Ronnie Young (Chairman, Aiken County Council); Jack DeVine (WSRC Senior Advisor and Aiken County Habitat for Humanity Board Member); and Richard Church (Executive Director, Aiken County Habitat for Humanity)

WSRC to Construct 'Green Build' House

Aiken County Habitat for Humanity is teaming with the Washington Savannah River Company to construct a "green build" house. This new breed of homes uses ecologically responsible building methods, resulting in homes that are both healthier for the environment and those who live in them.

The Aiken County Habitat for Humanity and WSRC "Green" building program aims to reduce the operating costs of this home, conserve water and energy, improve resource-efficiency and minimize construction waste. These are all features that Habitat plans to incorporate into its future home construction projects while at the same time striving to keep the costs affordable for the low-income community that it serves in Aiken

A group of WSRC and Habitat members determined the specific features of this home to include extra insulation in the walls, roof overhangs to shield rooms from sun/heat, a sheathing system in the attic to reduce heat build up, Low-E windows to repel heat from sunlight, insulated siding, a passive solar water heating system, Energy Star appliances, cellulose (instead of fiberglass) insulation, low VOC paint on interior surfaces, laminated hardwood and ceramic floors, and a correctly sized HVAC system to account for the other energy saving components. The landscaping will include drought resistant plants and groundcovers to reduce watering and lawn maintenance requirements. The ground-breaking was held June 14 and volunteers from WSRC will begin working on June 22. To volunteer, contact Missy Byrne, 7-4406.

What Counts?

800 Approximate number of employees who attended the recent SRS Safety Conference.

98 Number of canisters filled at DWPF, achieving a Minimum Performance Expectation three months ahead of schedule

WSRC News

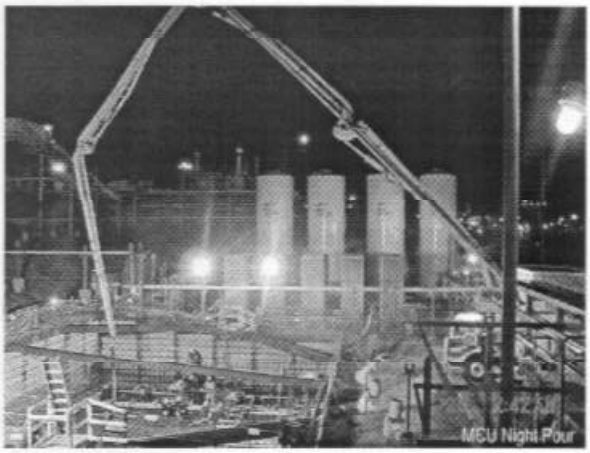
Washington Savannah River Company, Savannah River Site

August 1, 2007

BSRI Wins Construction Team of the Year

Bob Rucker, the Managing Editor of the ***Bechtel Globe*** sent BSRI his Congratulations for winning Bechtel's Construction Team of the Year award in the small projects category and wrote the following article for the June edition of the magazine.

Construction Team of the Year Small projects category (Under $100 million)


MCU Night Pour

Bechtel Savannah River, Inc. (BSRI), MCU project, United States.

Of the many challenges the MCU project team faced, the biggest was how to execute 300,000 job hours within an accelerated schedule, in a small facility, while being exposed to a wide range of weather conditions.

"The quality, workmanship, and safe work practices of this construction team were truly impressive," says **Don Young**, manager of construction and startup services for BSRI. "MCU is an excellent example of exemplary project performance in a unique facility. The successful delivery is a tribute to the knowledge, experience, and personal commitment of the BSRI construction team."

The construction team devised a modular design approach that allowed 40 percent of the project's electrical and mechanical equipment and materials to be assembled in a controlled shop environment, avoiding possible inclement weather at the site. *(cont page 2)*

WSRC 'Green Build' House Construction Continues

The Green Build house that WSRC is sponsoring for Habitat for Humanity has been progressing for the last four weekends. Various volunteers from within Infrastructure and Services and across the site have been giving of their time and talent on Fridays and Saturdays.

Chip Jennison and Frank Boyd hard at work

This house is the first "Green Build" in Aiken County for Habitat. This program aims to reduce the operating costs of this home, conserve water and energy, improve resource-efficiency and minimize construction waste. These are all features that Habitat plans to incorporate into its future home construction projects while at the same time striving to keep the costs affordable for the low income community that serves Aiken.

"We are making a lot of progress, having fun and should be complete in late September, if all goes well," said Missy Byrne, WSRC volunteer coordinator for the house. "On Aug 3rd and 4th we will be dry walling and finishing up the siding on the house. We are especially looking for volunteers willing to give their time for the next three weekends."

To check our the progress, look at the Habitat House link on the Infrastructure and Services home page in ShRINE. To volunteer, contact Missy Byrne, 7-4406.

What Counts?

95 Number of high school students that competed in the 2007 Savannah River Regional Science Bowl Competition

17,600 Number of students in the CSRA that WSRC Traveling Science Volunteers reached

THE AUGUSTA CHRONICLE
Augusta, Georgia
Circulation 82,000 Daily
95,000 Sunday

Sunday, October 28, 2007 Page CE-1 Page 1 of 1

Saving green

Habitat house is built to be energy efficient

By Sandi Martin
South Carolina Bureau Chief

Habitat for Humanity is seeing green.

The nonprofit that constructs houses for needy families recently unveiled its first local "green" house, which was built with environmentally friendly and energy-saving materials.

Kenya Keitt, who put in the sweat-equity hours to qualify for the house, choked back tears as she thanked everyone who took part in helping her get a house of her own.

"I've had the desire to become a homeowner for a long time," she said. "Today feels like Christmas in October. This is truly a gift."

Her son, 7-year-old Ke'Antae, also was grateful, saying, "I'm glad we have our own home."

Their home isn't just new, it's also going to be more efficient than most other houses.

Habitat for Humanity decided that this house would be green, meaning it was built to be economical and environmentally friendly.

With some of the materials used, Habitat spokesman Eric Lenser said, Ms. Keitt's utility bills should be significantly lower than if the home had been built traditionally.

The house's features include:

- Framing that offsets both heating and cooling costs
- Insulated siding
- 24-inch roof overhang to shield the interior
- Aluminum sheathing in the attic to repel heat
- A solar tube skylight in the bathroom to bring in natural light
- Solar panels on the roof to help heat water.

The green home was sponsored by Washington Savannah River Co., which donated about $50,000. President Leo Sain said the company has sponsored other Habitat homes and was pleased when the nonprofit organization decided to make this one a green house.

The energy saving features should help Ms. Keitt hold down the cost of her utilities, he said.

"That's probably timely with oil $90 a barrel right now," he said.

Along with the money, the company's employees volunteered on the weekends to help build the house, spending 28 days total working in Warren Ridge subdivision off Pine Log Road.

Ms. Keitt's house is the 65th completed by the local Habitat chapter, but it is the group's first green house.

Mr. Lenser said the typical cost of a Habitat home – which is built with significant amounts of volunteer labor and donated materials – is about $55,000.

The green house, cost about $5,000 more, but that will be made up by the utility savings for Ms. Keitt, he said.

Reach Sandi Martin at (803) 648-1305, ext. 111, or sandi.martin@augustachronicle.com.

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

Saturday, October 20, 2007 Page 14 Page 1 of 2

'There's no place like home'

Staff photo by Rob Novit

As his mother Kenya looks on, Keantae Keitt accepts the keys to a new Habitat for Humanity home from Washington Savannah River Company President Leo Sain Friday. WSRC and its partner firms contributed not only funds for materials for Aiken Habitat's first "earth-friendly" home, but also provided staffers to help build it. Also pictured is Dewitt Beeler of CH2MHill, one of the sponsoring companies.

Habitat builds first 'earth-friendly' home

By ROB NOVIT
Senior writer

Kenya Keitt would always say something like, "I'm going to the house." Now she can finally say, "I'm going home," which provides an entirely different feeling.

The newest Aiken Habitat for Humanity homeowner, Keitt tearfully thanked Habitat staff members and volunteers at a dedication ceremony in the Warren Ridge subdivision.

Her new residence "is a home that feels safe and comfortable, a place of security," Keitt said. "It's a place where my son can finally know what it's like to play outside."

The new home is also significant as the first Habitat project designated as a "green build" — an environmentally-friendly, energy-efficient residence.

Washington Savannah River Company and partner companies Bechtel, BNG, BWXT and CM2MHill contributed funds for materials as well as labor. WSRC President Leo Sain said

Please see HABITAT, page 16A

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Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

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Habitat

Continued from 1A

about 80 people worked on the project on 14 weekends for a total of 28 days.

"I'd like to thank the (Savannah River) Site employees for their safe, hard work to make this a reality," he said. "It takes all these people to bring it all together. WSRC and our partners enjoy being good citizens."

The Habitat for Humanity home was built as a model to show that energy saving efforts and environmentally-friendly features can be affordable as part of a low-income home. Keitt's new home includes 2-by-6 construction to allow for extra insulation in the walls, 24-inch roof overhangs to shield rooms from the sun and heat, insulated siding, laminated hardwood and ceramic floors, and a passive solar water heating system.

Those features added about $3,000 to the mortgage, for which Keitt will be responsible, said Habitat board chairman Jim Kelley. However, the changes from the traditional construction model should result in substantial savings for Keitt on her utility bills. Habitat and WSRC volunteers agreed that only such features would be part of the project.

"We will include some of these features, but not all of them, in future projects," said Kelley. "As more affordable features surface, we'll include those too."

As hundreds of thousands of people have lost or are at risk of losing their homes because of the subprime mortgage crisis, it's becoming harder for people to own their homes, Kelley said.

"We're fortunate to have companies like WSRC to build these houses," he said. "We're also blessed with a lot of volunteers to help our low-income families."

Habitat volunteer Deb Kladivko presented a Bible to Keitt, an organization tradition. She served as Keitt's "shepherd," acting as a liaison between the new homeowner and Habitat on such issues as "sweat equity" — Keitt's own labor on the house.

Actually, Kladivko said, "I had to run to keep up with her. Kenya has gone way beyond what she was expected to do."

Keitt, joined by her son Keantae, 7, at the ceremony, said she has long desired to become a homeowner. Her words could not begin to convey what her heart wanted to say.

"It is so awesome how God has placed so many wonderful people in our pathway," she said. "You have shown so much care and concern in choosing us as candidates for this home. I would encourage single moms, anybody on welfare, to be grateful. Don't let the welfare system dictate their future. The sky is the limit. My thing is to become a visionary. Get a plan and write it down."

Keitt said she and her son will show their own gratitude by their pride and determination to take care of their home.

"There have been times where there were things I took for granted," she said. "But you miss them when you don't have that choice. I thank everyone for helping us begin a new chapter in our story called life."

Contact Rob Novit at rnovit@aikenstandard.com.

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

Wednesday, October 17, 2007 Page 5A Page 1 of 1

Habitat to dedicate its first 'green build' home

Submitted article

Aiken Habitat for Humanity's first "green build" home will be dedicated at the residence in Warren Ridge subdivision Friday at 1:30 p.m.

The house was built through a partnership between the Washington Savannah River Company (WSRC) and Habitat. The team began constructing the energy-efficient home in June. The home uses ecologically responsible building methods that result in homes that are better for the environment.

"The purpose of this," said Habitat Executive Director Richard Church, "is to develop a model to show and demonstrate that very low-income people can afford to have energy-saving features and green build elements in their own homes. This has been successfully done."

Habitat will look at the factors that can be applied to future home-building projects. Church said other organizations that build low-income houses can come out and see the impact on utility bills and apply these methods themselves.

Specific features of the home include 2-foot by 6-foot construction to allow for extra insulation in the walls; 24-inch roof overhangs to shield rooms from heat; insulated siding; a passive solar water-heating system; and a SolarTube skylight to light a windowless bathroom.

WSRC senior management, including President Leo Sain, will join the Habitat board of directors and community officials at the ceremony.

Church said new homeowner Kenya Keitt "has worked really hard on this house. She's out there all the time and really put herself out on this one. She will be a happy lady with the home's features in the winter and summer." Church said.

Senior writer Rob Novit contributed to this article.

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

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EDITORIAL

Is U.S. energy future here?

Energy stands to play a huge role in the future of Aiken County.

A new hydrogen lab and the associated technology that is being introduced to the county could be significant to the future of motorized travel.

Proposals for plutonium functions being brought to Savannah River Site could provide a bright future with the creation of a teaching reactor at SRS, and perhaps one day a commercial reactor for electrical production.

But that is not all. Energy*Solutions* with a presence in Barnwell County is looking at recycling nuclear fuel with its eyes on the old Allied General facility near Barnwell as a test facility. Once the functionality of the test facility is realized, a full-fledged recycling facility could be built that would recycle nuclear fuel rods from all over the nation.

If all that these companies envision were to occur, 12,000 or more jobs could flood into this area. With other companies sure to follow, that number could be even higher. Even if only a part of this vision of our industrial future is achieved, the SRS area could once again be a hot spot for highly-educated scientists and engineers. This area might become to the energy crisis what SRS was to the Cold War – a beacon of hope.

What do you think?

- **Will Aiken County be an energy center in the future?**
- **Write to Letters to the Editor, Aiken Standard, Box 456, Aiken, S.C. 29802 or e-mail to letters@aikenstandard.com**

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Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

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Energy independence should be at the forefront of our national goals. Without it we are susceptible to national leaders who would hold our nation and the world hostage to their whims. Nor can our international relations be dictated by who has and who doesn't have an abundance of oil. We must always base policy on principle or our national identity will be tarnished.

The future holds every reason to be optimistic here in Aiken County. We need to ensure strong leadership locally, in Columbia and in Washington so that what happens here will benefit the entire country.

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Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

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Hydrogen study going steady

Scientists research methods to isolate gas for future uses

By Josh Gelinas
South Carolina Bureau Chief

NEW ELLENTON — Laboratories at the Center for Hydrogen Research that were inactive when it opened a year ago now buzz with activity.

Scientists and engineers are searching for more efficient ways to store the powerful gas, hoping to unlock its potential to power tomorrow's automobiles and homes and ease the nation's energy needs.

Right now, most of them come from Savannah River National Laboratory and make up the government's half of the research center, a 60,000-square-foot complex believed to be the first of its kind to partner the public and private sector for hydrogen research.

Carmaker Toyota is the only private investor currently leasing space, but it's only a matter of time before another tenant signs on, said Fred Humes, the executive director of the center, which is owned by Aiken County.

"There are several proposals out there, and within the next 90 days we'll be hearing good news," he said Friday.

Inside the lab, researchers are looking into better ways to detect the colorless, odorless gas. It can't be mixed with sulfur, like natural gas, which is also odorless and colorless, because hydrogen is too light, lab scientists say.

Still, the lab's focus remains the effective storage of hydrogen. There are scientists at the research center dedicated specifically to mixing and matching metal hydrides, still believed to be one of the best options.

They experiment with different combinations by placing metal powders in a ball mill, a machine that spins the powders until they fuse. Current hydrogen tanks for automobiles are too heavy, providing a round trip of only 150 miles.

Carmakers are looking for a tank that can provide 300 miles of travel, similar to today's gasoline-powered vehicles.

"It's the harder nut to crack, but if you solve that problem you solve a lot of problems," said Ted Motyka, a manager at the research center.

The effort to harness hydrogen is a worldwide one, and researchers in Aiken are collaborating with their peers around the world. One group at the research center is working with people from Germany, Japan and Canada, among others, to address safety issues with hydrogen.

"We live in a global marketplace," said Don Anton, a technical consultant at the research center. "The technology that eventually wins will be used in all countries. The protocols sort of need to be the same."

Closer to home, Dr. Motyka is working on ways to market what the

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Hydrogen

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research center already has accomplished.

Stationary hydrogen storage units are one such accomplishment.

How much a backup power unit at a hospital or cell phone tower weighs doesn't matter, he says, and a study by Clemson University's Institute of Energy Studies, to be released later this month, will cite those two industries as businesses that can benefit from existing hydrogen technology.

"Hurricane Katrina drove home that large institutions like hospitals cannot rely strictly on diesel as a backup power source," said Nick Rigas, the director of the Clemson study.

The Center for Hydrogen Research plans to power part of the center with one of its own hydrogen units, a demonstration facility for promotional purposes, Dr. Motyka said.

The research center also is part of the South Carolina Hydrogen Fuel Cell Alliance, which includes Clemson, the University of South Carolina and South Carolina State University.

Mr. Humes cites separate experiences at hydrogen events last year to characterize the growing buzz around it in South Carolina.

At the National Hydrogen Association meeting, people told him they didn't know anything about the state's involvement.

But six months later, at a Department of Energy summit, the state was all the rage.

Officials recently announced that the 2009 National Hydrogen Association meeting will be held in Columbia.

"That is a massive change in perception," he said. "I think that we have a combination in South Carolina that makes us unique."

Reach Josh Gelinas at (803) 648-1395, ext. 110, or josh.gelinas@augustachronicle.com.

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Circulation 17,500 Daily
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We Put Science To Work

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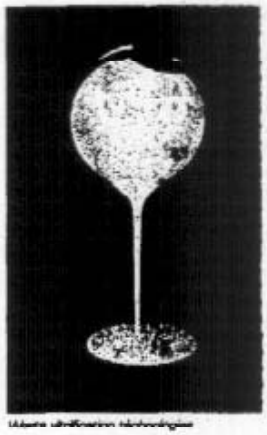


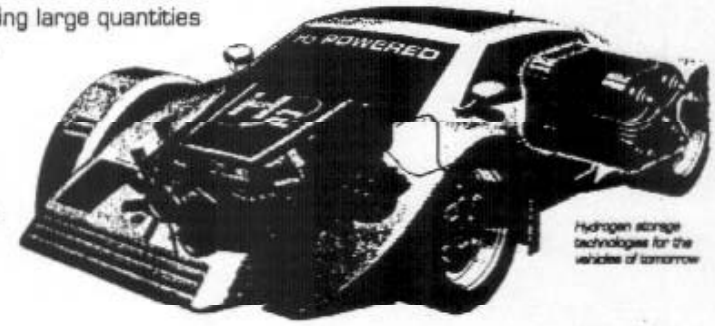
Waste vitrification technologies

The Environment

- science-based solutions that protect and clean up our environment
- methods that harness nature's own abilities to remove contamination
- technologies to safely handle and permanently dispose of hazardous and radioactive waste

Energy Security

- technologies to make the vision of practical hydrogen powered vehicles a reality
- technologies for on-board storage of hydrogen fuel
- technologies for producing large quantities of hydrogen from water



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THE STATE
Columbia, South Carolina

Circulation 137,200 Daily
171,200 Sunday

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TRANSFORMING SOUTH CAROLINA

State positioning itself to win in the hydrogen world

By JAMES T. HAMMOND
jhammond@thestate.com

In trying to build the best hydrogen fuel-cell research team in America, South Carolina has taken a page from George Steinbrenner's playbook for building a great baseball team: Hire your competitors' best players.

And, like the flamboyant New York Yankees owner, South Carolina has gotten good at it.

■ The S.C. Hydrogen Coalition, which promotes the hydrogen economy in the state, hired as its new director Shannon Baxter-Clemmons, hydrogen fuel-cell adviser to California Gov. Arnold Schwarzenegger.

■ To manage its new technology campus, which will be home to the hydrogen fuel cell team, USC lured John Parks away from a successful run as manager of the University of Kentucky's technology park.

■ USC this spring hired Kenneth Reifsnider, director of the Connecticut Global Fuel Cell Center. Reifsnider has strong ties to United Technologies Corp., a fuel cell innovator with a huge interest in how hydrogen might hit the marketplace: Its subsidiaries make Carrier heating and air conditioning systems, Otis elevators and Pratt & Whitney aircraft engines.

Reifsnider's departure created a bit of a buzz for South Carolina — and some panic in Connecticut.

When the news slipped out, Joel M. Rinebold of the Connecticut Hydrogen-Fuel Cell Coalition told The New York Times that South Carolina fuel cell education and training are tops in the nation.

But can South Carolina attract the right brainpower to become a leader in the "hydrogen economy"? To be to hydrogen what the Silicon Valley is to computers?

WHAT YOU'LL LEARN TODAY

■ South Carolina is considered a serious contender for attracting top jobs in the hydrogen-based economy.

■ South Carolina's statewide approach wows researchers and industry leaders alike.

■ In the world of hydrogen, producing and marketing new products — entrepreneurship — will be as lucrative as making early scientific breakthroughs. South Carolina is positioning itself to do both.

■ It was Harris Pastides, then public health dean, who suggested to USC officials that University of Alabama president Andrew Sorensen might be interested in a move to USC. Sorensen has been USC's president now for almost five years, and is a key driver in the state's research push; Pastides is his vice president for research.

ABOUT THIS SERIES

SUNDAY: Leaders are betting on research universities to overhaul the state's economy.

TODAY: South Carolina hopes to be the nation's hydrogen headquarters. But the competition is pretty stiff.

TUESDAY: Fancy a ride on a fuel cell-powered scooter? Golf cart? Bus? You might not have long to wait.

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Circulation 137,200 Daily
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HYDROGEN

FROM PAGE A1

It doesn't hurt that South Carolina has a growing economy — and yes, the weather is nice.

But there are other reasons South Carolina's high-stakes gambit might succeed:

■ South Carolina's approach is a statewide one, with public and private cooperation.

■ USC researchers have been breaking ground in hydrogen fuel cell research for several years.

■ USC for four years has been home to the country's only National Science Foundation Industry/University Cooperative Research Center for Fuel Cells.

USC's School of Engineering has as many as 20 researchers at the center conducting cutting-edge research. And big-name industries are signing on as corporate partners.

The center's mission is to hit the industry's multibillion-dollar home run: Develop the technology to make fuel cells commercial — useful in everyday life — possibly even replacing electricity, batteries and gasoline as energy sources.

■ The state has something few others have — a former nuclear weapons plant with 50 years of experience in producing and storing hydrogen. USC and the Savannah River National Laboratory near Aiken are sharing technology and expertise. And Aiken County has built a center just outside the plant to help transfer technology developed in the public sector to the private sector.

■ Clemson University's automotive research campus in Greenville, CU-ICAR, is getting ready to provide real-world testing for fuel cells developed for automobiles, thanks in large part to industry giant BMW, whose only North American plant is a dozen or so miles away.

■ Clemson scientists have contributed major breakthroughs in improving membranes necessary for fuel cells.

■ The state's fledgling endowed chairs program is providing the real money it takes to attract more top researchers.

"If we are going to win, if we are going to move the university forward, we don't just need a few stars, we need a constellation," said John Van Zee, a core driver of USC's fuel cell efforts and director of the National Science Foundation center. "That's part of what we are trying to create here with these endowed chairs."

MORE THAN ONE WAY TO WIN

Getting the science right will not be enough to make the state a world leader in an emerging industry.

Granted, whichever state makes the big breakthrough in the commercialization of hydrogen will attract researchers, federal dollars, private industry and jobs like a flame draws moths, like California attracted gold diggers in 1849.

But converting the science into products and services is another way to become a major player in a hydrogen-driven world.

To boost the state's chances in finding applications for hydrogen, Clemson has brought in David Bodde, a former executive with the National Academy of Sciences and an expert on entrepreneurship. Bodde in February participated in a National Academy conference on the future of the hydrogen economy.

"I think we can win in this independent of where the breakthrough comes from in the science," Bodde said. "We'd like it happen here, of course. But the entrepreneurship will be key to economic success.

"(Clemson is) a player. We don't have a huge lead. We are kind of small in the game, but we have some advantages," Bodde said.

Bodde cites a $2 million grant Clemson received from the Department of Energy to study the effects of impurities in hydrogen fuels. "If we weren't getting these types of awards, we'd have to question our ability to play. But we are getting them."

USC has received similar grants, including $2 million from the Department of Energy to collaborate with industry on high-temperature membranes, new catalysts and gaskets and seals, and $1.7 million from DOE for research on nonplatinum catalysts.

Tom Vogt, director of the USC NanoCenter, also expects his department to be a player in the commercialization of fuel cells.

"As an incubator (for new businesses), the question is always: What is the big picture? What is the end game?" Vogt said.

"The end game is that you become a sustainable entity, I mean scientifically, with world renown, and financially self-supporting."

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Circulation 137,200 Daily
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HOW SOUTH CAROLINA RANKS

The Kauffman Foundation ranked South Carolina's "new economy" against other states on a variety of factors as to how well it is able to attract high-wage, knowledge-based economy jobs.

Overall: 39

Foreign investment: 1

Exporting a focus of manufacturers: 15

Technology in schools: 24

E-government: 28

Broadband telecommunications: 30

Fastest-growing firms: 33

Entrepreneurial activity: 39

Work force education: 40

High-tech jobs: 40

Scientists and engineers: 42

Venture capital: 44

Vogt said.

USC's challenge, Van Zee said, has been to single out one or two fields of study with major commercial potential, and to excel in those areas.

"We can't be excellent in everything," Van Zee said.

The National Science Foundation endorsement has given the state great momentum. And it, in particular, has helped create a national buzz about fuel cell research in South Carolina.

But South Carolina has serious competition.

Ohio has invested more than $40 million in 30 fuel cell-related projects throughout the state. Last December, Rolls-Royce PLC, a British maker of power systems worldwide, announced it would build the U.S. headquarters of its fuel cell subsidiary in Ohio.

And California has been very successful in attracting private investment when the state has primed the pump. In just four southern California counties, $11 million in state incentives has generated $100 million in private investments.

But Bodde says those investments in current technology don't necessarily rule out South Carolina as a player in future breakthroughs. One major scientific milestone could make all that investment in transitional technology obsolete, he said.

A LONG-TERM VISION

Most marketplace applications are years away. In South Carolina, the gains being made now are small but significant.

The state has not yet produced its own Bill Gates, the chairman of Microsoft, or Steve Jobs, who runs Apple Computer. But Van Zee believes the culture being created in Columbia could lead to an emerging company with a scientific breakthrough that will lead the transition to a hydrogen-fueled economy.

"We hope, with these endowed chairs and with the education our students are getting, to create some of those types of companies," Van Zee said. "We are beginning to see some of our young Ph.D. graduates file for corporate charters with the state."

"I think this is a real change for Columbia, for such companies to grow out of this university," Van Zee said.

Vogt, the USC NanoCenter director, cautioned that the goal of economically sustainable industries built on academic research will be a multigenerational effort.

"Rarely do you have the people who have the vision and can then implement it," Vogt said. "It is a different set of skills, a different culture even."

"So I look at this as a very long ball game, and the guys who are on the mound pitching now will have made their contribution to the ball game. And when you walk off in the ninth inning, even the guy who pitched in the first inning did his part," Vogt said.

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Aiken, South Carolina

Circulation 17,500 Daily
18,000 Sunday

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By TONY BAUGHMAN
Staff writer

The new executive director of the S.C. Hydrogen and Fuel Cell Alliance offered the Rotary Club of Aiken a glimpse into the future Monday.

Dr. Shannon Baxter-Clemmons, a Charleston-area native who took over the Alliance on March 1, discussed the ongoing research into hydrogen energy, fuel cells and other alternative fuels at the weekly lunch gathering of Rotarians at the Aiken Municipal Center conference center.

"We're talking about changing the way we look at energy in the United States and world," she said.

Baxter-Clemmons, a University of South Carolina graduate, returned to the Palmetto State this month after helping to develop California's "Hydrogen Highway" project to build hydrogen fueling stations along that state's interstate highways. She holds a doctorate in chemical engineering from USC and performed graduate research on direct methane fuel cells at the Argonne National Laboratory in Chicago before moving to California to work with the California Environmental Protection Agency.

Though other states have garnered national attention for their hydrogen research, "South Carolina probably has the largest number of researchers in one state working on hydrogen research," said Baxter-Clemmons.

USC, Clemson and South Carolina State have joined Aiken's Center for Hydrogen Research, the Savannah River National Laboratory and the S.C. Department of Commerce in conducting groundbreaking hydrogen research under the S.C. Hydrogen and Fuel Cell Alliance banner.

As work continues here, more private enterprises interested in alternative fuels also will begin to find South Carolina more attractive, according to Baxter-Clemmons. She specifically mentioned Toyota, which is a partner in the work being done at the Center for Hydrogen Research.

"We're working on ways to get (companies) to come here," she said. "If they don't want to relocate — which it's a very difficult thing to get a company to relocate — then maybe they'll build a manufacturing plant here. Maybe they would put a service facility here. Maybe we would get start-ups that are coming out of the universities, all of these researchers getting the dynamics working together."

Numerous federal and state agencies, including the Department of Agriculture, the Department of Defense and the Department of Energy, also hold a keen interest in the hydrogen research being done in Aiken and other sites around the state.

All of this attention on alternative fuels is creating an environment that will encourage a new generation of scientists — young people now studying in high schools and universities — to keep South Carolina at the forefront of hydrogen and fuel cell research.

"The education is getting through. They are going to think of ways to use hydrogen fuel cells that we cannot even imagine," Baxter-Clemmons said.

The Rotary Club of Aiken meets every Monday at noon at the Municipal Center. Bob Newburn is the club president.

What do you think?

- How useful do you think S.C.'s hydrogen research will be to the state and elsewhere?
- Write to Opinions, Aiken Standard, Box 456, Aiken, S.C. 29802 or e-mail editorial@aikenstandard.com

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Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

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Grant will allow Center to acquire hydrogen-fueled vehicle for research

By APRIL BAILEY
Staff writer

The Center for Hydrogen Research is looking to lead South Carolina's hydrogen refueling network. The center will soon be the first in the state to acquire an internal combustion engine hydrogen-fueled vehicle, thanks to a $175,000 grant from the Washington Savannah River Company.

The announcement was made during the Economic Development Partnership's annual meeting, held on Tuesday evening.

Located at the Savannah River Research Campus, CHR houses scientists and technicians and provides office and lab space for private sector companies, university researchers and technology transfer offices.

According to Leo Sain, president of WSRC, the new vehicle – a 2007 full-size Chevrolet Silverado 1500 pickup – will help companies and research organizations in efforts to learn more about hydrogen fuel, including efficient storage strategies and its production capabilities.

Sain said better understanding hydrogen capabilities will essentially reduce the nation's dependence on foreign oil.

"Any step away from foreign oil dependence is a step in the right direction," he said. "I think it's time to take the next step forward."

Sain said the vehicle will also eventually help with the center's efforts to develop a hydrogen refueling station locally.

The grant will be used to purchase the truck, make the necessary modifications and other expenses to transform the vehicle.

According to Fred Humes, director of the Economic Development Partnership, very little of the truck's engine will appear different to the average person. The engine will be equipped with a modified computer control system, as well as new injectors, a new fuel system, an intercooler and a turbocharger.

The vehicle, which will be delivered to the center in January, is under modification by eTech and Roush Industries, Inc. It will be totally powered by hydrogen with three 150-liter cylinders located at the bed of the vehicle.

Staff photo by April Bailey

Leo Sain (right), president of Washington Savannah River Company, hands a check for $175,000 to Ronnie Young, chair of the Aiken County Council, as Fred Humes, director of the Economic Development Partnership looks on.

Instructors from Aiken Technical College will also take part in the project, helping to service and maintain the truck. The instructors will be trained by representatives of eTech and Roush Industries. Once the truck is delivered, CHR, the Savannah River National Laboratory and Aiken Tech will each provide sessions on hydrogen vehicles and refueling for local first responders and other officials. CHR will manage the system of the vehicle, coordinate its use and schedule demonstrations.

Contact April Bailey at abailey@aikenstandard.com.

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

Friday, October 12, 2007 Page 15A Page 1 of 1

A step toward energy freedom

The Silverado will have all the appearances of a normal pickup truck when it rolls to a stop in front of the Center for Hydrogen Research early next year. There will, however, be a major difference from its brothers. This vehicle will be powered with hydrogen instead of petroleum products.

A $175,000 grant from Washington Savannah River Company is paying for the vehicle and the modifications that will have it use hydrogen as its fuel. To be housed at the Center for Hydrogen Research, the vehicle will allow the scientists and technicians there to learn about real-life usage of hydrogen as a fuel and efficient strategies for storing the fuel.

What do you think?

- **What is your opinion about the work being done on hydrogen for fuel at the Center for Hydrogen Research?**
- Write to Letters to the Editor, Aiken Standard, Box 456, Aiken, S.C. 29802 or e-mail to letters@aikenstandard.com

Also involved with the vehicle will be faculty from Aiken Technical College who will help service and maintain the truck. CHR, the Technical College and Savannah River National Laboratory will all be involved in the use of the vehicle.

This is an exciting contribution to the development of hydrogen technology for the CHR which has received support from Aiken County Council, the Economic Development Partnerships of Aiken and Edgefield Counties as well as WSRC and SRNL. This may be another step toward this country decreasing its dependence on overseas sources for energy.

THE AUGUSTA CHRONICLE
Augusta, Georgia
Circulation 82,000 Daily
95,000 Sunday

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CENTER FOR HYDROGEN RESEARCH

Grant will buy truck

Study to focus on vehicle's engine

By Julia Sellers
South Carolina Bureau

AIKEN — A truck will be the vehicle for hydrogen research in Aiken.

The Washington Savannah River Co. announced Tuesday that it will provide a $175,000 grant to the Center for Hydrogen Research to study the hydrogen internal combustion engine. A 2007 Chevrolet Silverado 1500 pickup will serve as the model for the Center for Hydrogen Research.

Researchers will use the truck to test the possible use of hydrogen transportation and test refueling storage technology. Officials say the truck serves as an ideal vehicle because storage containers can fit in the truck bed without having to modify the vehicle.

The center also will team up with Aiken Technical College to use the truck for instruction in the school's fuel cell and hydrogen curriculum.

"To the average person, very little will appear different under the hood," said Fred Humes, Economic Development Partnership director. "However, the engine will be equipped with new injectors, a new fuel system, intercooler and turbocharger coupled to a completely redesigned and modified computer control system."

The truck, powered solely on hydrogen, is expected to provide the fuel for 210 miles.

Members of the lab and the University of South Carolina Aiken are also researching ways that hydrogen can self-generate from water molecules, eventually making hydrogen production more efficient, Washington Savannah River Co. President Leo Sain said.

"This will show everyone that (hydrogen) can really happen," he said. "Obviously, the focus on this vehicle is to decrease our dependence on foreign oil."

The truck will arrive in January. About 30 people from the hydrogen lab and Washington Savannah River Co.'s Savannah River National Lab will work on the project.

Reach Julia Sellers at (803) 648-1395, ext. 106 or julia.sellers@augustachronicle.com.

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

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S.C. speaker wants to offer incentives to hydrogen market

By PHILIP LORD
Senior writer

Leaders in South Carolina are positioning the state to compete on a national level for private investment in hydrogen technology.

S.C. House Speaker Bobby Harrell unveiled a bill he was preparing to prefile Tuesday that would provide tax credits and grants to encourage private industry to invest in hydrogen technology in South Carolina.

"South Carolina can really be at the center of the universe with this deal," said Rep. Robert S. "Skipper" Perry, R-Aiken.

Perry, who attended Tuesday's announcement in Columbia, said he was prepared to sign on as a co-sponsor for the legislation as soon as it was in its final form.

"With the technology that we have at the Savannah River Site and the national lab, I think this is a natural," Perry said.

Rep. James Roland Smith, R-Warrenville, said he is already a co-sponsor of Harrell's bill and is working with other members of the House Ways and Means Committee to tap funding for the program.

"We'll have some money attached to it, because we are putting money into it already."

Please see HYDROGEN, page 13A

What do you think?

- What do you think the bill that speaker Bobby Harrell is planning to file will help bring hydrogen technology to the state, particularly to SRS?
- Write to Opinions, Aiken Standard, Box 456, Aiken, S.C. 29802 or e-mail editorial@aikenstandard.com

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Circulation 17,500 Daily
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Hydrogen

Continued from 1A

said Smith, who is chairman of the Aiken County Legislative Delegation and a subcommittee chairman of the powerful Ways and Means Committee – which must sign off on all state spending.

On Monday members of the Ways and Means Committee, of which Harrell used to be chairman, met with leaders from the automotive industry at Clemson University's International Center for Automotive Research.

"Frankly we are expecting South Carolina to become more and more involved in the automotive industry," Smith said following the meeting.

The proposed legislation is aimed at getting the private sector involved in the already existing hydrogen energy infrastructure set up South Carolina, Harrell said in a press release.

This plan is centered around two things – developing a clean alternative fuel and creating jobs for citizens, Speaker Harrell said. "For this to happen, we need to encourage private sector involvement in this field. A small investment here could turn our state into a major leader in an industry that is expected to be over $2.6 trillion dollars in the next few decades. South Carolina has the resources and opportunity to be a major player in the worldwide hydrogen technology market. This legislation will help us get there."

Harrell

Harrell said his plan includes incentives that will help encourage companies to come to South Carolina and creates a fund for targeted, high profile investment that will lead to job creation.

The bill also encourages the continued collaborative efforts of the University of South Carolina, Clemson University, South Carolina State University, Savannah River Site and the Hydrogen and Fuel Cell Alliance.

Contact Philip Lord at plord@aikenstandard.com

LWO Project "Raises the Roof" on Tank Removal

A 28-by-34-foot section of roof was recently removed from the 241-96H building, located within the site's H Tank Farm, to permit the removal of two large process tanks. Completion of this effort was important for the dismantlement and removal (D&R) project currently taking place in the building.

Two steel tanks were recently removed from an H Tank Farm facility to make room for a new process.

The 19-foot-tall and 12-foot-wide steel tanks were lifted through the opening by a crane and placed on a truck trailer bed for transport to the Solid Waste Disposal Facility.

"This is an unusually complex D&R project," said Brenda Green, project manager. "Our challenge is to remove tons of equipment from this building while preserving its structural integrity for reuse."

Green also explained that two factors required an extensive amount of planning and preparation. The first was residual liquid and contaminated materials found within this facility, the second was the fact that D&R work had to be accomplished using numerous electrical lock-outs to permit the continued operation of nearby facilities.

"The biggest challenge was accomplishing the various tasks involved in this effort in parallel versus sequentially, the most common D&R practice," said Green. "We took on this challenge knowing it was a fast-track project that had to be completed 18 days earlier than originally scheduled. The incredible talent and dedication of our team is making this goal a reality."

The 241-96H building formerly contained the In-Tank Precipitation project. One third of the building is now devoted to the Actinide Removal Project, while the remaining portion will eventually house a technology selected to process benzene-generating organics now stored in Tank 48.

SRNL Hosts Regional Scientific Meeting

The Savannah River Section of the American Chemical Society (ACS), in collaboration with the Central Savannah River Area Section of the American Institute of Chemical Engineers, hosted the 58th Southeastern Regional Meeting of the ACS on Nov. 1-4 in Augusta, Ga. This is the first time this conference has been hosted locally.

The conference, supported by Washington Group International, Savannah River National Laboratory (SRNL), and Bechtel Savannah River, Inc., among others, brought nearly 1,400 chemists, chemical engineers, educators, and students to the CSRA. SRNL fellow scientist Dr. Chris Bannochie, who served as General Chair, indicated that the conference "exceeded even our best expectations; our four years of planning really paid off with a successful event that highlighted the laboratory and its science."

WSRC also participated in the ACS Regional ChemJobs Clearinghouse with seven other employers. The clearinghouse included 37 posted jobs with 129 job seekers, and conducted 17 interviews.

For additional details on the conference or to review the symposia titles and abstracts, visit the meeting website at www.sermacs2006.org. The 2007 conference will be hosted in Greenville, S.C.

Lab Teams to Build Hydrogen Power System

The Savannah River National Laboratory and the Center for Hydrogen Research are teaming up to build and test a prototype system to demonstrate how hydrogen fuel cells can be effectively used to provide an emergency backup power system for hospitals and other critical facilities.

The partners will combine SRNL's unique hydrogen storage technology with a fuel cell capable of generating electricity from hydrogen fuel and an electrolyzer to produce hydrogen. These combined elements will make up a regenerative fuel cell system that will provide a rugged, compact, quick response, reliable emergency power supply for occasions when grid power is temporarily cut off. The resulting prototype will serve as a model for future larger scale systems that would enhance U.S. energy security by providing safe, reliable, and renewable backup power for a variety of critical applications.

This project is sponsored by the DOE Office of Electricity Delivery and Energy Reliability.

THE AUGUSTA CHRONICLE
Augusta, Georgia

Circulation 82,000 Daily
95,000 Sunday

Wednesday, November 8, 2006 Page 3 B Page 1 of 1

Scientists to build hydrogen prototype

Scientists from the Savannah River National Laboratory and Center for Hydrogen Research in Aiken County are building a prototype emergency power system that runs off hydrogen fuel cells, officials announced Tuesday.

The "prototype will serve as a model for future, larger-scale systems that would enhance U.S. energy security by providing safe, reliable and renewable backup power for a variety of critical applications," a press release from the laboratory stated.

THE STATE
Columbia, South Carolina

Circulation 137,200 Daily
171,200 Sunday

Thursday, October 20, 2006 Page B6 Page 1 of 2

Harrell works on plan to boost hydrogen fuel

Legislation under development would offer incentives for research, manufacturing

By JAMES T. HAMMOND
jhammond@thestate.com

House Speaker Bobby Harrell plans to introduce legislation in 2007 to provide incentives and seed money for South Carolina's strategy to become a major center for hydrogen fuel development.

Harrell, R-Charleston, said the bill, which his staff is drafting, should include:

- Tax cuts to encourage hydrogen fuel businesses to locate research and manufacturing here
- A state development fund, perhaps $15 million, to support commercialization of hydrogen fuel technology
- Changes in the state procurement code to ensure that, when possible, state purchases support alternative fuels
- Financial incentives to lower the cost of hydrogen fuel development and fuel cell technology
- Continued incentives for collaborative research among South Carolina institutions

Leaders in the effort to make South Carolina a center of fuel cell research have said the state lacked a comprehensive policy putting substantial resources behind developing a hydrogen fuel economy.

SEE **FUEL** PAGE **B9**

S.C.'S COMPETITION

Many states are laying the groundwork for a hydrogen fuel economy, according to a report prepared for the state of California. Initiatives include:

Ohio Fuel Cell Initiative — introduced in 2002, pumped $103 million into state-supported fuel cell development. Sought to expand the state's research capabilities; participate in demonstration projects; and expand the fuel-cell industry in Ohio. Initially a three-year effort, initiative extended to 2008.

California Hydrogen Highway Network — passed in 2004, aims to put 20,000 hydrogen-fueled vehicles on California highways and open 250 hydrogen fueling stations to support them.

New York's Hydrogen Energy Roadmap to Future Economic Development — calls for installing hydrogen fueling stations on the 400-mile New York State Thruway from Buffalo to New York City over the next 10 years. Aims for hydrogen to serve as fuel for transportation and stationary power markets by 2020, replacing imported and polluting fuels.

THE STATE
Columbia, South Carolina
Circulation 137,200 Daily
171,200 Sunday

Thursday, October 26, 2006 Page B9 Page 2 of 2

FUEL

FROM PAGE B6

Harrell's legislation could fill that gap.

"Frankly, when we started this, we did not know where we wanted the research to go, only that we wanted it to lead to jobs," Harrell said. "It is our job to ensure that South Carolina is positioned to benefit from the next big changes in technology."

The General Assembly has channeled hundreds of millions of dollars into basic research at the University of South Carolina, Clemson University and the Medical University of South Carolina through the endowed chairs and Life Sciences laws. A substantial portion of that money will be dedicated to fuel cell and hydrogen fuel research.

While hydrogen fuel research is a high-risk economic development strategy, it also has the greatest potential for reward.

South Carolina has substantial research and development resources to help build a hydrogen fuel economy:

- The Savannah River National Laboratory, with a half-century of experience in basic research about hydrogen generation and storage
- USC's Industry/University Cooperative Research Center for Fuel Cells, the only such center designated by the National Science Foundation. Private partners in the center include Millennium Cell; Air Liquide; BASF AG; Boeing; DANA Corp.; ePower Technologies; General Motors Corp.; John Deere; LG Electronics; and Westinghouse Savannah River Co.
- Clemson's International Center for Automotive Research in Greenville, which plans to work with S.C. institutions in adapting hydrogen fuel technology to power vehicles

But South Carolina also has many competitors, some of which have substantially larger financial resources. In a report compiled for the state of California, Breakthrough Technologies Institute Inc. found that 47 states and the District of Columbia have some sort of fuel cell or hydrogen legislation, demonstration or activity.

U.S. Rep. Joe Wilson, R-S.C., told fuel cell advocates at last week's EngenuitySC '06 conference in Columbia that Fort Jackson, the largest U.S. Army basic training base, might provide an important testbed for fuel cell power plants.

He said the U.S. Defense Department aims to reduce its reliance on fossil fuels, and hydrogen fuel cells will be an important piece of that strategy. U.S. Rep. James Clyburn, D-S.C., said the state's strategy must find a way to "break the cycle of South Carolina developing the technology and other states reaping the benefits" of new manufacturing jobs.

Reach Hammond at (803) 771-8474.

IN COLUMBIA

Seven fuel cell technology projects for the Columbia area were announced last week. Six of the projects, funded through The Greater Columbia Fuel Cell Challenge, were announced during the annual meeting of EngenuitySC.

FUEL CELL BUS

A hybrid-electric fuel cell bus should be on the streets of Columbia in the spring of 2009. Columbia is one of four cities where the 37-passenger bus will be demonstrated. The Federal Transit Administration awarded $5.67 million to a 16-member development team for the project through the Center for Transportation and Environment in Atlanta.

SEGWAY FOR USC

A project proposed by John Weidner, a professor of chemical engineering at USC, will bring fuel cell-powered Segway Personal Transporters to the USC campus. The project involves developing two fuel cell battery hybrid prototype personal transporters.

BACKUP POWER AT BENEDICT

Logan Energy and Plug Power have teamed with Benedict College to provide a five-kilowatt hydrogen fuel cell backup power system for the Project Sustain community center on the Benedict campus. The fuel cell will be used as a teaching tool by Benedict's faculty.

S.C. CITIZEN'S SCHOOL

USC will create a program of six to eight sessions in the spring to help nonexperts learn about fuel cells and other energy policy. The program will be modeled after the Citizen's School in Nanotechnology.

EDVENTURE EXHIBIT

EdVenture will develop a concept design and content plan for a hands-on exhibit on alternative energy technologies, including fuel cells.

BATTERIES FOR TV CAMERAS

Jadoo Power Systems and Millennium Cell are combining to deploy hydrogen powered batteries as a substitute for conventional battery packs in video cameras used by ETV.

FIRST RESPONDERS POWER-PACK

Jadoo Power and Millennium Cell teamed with Columbia's Department of Homeland Security to demonstrate fuel cell power systems for first responders and law enforcement officers.

— *C. Grant Jackson*

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

Tuesday, January 16, 2007 Page 3 A Page 1 of 1

SRNL to help in study of fusion

By PHILIP LORD
Senior writer

Savannah River National Laboratory has been added to an international program that is seeking to demonstrate the scientific and technological feasibility of a full-scale fusion power reactor.

Wright

The U.S. ITER Program Office, located at the DOE's Oak Ridge National Laboratory in Oak Ridge, Tenn., selected SRNL along with Princeton Plasma Physics Laboratory as a partner laboratory for the U.S. ITER project, said SRNL spokesperson Angie French.

There are currently seven national and supranational parties participating in the ITER program: the European Union, the United States, Japan, Russia, India, China and South Korea. The project is being constructed in Cadarache, France.

SRNL's role is the design, fabrication, assembly, testing, and shipment of the exhaust processing system, working in collaboration with Los Alamos National Laboratory.

In addition, SRNL is providing support at the invitation of the Commissariat à l'Energie Atomique (CEA — the French Nuclear Regulatory Agency) to join the ITER International Team in Cadarache to fill the urgent position for safety and licensing activities.

ITER, which is Latin for "the way," will play a critical role in advancing the worldwide availability of energy from fusion — the power source of the sun and the stars. It will involve the construction of a massive "machine" known as a tokamak for the production of fusion energy, followed by about 20 years of operation of the tokamak for research, development and experimental validation. To produce practical amounts of fusion power here on earth, heavy forms of hydrogen are joined together at high temperature, over one hundred million degrees Celsius. At these high temperatures, electrons are detached from the nuclei of the atoms, in a state of matter called plasma. In the tokamak, magnetic fields will confine the high-temperature plasma.

Experimental operations at the project in Cadarache are planned to begin in 2016.

"SRNL's participation in this important international project builds on the laboratory's decades of work with hydrogen and its isotopes deuterium and tritium," said SRNL Laboratory Director Dr. G. Todd Wright of Washington Savannah River Company.

"For half a century, we have been providing the applied research and development to support the Savannah River Site's production and handling of tritium for use in the nation's defense," he said. "That same expertise will help the international community take a giant step forward toward this exciting new source of clean, renewable energy."

U.S. ITER Project Manager Ned Sauthoff said, "The U.S. ITER Project and the international ITER Organization are very pleased to have the Savannah River National Laboratory as a member of the ITER team. The ITER project draws on the best in the world in addressing a global energy challenge by an unparalleled international partnership to create 'star-stuff' on Earth, to demonstrate the scientific and technological feasibility of fusion energy. SRNL's experience and expertise in large-scale tritium processing systems and its track record of effective project execution form a unique combination that is key to the success of this unique project."

The TEP is estimated to be an eight-year project, with a cost of about $60 million. Initial activities will focus on international safety and licensing, computer modeling of the process, and design support. Starting in 2010, the components of the TEP will be procured, assembled, tested and shipped to Cadarache, France, by 2014.

When the international partners signed the agreement last November to begin construction of the project, U.S. Secretary of Energy Samuel W. Bodman said, "The U.S. is proud to be part of this partnership, and to join in the pursuit of nuclear fusion as a source of clean, safe, renewable and commercially deployable energy for the future."

Fusion energy is an important component of President Bush's Advanced Energy Initiative (AEI), given fusion's potential to become an attractive long-range option for the U.S. clean energy portfolio. In fiscal year 2006, DOE allocated $25 million to ITER and the President, as part of the AEI, has requested $60 million for U.S. ITER support in fiscal year 2007.

Contact Philip Lord at plord@aikenstandard.com

What does it mean?

- The Savannah River National Laboratory will participate in an international partnership to study the feasibility of a fusion power reactor.

THE AUGUSTA CHRONICLE
Augusta, Georgia
Circulation 82,000 Daily
95,000 Sunday
Wednesday, March 7, 2007 Page 14 Page 1 of 2

S. Carolina considering wind power

By Kirsten Singleton
Morris News Service

COLUMBIA — Ralph Nichols, a Savannah River National Laboratory engineer, can envision a time when ocean breezes power the production of hydrogen that is used to generate electricity for South Carolina homes and businesses, particularly in remote areas where access to other power sources is scarce.

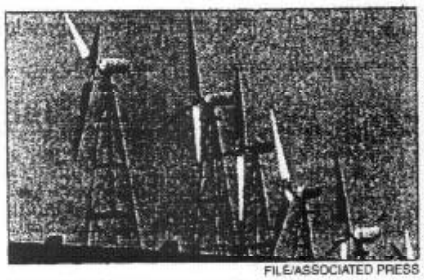
The result: a clean-burning fuel source that is entirely homegrown.

"All the pieces exist," Mr. Nichols said.

What's been lacking is coordination between researchers and energy companies, industry leaders and governmental agencies.

That coordination took a big step forward last week when experts from around the country and around the world met in Charleston for the first time, during the two-day Southeast Regional Offshore Wind Power Symposium.

Their vision? Jobs. Millions of dollars poured into the Georgia and Carolina economies. Energy security. Clean-burning fuels. All founded on the winds off the Southeastern shore.



FILE/ASSOCIATED PRESS

Other states, such as California, already use wind-powered generators. These are positioned in the Altamont Pass near Tracy.

Their conclusions? Offshore wind-power production is possible in the United States, the Carolinas and Georgia are particularly well-suited to the task, and it's time to get started.

Offshore wind is "a big resource," said Jeff Freedman of AWS Truewind, which provides the wind maps, forecasting, modeling and other services needed to create an offshore wind park.

Europe generates electricity from offshore winds, but no such projects exist in the United States. Two, though, are in the works off the

Please see **WIND** *on* **PAGE 8A**

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Augusta, Georgia
Circulation 82,000 Daily
95,000 Sunday
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Wind

Continued from 1A

shores of Long Island, N.Y., and Massachusetts.

"We're a little behind them in terms of engineering and planning because we haven't been thinking about it that much," Mr. Nichols said.

Mr. Freedman said the Georgia-Carolinas region holds great possibility because of its wide continental shelf – important because technology has limited off-shore wind farms to areas where the water is less than 50 feet deep.

How much energy is produced depends on several factors, including the size of the project.

The Long Island park, for example, is expected to consist of 40 turbines capable of generating about 140 megawatts, enough to power 44,000 homes, according to WindWorks Long Island, a partnership supporting the project.

There are impediments to developing offshore projects, and drawbacks.

Among them: startup costs that run into the millions, the potential disruption of marine-based industries during construction, concerns over whether wind power will be more expensive than other sources and the aesthetics of wind turbines dotting the horizon. For the Long Island project, some turbines will be as close as 3.6 miles offshore.

In the Southeast, on a clear day, turbines probably could be seen along the horizon five to six miles out, Mr. Freedman said.

Experts also point out the benefits – notably, the potential for a homegrown energy source and the economic development and jobs that would result.

South Carolina imports almost all of its fuel sources.

"That's dollars that we have to send outside the state," said Laura Varn, Santee Cooper's vice president for corporate communications.

South Carolina Electric & Gas spokesman Robert Yanity said the company is interested in learning more about wind power.

But it's investing in nuclear power to meet the demand expected by 2015, he said.

Support the PEAK ALERT Program at SRS Summer 2007

Peak electrical demand at SRS usually occurs:

- Between 11:00 am and 4:00 pm on Mondays through Thursdays
- When daytime temperatures and humidity are high, following a relatively warm night

When the Site issues the Peak Alert announcement, implement the PEAK ALERT checklist:

1. Continue working safely and efficiently.
2. Raise thermostat settings 3 degrees to reduce cooling demand by 25%, and reduce cooling costs.
3. Postpone non-urgent work which uses PCs, copiers, and other non-essential heat producing electrical equipment.
4. Reduce lighting where safely appropriate.
5. Turn off lights and equipment in unoccupied offices, conference rooms, and other work spaces.
6. Close outside doors, windows, and blinds.
7. Dress appropriately for hot weather.

The conservation of electrical power during Peak Alert announcements:

- Conserves a valuable commodity
- Minimizes the environmental impacts of peak power generation
- Makes electrical power available for other electrical customers in our area
- Postpones the requirement for new peak power generating facilities
- Reduces SRS operating costs

Over the summer of 2006, the power saved by participants of the SRS Peak Alert program could have provided electrical service to over 500 homes* an hour during the peak alert periods!

**Based on an average SCE&G residential customer*

M03R01411_01.ai

Tuesday, May 15, 2007

Meetings & Notices

Expand All Collapse All

WSRC Morning Safety Report: Click here to access today's report.

WSRC Safety Conference
There are still openings to attend the 2007 Safety Conference to be held June 12 and June 13 at USCA . Employees attending the breakout sessions will be given training credit on TRAIN. Family Night is June 12 from 6-8 p.m. and is open to everyone.

If you are interested in attending, please notify your department point of contact or call Chris Fallaw, 7-9058. To view the breakouts and agenda, click on the this link: (http://shrine.srs.gov/html/msd/safconf/07/index.htm)

Peak Alert Announcement -- Do Your Part
Peak electrical demand at SRS usually occurs between 11 a.m. and 4 p.m., Mondays through Thursdays, and when daytime temperatures and humidity are high, following a relatively warm night.

When the Site issues the Peak Alert announcement, implement the Peak Alert checklist:

1. Continue working safely and efficiently.
2. Raise thermostat settings 3 degrees to reduce cooling demand by 25 percent, and reduce cooling costs.
3. Postpone non-urgent work that uses PCs, copiers and other non-essential heat producing electrical equipment.
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The conservation of electrical power during Peak Alert announcements conserves a valuable commodity, minimizes the environmental impacts of peak power generation, makes electrical power available for other electrical customers in our area, postpones the requirement for new peak power generating facilities, and reduces SRS operating costs.

Over the summer of 2006, the power saved by participants of the SRS Peak Alert Program could have provided electrical service to over 500 homes* an hour during the peak alert periods.

*Based on an average SCE&G residential customer

WSRC S/RID Updates

THE AIKEN STANDARD
Aiken, South Carolina
Circulation 17,500 Daily
18,000 Sunday

Friday, April 20, 2007 Page 3 A Page 1 of 1

North Augusta celebrates Kids Earth Day

Staff reports

This is Aiken County Litter Awareness Week and PalmettoPride has a number of events planned, culminating in Kids Earth Day on Saturday, April 21.

The week began in the North Augusta area with a Paul Knox Middle School cleanup on Monday, followed by cleanup on Highway 1 between Revco Road and the Georgia State line.

On Wednesday, the plan was to clean up on Atomic Road from Martintown Road to the Highway 1 overpass. Thursday a group will be worked to spruce up Highway 25 from Bradleyville Road to Walnut Lane and another group will work on Ascauga Lake Road. Friday, the Aiken County cleanup will continue along Sudlow Lake Road.

Then on Saturday Palmetto Pride will join with the Columbia Marionette Theatre to present "Litter Trashes Everyone" during the annual North Augusta Kids Earth Day. The marionette and hand puppet show will be presented at 11 a.m. and 1 p.m. and shares the message that everyone has a responsibility to help keep the Earth clean and beautiful.

Want to go?

- **What?** Kids Earth Day
- **When?** Saturday, April 21
- **Where?** Lions Memorial Field, North Augusta
- For more information, call 441-4224 or visit www.northaugusta.net.

The shows are just one part of Kids Earth Day in North Augusta, which will take place from 10 a.m. to 2 p.m. on Saturday at Lions Memorial Field.

Admission to the Earth Day's activities is a donation of one aluminum can.

In addition to the PalmettoPride-sponsored shows, there will be dozens of exhibitors who will share information about plants, animals and the environment.

Among the returning favorites are S.C. Department of Health and Environmental Control's giant earth ball, Tony Mills and his animal friends from the Savannah River Ecology Lab and meteorologist Jeff Rucker of WAGT TV, who is bringing a weather balloon. Those attending Kids Earth Day will also get to experience an earthquake.

Other exhibitors include Aiken Young Farmers, plant seedlings and trees; Savannah River Archaeology, cookie dig, artifacts and equipment; Aiken Backyard Hobby Beekeepers, live bees in observation hive; South Carolina Department of Health & Environmental Control; SCE&G, Safety City; SRS-Ruth Patrick Science & Education Center, earthquake demo; NSC's Fort Discovery; Savannah River Ecology Lab — Tony Mills and his animal friends; Aiken County Emergency Services, ambulance tour and meet the EMTs; Sierra Club; South Carolina National Wildlife Federation; Augusta-Aiken Audubon Society; Aiken County Adopt-A-Highway; Aiken Center for Alcohol & Other Drug Services; Toyota of Augusta, hybrid vehicle.

Among the sponsors are CommuniGraphics, The Family Center, Energy*Solutions*, SCE&G, Bridgestone/Firestone, Coca Cola of Augusta, The Augusta CW and NBC Augusta.

For more information, call 441-4224, visit www.northaugusta.net or e-mail amay@northaugusta.net.

Thursday, April 19, 2007

Meetings & Notices

Expand All Collapse All

WSRC Morning Safety Report: Click here to access today's report

Earth Day - April 22
This year's theme, "Think Globally...Act Locally: Make the Clear Energy Choice Every Day," encourages each of us individually to consider our own commitment to protecting the environment and conserving our natural resources. Local Earth Day events in North Augusta and August offer opportunities to learn about programs in our communities and personal actions that support environmental sustainability. Go to http://www.scdhec.net/environment/earthtoday/ to learn other things you can do to protect our environment.

Liberty Mutual Representative on Site April 26
Liberty Mutual now has a local Georgia representative located in Augusta. Tiffany Robinson will be available Thursday, April 26, 703-47A, Rm. 175. This is the Human Resources Building and is located adjacent to the former A-Area Medical Facility.

More Information

Submit your Safety Conference Photos
It's time to submit your family photos for the 2007 SRS Safety Conference "Why I Work Safely." To access the form go to : Lotus Notes, ?, Sitewide Apps., Safety Conference Photo Release Form and follow the instructions. Complete the photo release form, upload pictures and submit electronically.

If your picture is being sent by site mail:
Complete the form; print the completed form; and mail the picture and a copy of the form to Mattie Odom, 717-12F, by May 31.

Upcoming Server Outages
Windows Server Outage

Thursday, April 19			
Time	**Service Impact(s)**	**Reason for Outage**	**After the outage, users should:**
4/19 6 p.m. - 4/20 12:15 a.m.	Access to Notes, ShRINE, FileMaker applications, Oracle web-based applications and ITS centrally managed Windows Servers will be intermittently unavailable during the outage period. This includes	Patch Manage-ment	If access problems persist, restart computer. Should problem continue, contact your Help Desk.

October 6, 2006

Message from James Rispoli, Asst. Secretary of Energy, Office of Environmental Management

The Department of Energy's "*Change A Light*" Campaign officially started on Wednesday, October 4, 2006. Secretary Bodman has invited every one of us to join him in taking a pledge to change at least one standard light bulb in your homes to an Energy Star qualified bulb. These bulbs not only help protect the environment, but they last up to 10 times longer than standard bulbs and use at least 2/3 less energy. And they will reduce your utility bills.

With more than 30,000 employees and contractors, EM as an organization can make a big contribution toward our nation's energy security and environmental protection if each and every member of the EM family takes the pledge and changes just one light bulb to an Energy Star-qualified light bulb. If you haven't done so already, please log on to the DOE Change A Light website at http://www.energy.gov/pledge.htm and fill out the pledge form. The EM goal is for 5,000 federal and contractor employees to "Change a Light."

The campaign lasts until November 30, 2006. However, it is my hope that whenever you change a light bulb, it will be to an Energy Star-qualified one. I very much appreciate your active participation in this environmentally friendly energy conservation effort.

Thank you,

Jim Rispoli

November 20, 2006

Make a Pledge to the DOE "Change a Light" Campaign
The WSRC team has been asked to participate in this worthwhile DOE campaign. Bob Pedde sent a message to all employees requesting their participation; the response, however, has not been strong. There are only a ten days left before the campaign ends. Please click on the website highlighted in the letter sent previously to all contractor employees and do your part in the "Change a Light" campaign.

Greetings to All DOE-EM Federal and Contractor Employees:

With only two weeks and one day before the "*Change A Light*" Campaign closes on November 30th, 2006, I would like to remind every one in the EM family, federal and contractor employees alike, to take our pledge at the DOE web site http://www.energy.gov/pledge.htm, especially if you haven't done so already.

The official tally of the pledge goal reached on November 15, 2006, by each office within the Department of Energy is reproduced below for your information. As you can see EM's pledge count reaches a total of 958 which amounts to 19% of our organizational goal. Obviously, we need to redouble our effort. Since I believe that our slow progress in reaching our Campaign Goal reflects our inability to reach the majority of the employees in our contractor organizations I am reiterating my previous request that every EM federal employee (especially those in the field offices) forward this e-mail to your counterparts at our contractor organizations.

Thank you for your active participation in this energy conservation effort and best wishes to all!

Sincerely,

DOE "*Change A Light*" Campaign
Stephen C. Lien,
DOE, EM-POC
EM-23

Donell Jenkins/DOE/Srs
10/25/2006 10:54 AM

To DOE-SR-EMPLOYEES
cc David02 Wolfe/WSRC/Srs@srs
bcc
Subject Fw: Change A Light Campaign - 10% of EM goal in 2 weeks - Please Get The Word Out and Make a Pledge

As the Energy Conservation Program Manager for the Site, I encourage you to join in this campaign. I made my pledge to change out one bulb with an Energy Star bulb. It takes only a few minutes to make your pledge (**http://www.energy.gov/pledge.htm**). Your pledge must be made by November 30, 2006. Remember, you must follow through and change out at least one bulb. We can together make a difference and secure the future for the next generation. Thank you in advance for your cooperation.

----- Forwarded by Donell Jenkins/DOE/Srs on 10/25/2006 10:35 AM -----

estar@energystar.gov
10/25/2006 08:57 AM

To donell.jenkins@srs.gov
cc
Subject ENERGY STAR Change a Light, Change the World

THANK YOU for your pledge! You are part of a growing number of people taking steps to save energy and help fight global climate change.

Now that you've done your part, please consider inviting others to follow your lead! We're making strides, but it's going to take even more of us to tackle our energy and environmental challenges. So, spread the word (http://www.energystar.gov/index.cfm?fuseaction=cal.showTakeAction#spread_word) and encourage others to change a light.

For more ways to save energy, sign up here (http://www.energystar.gov/index.cfm?fuseaction=cal.pledgeTakerReceiveEmails&email=donell.jenkins@srs.gov) to receive quarterly e-mails from ENERGY STAR with energy-saving tips.

With sincere thanks,

The ENERGY STAR Change a Light Campaign Team

----- Forwarded by Donell Jenkins/DOE/Srs on 10/25/2006 10:33 AM -----

Jeffrey Allison/DOE/Srs
10/19/2006 02:46 PM

To DOE-SR-EMPLOYEES
cc
Subject Fw: Change A Light Campaign - 10% of EM goal in 2 weeks - Please Get The Word Out and Make a Pledge

----- Forwarded by Jeffrey Allison/DOE/Srs on 10/19/2006 02:45 PM -----

"Lien, Stephen"

October 31, 2006

To All WSRC Team Employees:

Secretary of Energy's Request to "Change a Light"

Earlier in October, you may have seen an e-mail communication regarding a DOE campaign toward energy security and environmental protection.

The Secretary of Energy's request is simple - for each of us to commit to changing at least one standard light bulb in our homes, replacing it with an Energy Star qualified bulb. These bulbs use one-third of the energy of a standard incandescent light, last up to ten times longer, and save an average of $30 or more in energy costs over a bulb's lifetime.

This is an opportunity for us to demonstrate leadership in the area of energy independence, and I would encourage you to join me in pledging to "Change a Light."

You can learn more information, and pledge your support, at the following link:

http://www.energy.gov/pledge.htm

Bob Pedde
WSRC President

- The Library is the initial point of contact for subscription purchases and should to be contacted for all subscription requests.
- Site organizations are responsible for forecasting and submitting their annual subscription budget. Employees requesting subscriptions are responsible for ensuring budget is available to make subscription purchases prior to the request.
- If the Library is not able to obtain the subscription through a Site subscription vendor, the requestor will be notified via email to contact their field procurement engineer to purchase the subscription.

Subscription definition guide sheet rev3 sept 28 2006.doc

Badge Office Power Outage, Oct. 27

Friday, Oct. 27, from noon until close, the Badge Office computers will be shut down for maintenance. If you need a photo badge, please make sure that you or your personnel report to the badge office by 11:15 a.m. If you have a visitor coming to the Site, make sure the paperwork is submitted and approved by your management by 11 a.m. on Friday, Oct. 27.

If you have any questions, contact Marji Pretzello at 5-3186.

IDEAS Exhibit Today

An IDEAS exhibit will be set up in the 766-H cafeteria between 11a.m.-1 p.m. today. Stop by during your lunch break and hear about the changes planned for FY07, future promotions, and IDEAS awards available to all submitters. While you are there don't forget to register for a drawing to give away an Outback gift card and movie tickets with refreshments (Congratulations to last week's winner in N Area, Jeri Hutchinson). To learn more about the IDEAS Program, click on the URL http://shrine.srs.gov/html/fssbu/hr/compensate/04guide.htm

Click on the attachment below to see what other activities are taking place during October.

Celebrating.pps Oct 25, 2006 "on-line"

Message from James Rispoli, Asst. Secretary of Energy, Office of Environmental Management

The Department of Energy's "*Change A Light*" Campaign officially started on Wednesday, October 4, 2006. Secretary Bodman has invited every one of us to join him in taking a pledge to change at least one standard light bulb in your homes to an Energy Star qualified bulb. These bulbs not only help protect the environment, but they last up to 10 times longer than standard bulbs and use at least two-thirds less energy. And they will reduce your utility bills.

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News SRS in the News

Collapse All Expand All

SRS OnLine

Thursday, January 4, 2007

Meetings & Notices

Expand All

Collapse All

WSRC Morning Safety Report: Click here to access today's report.

Savings & Investment Plan (SIP) Fund Lineup Changes Presentation Now Available
The Power Point presentation slides used in the Dec. 13 SIP Fund Changes Employee Information Meeting are now available online. The slide presentation can be found on the Human Resources web page under "Benefits." You may also access the Power Point presentation slides by clicking here.

Laptop Users May Receive Notice to Install Pointsec Encryption Software
In the coming weeks, users of site laptops that can be taken offsite will be required to install a new, easy-to-use software package called Pointsec. Because Pointsec encrypts the entire disk, all data, including Unclassified Controlled Information (UCI), will be protected while on the PC, even if it is lost or stolen. Entrust/ICE is still required on all laptop computers that leave the site boundary to provide for encryption of files on removable media and email to other DOE sites.

Note: Do not install Pointsec until you receive an email notice. If you are required to install Pointsec, you will receive an email with instructions how to install and activate this new security package. For questions or concerns, contact the appropriate help desk facility: WSRC Team employees, 5-HELP (5-4357), DOE employees, 2-9032.

Personnel Relocation and Furniture Reconfigurations Process
As provided in the WSRC 1D Manual, Procedure 3.01 "Administrative Space Utilization and Personnel Relocation," all personnel relocations and furniture reconfigurations require an approved Furniture/Move/Reconfig Request Form. Go to the Site Housing home page by performing a quick search on "site housing" on ShRINE. Any employee can submit a request, view schedules or obtain a Move Package by clicking on the link of interest.

More Information

IDEAS Supports Energy Conservation Month
Got IDEAS on how to cut energy costs or eliminate inefficiencies? If you do, this is the month to submit them through the IDEAS Program in support of Energy Conservation Month. A lot of employee suggestions have been captured over the last few years that have led to substantial energy savings for the site. However, constant change in the workplace makes it easy to overlook or miss an opportunity to conserve energy. Now is the time to identify these areas for improvement and you may become eligible for the Monthly Award as well as other great give-aways. Open the attachment below for details on what's in it for you!

Energy Conservation.pps

Thursday, January 18, 2007

Meetings & Notices

Expand All

Collapse All

WSRC Morning Safety Report: Click here to access today's report.

SRS Citizens Advisory Board Meeting
The SRS Citizens Advisory Board will hold its next bi-monthly meeting Jan. 22-23 at the Crowne Plaza, 130 Shipyard Drive, Hilton Head Island, S.C. The combined committee session on Jan. 22 will include discussion of the 2007 workplan, status update on the Salt Waste Processing Facility and draft motions. The Jan. 23 full board meeting will include consideration of a draft motion on Plutonium Disposition, briefings on S.C. environmental study results and SRS facilities disposition status. The Board will select membership candidates and elect committee chairs. Public comment sessions will be offered throughout the day. For more information, contact Gerri Flemming, 2-7886.

Windows Server and UNIX Password Tool (in ShRINE) Outages

Friday, Jan. 19, - Saturday, Jan. 20			
Time	**Service Impact(s)**	**Reason for Outage**	**After the outage, users should:**
Friday, 1/19, 7:30 pm until Saturday, 1/20, 2:30 a.m.	Access to email, I: drives, workgroups, ShRINE, FileMaker, Oracle web-based applications, and ITS centrally managed Windows Servers will be intermittently unavailable.	Maintenance	If access problems persist, restart computer. Should problem continue, contact your Help Desk.
Saturday, 1/20, 9 a.m. - 6 p.m.	The capability to change the password for Passport and DCR (Document Control Register) (UNIX password) will be unavailable due to system maintenance activities.	Maintenance	After the outage, resume use of the password utility to reset UNIX passwords. If access problems persist, contact your Help Desk.

IDEAS = Energy Conservation
IDEAS are coming in every day with suggestions on how SRS can save energy. One employee idea being reviewed by the Energy Council is the use of "light pipes" during daylight hours to reduce the cost of electricity. If you have suggestions, make sure you submit them through Lotus Notes.

This is the month to identify ways to save energy and cut costs. Constant change in the workplace makes it easy to overlook or miss an opportunity to conserve energy. What's in it for you? A chance to win a monthly award valued up to $250! This month's award is an energy package that includes an Energy Star outdoor light set, an emergency flashlight (uses no batteries), and eight compact fluorescent bulbs. AND... if your IDEAS is accepted, a drawing will be held to give away five $10 Blockbuster gift cards and five

Monday, March 12, 2007

Meetings & Notices

Collapse All

Expand All

WSRC Morning Safety Report: Click here to access today's report.

SRS Job Posting
The following position will be posted in Shrine on the Human Resources home page under "Internal Posting, SRS Competency Based Posting System," "Current Positions," (or click here) through Thursday, March 22, 2007.

M&O
First Line Manager, Rigging and Cranes

More Information

Interviewing and Communication Skills Training Class Offered
Interviewing and Communication Skills Training (TTSSAS04) will be offered March 21, 8 a.m.-noon, 766-H, Room 2108. You can register in TRAIN through your training coordinator, or self-regester by going to SHRINE and selecting Training Topics; TRAIN Course Catalog and Self Registration; type in your User ID and PIN Code; under Keyword search type in TTSSAS04. Click on the Class Code for March 21 to self register. For more information, contact Rick Cook, 2-0770.

Publishing
Works created by WSRC employees, such as conference papers, journal or magazine articles, or contributions to other published works are considered "works for hire." Under its managing and operating contract, WSRC is required to maintain ownership of these works and cannot assign its copyright interests (without specific DOE approval) to a professional association or publishing company. Professional associations and publishing companies may send forms to employees that may contain provisions to assign copyright in the work, agree to indemnification or warranties, agree to confessions of judgments, or other provisions of personal obligation and risk. Employees should not sign these documents, but should send the documents to Jean Campbell, Building 773-41A. Contact Jean Campbell, 5-3852, with questions or for assistance.

SRS Celebrates Women's History Month
March is National Women's History Month. The SRS Multicultural and Diversity Committee (MDC) asks you to test your knowledge of women's history by answering the following questions (answers are given below):

More Information

Reducing Petroleum Use
Walking, riding a bicycle and taking mass transit are great ways to reduce petroleum use. But those choices are not always available to meet our needs. When you need to drive, make sure you help

conserve energy, prevent pollution and get the most out of every penny at the pump! For a handful of the best ways to do so, click on the link below.

http://www.eere.energy.gov/consumer/save_energy/

IBARS System Maintenance
IBARS reports will be unavailable on Friday, March 16, due to required system modifications. Other IBARS functions may be temporarily unavailable during the day on Friday. For more information, contact Cyndy Ledbetter, 2-7106.

Instructor Training Courses

- Basic Instructor Training and Job Analysis Training
- Offered by the DOE National Training Center, 766-H
  1. Curriculum Development - June 18-22, 2007
  2. Job Analysis - July 23-27, 2007

More Information

Informal Recognition - It's Never Out of Style
Praise your employees often. Remember, you get out only what you put in. Authors Beverly Kaye and Sharon Jordan-Evans reference six ways to praise or recognize employees in their book entitled, *"Love 'Em or Lose 'Em, Getting Good People to Stay."* Don't let a moment of praise slip away . . .

1) Spontaneously - Catch people doing something right and thank them right then and there.
2) Specifically - Praise people for specific accomplishments.
3) Purposefully - Take an employee to lunch or dinner to show your appreciation of work well done.
4) Privately - Go to your employee's office to give a personal thank you in private.
5) Publicly - Praise an employee in the presence of others (peers, your boss, family members).
6) In Writing - Send a letter, memo or e-mail. Send a copy to team members or higher levels of management.

March.pps

News SRS in the News

Expand All

Collapse All

SRS In The News - Daily Newspaper Clips
Weather Forecast
Professional Societies Information
SRS Outage Database:

Expand All Collapse All
To expand and view a story:
Click on a title or the dark red arrow.
To collapse/close a story:
Click on the empty line of space above the story (formerly held by the title) or the dark red arrow.

Click on the button below to visit ShRINE's
Employee Communications Archives.

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Lower Savannah, SC (Designated - Attainment)							
DECEMBER 2007 ALLENDALE COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
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.	Completed. An Air Quality Contact was first designated in 2003. Linda Sanders is the current Air Quality contact.	Mar-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Support state-wide emission reduction efforts	Allendale County will support the efforts of SC DHEC regarding state-wide emission reduction strategies.	Completed. The county supported SCDHEC in the promulgation of the following regulations: SC61-62.2 "Prohibition of Open Burning" & SC61-62.5 Std. 5.2 "Control of Oxides of Nitrogen.	June 25, 2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Measures taken to present	Allendale County Emergency Management Agency distributed to all county employees, information about Air Quality basics and protective measures.	Completed.	March 1, 2006	n/a directionally sound	n/a directionally sound	n/a	See Comment #3

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Lower Savannah, SC (Designated - Attainment)							
DECEMBER 2007 BAMBERG COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
1. 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.	Completed. Booker Patrick is the current Air Quality Contact.	2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
2. Support Statewide efforts	The county will support the efforts of SCDHEC regarding statewide reduction strategies.	Completed. The county supported SCDHEC in the promulgation of the following regulations: SC61-62.2 "Prohibition of Open Burning" & SC61-62.5 Std. 5.2 "Control of Oxides of Nitrogen.	June 25, 2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
3. Bamberg County Handy Ride transportation system	Handy Ride, the sister-system to the Allendale County Scooter, will use empty seats on existing agency vehicles to provide better transportation options for the citizens of Bamberg County. Vehicles from the Allendale and Bamberg systems will be used to expand transit opportunities for residents of both counties.	Completed	May, 2006	n/a directionally sound	n/a directionally sound	n/a	
4. USDA grants to restore longleaf forests	Cropland in Orangeburg, Calhoun and Bamberg counties is eligible to participate in the latest U.S. Department of Agriculture Farm Service Agency's Conservation Reserve Program designed to restore the longleaf pine.	Available	October, 2006	n/a directionally sound	n/a directionally sound	n/a	

Comments:

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2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

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A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Lower Savannah, SC (Designated - Attainment)							
DECEMBER 2007 BARNWELL COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
Global Nuclear Energy Partnership	Currently, EnergySolutions and the Savannah River National Laboratory, which is partnered with the Economic Development Partnership of Aiken and Edgefield counties, are working to complete applications by May 30 to be one of the sites selected for the nuclear recycling program.	Under the figures released by DOE January 30th, SRNL's project will receive $468,420 and EnergySolutions will receive $963,151 for its Barnwell project.	2007	n/a directionally sound	n/a directionally sound	n/a	
Air Quality Contact	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.	Measure under consderation/Designate Ozone Action Coordinator. The Emergency Management Director, Roger Riley, will be the Air Quality Contact.	2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Support state-wide efforts	Barnwell County will support the efforts of SC DHEC regarding statewide emission reduction strategies.	Completed/supports SC DHEC regarding statewide emission reduction strategies.	Continuing	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Bio-Diesel/ Alternative Fuels	Barnwell County will be seeking information on Alternative Fuels.	Measuer under consideration/Not available in Barnwell County at this time	Not available in Barnwell County at this time	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
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.	Completed/Implemented in 2003 and continuing	Implemented 2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Stricter Controls of Illegal/ Unauthorized Outdoor Burning	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.	Completed/Implemented in 2003 and continuing	Implemented 2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Vehicle Replacement	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.	Measure under consderation	Still under review	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Community Awareness and Education	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.	Completed/Implemented 2003 and Ongoing	Implemented 2003 and Ongoing	n/a directionally sound	n/a directionally sound	n/a	See Comment #3

Comments:

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8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
DECEMBER 2007 CALHOUN COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality							
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.	Completed. Woody Rucker was designated as the Air Quality Contact.	Mar-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Support state-wide efforts	Calhoun County will support the efforts of SC DHEC regarding state-wide emission reduction strategies	Completed. The county supports the efforts of SCDHEC requarding state wide emmission reduction strategies.	Aug-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Heavy Equipment operation	Delay/Reschedule mowing and motorized construction on Ozone Action Days.	Completed. Outdoor activities such as mowing and motorized construction will be done before 12:00 pm.	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Small Engine operation	Delay/Reschedule landscaping activities with small engine use on Ozone Action Days.	Completed. Landscraping activities with small engine use will be done before 12:00 pm.	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Fueling	Do not "top off' fuel tanks when refueling.	Completed. The county will not "top off" fuel tanks when refueling.	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Buildings	Have employees turn off computers and lights daily.	Completed. County employees will turn off lights daily.	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Painting	Restrict indoor and outdoor painting on Ozone Action Days.	Completed. Employees will restrict indoor and outdoor painting on Ozone Action Days.	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness	Promote employee education/awareness of ozone issues.	Completed. The county promotes awareness of ozone issues.	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Schedules	Change outside employee work hours to accommodate summer temperatures.	Completed. The Public Works employees changed their working hours from 8:00 am - 5:00 pm to 7:00 am - 4:00 pm to get an early start on outdoor activities.	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Longleaf Pine Tree Restoration	Calhoun County's local Farm Service Agency will promote this Conservation Reserve Program	Program sign up will be ongoing	Dec. 1				

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Lower Savannah, SC (Designated - Attainment)							
DECEMBER 2007 ORANGEBURG COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
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	Completed. An Air Quality Contact was first designated in 2003. The current Air Quality Contact is George Bonnette.	Mar-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Support state-wide efforts	Orangeburg county will support the efforts of SC DHEC regarding statewide emission reduction strategies.	Completed. The county supported SCDHEC in the promulgation of the following regulations: SC61-62.2 "Prohibition of Open Burning" & SC61-62.5 Std. 5.2 "Control of Oxides of Nitrogen.	June 24, 2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Stakeholder development	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)	County Administration, Shop, Public Works, and EMS	Jan-06	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Integrate notification procedure	Integrate the notification procedure into existing Notification procedures using organic resources of the Emergency services dept/EOC.	Emergency Services Office can notifty through telephone and public information systems	Jan-06	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Public education program	Utilize existing public education programs to include ozone program using organic resources of OES dept and Project Impact program	Presentations are being made when we can	Jul-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Vehicle operations	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	County Administrator has instructed fleet manager to persue purchasing alternative vehicles when replacing vehicles	May-06	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Vehicle operations tracking	County is installing GPS/vehicle monitors which Will also monitor all engine idling time and and Miles driven. Will help identify options to reduceVehicle idling and unneeded mileage	Tracking has been implemented on public works vehicles, EMS vehicles, Administrators vehicle, and heavy equipment vehicles	Jun-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Recycling News Article	An article was published Sunday, April 22, 2007 in the Times and Democrat detailing the county's recycling program.	The article covered the many options available to Orangeburg residents who wish to recycle.	Apr-07	n/a directionally sound	n/a directionally sound	n/a	See Comment #4
Proposed Zoning Ordinance	A public hearing on the county's proposed zoning ordinance was held at the Santee Cultural Arts & Visitors Center on May 29th, 2007. "We want to promote smart growth as opposed to urban sprawl and funnel development into areas that can be facilitated with infrastructure such as water, sewer and other improvements," consultant Dan Vismor said. "We have also tried to delineate the rural communities."		May-07				
America Recycles Day	A partnership has been formed by the County of Orangeburg, JJS Developments Co. LLC o/a Electronic Recycling Services, Office Max of Orangeburg, the Orangeburg County Conservation District and South Carolina State University Honors Program to recycle Computers, monitors, phones, faxes, printers, copiers, power supplies, UPS, hubs, switches, routers, cell phones, rechargeable batteries, wet or dry lead acid batteries and all types of cables.	Orangeburg County has made arrangements with ERS to place a container at Office Max on Thursday, Nov. 15, which is America Recycles Day.	Nov-07				

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8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

US EPA ARCHIVE DOCUMENT

Enclosure 4

December 2007

FINAL EAC Progress Report Document
Statewide EAC Activities

D H E C

PROMOTE PROTECT PROSPER

Enclosure 4
South Carolina's 8-hour Ozone Early Action Compact
Statewide EAC Activities
December 2007

A Notice of Drafting (NOD) was published in the South Carolina *State Register* on August 23, 2002, expressing our desire to pursue an early action plan that provides for ambient air in South Carolina that meets the more restrictive federal standard prior to the deadline(s). The NOD requested those interested in participating in an early action plan for ground-level ozone provide that interest in writing to the Department. Due to the timing of events and the requirements of the State's Administrative Procedures Act, a second drafting notice was published in the *State Register* on April 25, 2003, the purpose of which was to extend the comment period.

The South Carolina Department of Health and Environmental Control (Department) established a large stakeholder group consisting of federal, state and local government officials, environmental groups, citizens groups, business, industry and private citizens. On August 26, 2002, correspondence was issued to the stakeholders seeking active participation in the development of an Early Action Plan (EAP) regarding ground level ozone reduction in South Carolina and providing a list of informational forums scheduled throughout the state. Surveys were a part of the informational forum and included an opportunity for attendees to request active participation in the EAP process. Copies of sign-in sheets, meeting agendas, and survey forms were included as Attachment 4 of the June 2003 Progress Report.

Local stakeholder participation was obtained through the involvement of the county administrators and/or county councils. On November 12, 2002, the South Carolina Association of Counties issued correspondence to each county council chairman and county chief administrative officer stating support of each county's participation in South Carolina's 8-hour Ozone Early Action Compact (EAC). Also on November 12, 2002, the Department issued correspondence to county administrators seeking active stakeholders for participating in the EAC. This correspondence included a working draft copy of the EAC. As a result, Department staff participated in numerous county council meetings and other discussions (telephone and electronic mail) with county officials seeking local participation in the EAP process. On December 12, 2002, Department staff presented at the yearly meeting of county administrators sponsored by the South Carolina Association of Counties. At the request of several counties and the Association of Counties, the Department again issued correspondence to the county's seeking participation.

On December 20, 2002, the Department submitted to EPA the Early Action Compacts received as of that date, signed by the respective local participant and DHEC representative, R. Lewis Shaw, Deputy Commissioner for Environmental Quality Control. On December 27, 2002 and again on December 31, 2002, the Department submitted additional compacts received from local participants. As of December 31,

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2002, forty-five of the forty-six counties in South Carolina elected to become active stakeholders in the South Carolina Early Action process.

One condition set by EPA Region 4 for York, Chester, and Lancaster counties participation in the EAC, requires South Carolina continue to actively participate in the Charlotte Region Integrated Air Quality Management Pilot Project. This project has since been renamed "Sustainable Environment for Quality of Life" (SEQL). In addition to the milestones established in the Early Action Compact, South Carolina and North Carolina were required to develop a specific memorandum of understanding (MOU) detailing how this requirement will be met. On March 14, 2003, Mr. R. Lewis Shaw, Deputy Commissioner for Environmental Quality Control at the Department and Mr. William G. Ross, Jr., Secretary for the North Carolina Department of Environmental and Natural Resources signed the MOU, included as Attachment 8 of the June 2003 Progress Report.

The Department continues to be an active partner in the SEQL project. As a part of the SEQL project, the Catawba Council of Government (COG) partnered with the Department and other stakeholder groups to compile sample ordinance language, policies, best management practices (BMPs) and program guidance for the development and implementation of SEQL action items geared to the local governments within the SEQL project area. This information should prove helpful to local governments in their 8-hour ozone early action efforts. In December 2004, a CD with these documents was provided to all participating areas. The information is also available on the Department's website.

South Carolina was not required to enter into a formal agreement with the state of Georgia in regards to emission reduction strategies for the Upper and Lower Savannah areas. However, representatives from the state of Georgia attended the Lower Savannah Council of Government meeting held on February 6, 2003. Representatives from EPA also attended this meeting. In addition, Department staff attended a meeting held on February 21, 2003, in Augusta, Georgia, with local and state government officials from Georgia and South Carolina and EPA to discuss the impact of the early action process and emission reduction strategies for that area.

In 2006, South Carolina has joined forces with the State of Georgia to address air quality issues in the Augusta-Aiken-Edgefield area. While the area is attaining the 8-hour ozone standard there is much concern over the fine particulate matter standard. A stakeholder group consisting of representatives from the Georgia and South Carolina state environmental agencies as well as the Environmental Protection Agency Region 4 office, local government, industry and concerned citizens is being formed. The focus of this stakeholder group will be emission reduction efforts to address air quality. These efforts should help the area maintain the ozone attainment status as well as address fine particulate matter concerns. For additional information on the stakeholder meetings refer to the Aiken and Edgefield local progress reports.

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In February 2007 another stakeholder group was formed in the Town of Irmo located in Lexington County. While Lexington County is currently attaining the 8-hour ozone standard, there is concern over the fine particulate matter standard. The goal of this effort is to involve local stakeholders in reviewing local monitoring data and surrounding activities in an effort to implement strategies to reduce emissions. The stakeholder group includes local industry, local government, and recreation and school officials and was expanded to include neighboring Richland County as well as the Central Midlands Council of Governments (COG). Other counties and local governments within the Central Midlands COG will be invited to participate. For additional information on the stakeholder efforts refer to the Lexington and Richland County local progress reports.

The Department held a public meeting on the Early Action State Implementation Plan (SIP) submittal on August 18, 2004. The meeting was held in Columbia and broadcast around the state at local Department Environmental Quality Control offices to allow participation from all over the state. The Draft Early Action SIP was published in the *State Register* on October 22, 2004, and the public hearing was held on November 22, 2004. As deemed appropriate, based on comments presented during the public comment period, the Department finalized the Early Action SIP and submitted it to EPA on December 29, 2004. A complete copy of the submittal may be found at http://www.scdhec.gov/eqc/baq/html/eap_sip.html.

The modeling analysis completed as a part of the EAC SIP submittal demonstrates that all monitors in South Carolina will be attaining the 8-hour standard without the inclusion of measures beyond the national and regional programs already finalized. The Protocol for Early Action Compacts endorsed by EPA states that "after all Federal and State controls that have been or will be implemented by December 31, 2007, are accounted for in the modeling, the local area will identify additional local controls, as necessary, to demonstrate attainment of the 8-hour ozone standard on or before December 31, 2007." While the early action process was developed to provide local areas the option to attain the 8-hour ozone standard by December 31, 2007, and obtain cleaner air sooner than federally mandated by implementing emission reduction strategies that make sense for their respective area, South Carolina also realized that statewide emission reduction efforts would be necessary to achieve and maintain the 8-hour ozone standard.

Among the key control strategies that were developed as part of the EAC process, were revisions to state wide regulations for the purpose of providing additional reductions in ozone precursors. R.61-62.5 Standard 5.2, Control of Oxides of Nitrogen, and R.61-62.2, Prohibition of Open Burning, were published in the South Carolina *State Register* on June 25, 2004, and became effective upon publication. For more information on these regulations refer to Number 4 – Regulatory Initiatives of the State Activities enclosure.

While information pertaining to the amount of NO_x and VOC reductions that are expected as a result of these regulations is available, it is important to note that modeling indicates that all monitors will be attaining the 8-hour standard by 2007 even without these additional measures. However, the reductions from these regulations are

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quantifiable, permanent and will ensure that South Carolina obtains cleaner air sooner and helps ensure continued maintenance of the 8-hour ozone standard in the future.

Another significant control strategy that was developed through this process is the voluntary commitments that the Department has negotiated with several of the state's largest existing industrial sources to reduce and/or limit their NO_x emissions. These negotiations were the direct result of the EAC process as are the NO_x reductions that will result from them. These voluntary commitments are described in more detail in Number 8 – Other Point Source Reductions of the State Activities enclosure.

The Department believes that the sum of all these efforts will have a very real and positive impact on the health and environment of South Carolina. The EAC process has allowed the state of South Carolina to achieve reductions in ozone precursors from a variety of sources that otherwise would not have occurred and this was all done on a timeframe that was sooner than what would be required through the traditional nonattainment designation process. In addition, as a result of the local EAC plans and local efforts, awareness of air quality issues has been raised to a level that would not have been possible without the EAC process. People from around the state, who have never previously had any significant exposure to air quality issues, have participated in the EAC process and helped make decisions about improving air quality. This is perhaps, above all else, the reason why the South Carolina Wildlife Federation chose to honor the "SCDHEC Early Action Compact SIP" with their 2005 South Carolina Wildlife Federation Air Conservation Award, an award that has only been bestowed six times since 1970 (see Appendix 15 of the SC EAC SIP).

Beginning with June 2003 to present, this report represents the eighth bi-annual progress report. In addition, local plans identified the emission reduction measures under consideration by the participating county. The South Carolina EAC SIP was submitted December 2004 and supplemental information to the EAC SIP was submitted on April 20, 2005. Each of these submittals contains information updating local and state measures supporting the EAC process and can be found on the Department's website (http://www.scdhec.gov/eqc/baq/html/eap.html).

This document includes highlights of activities in the deferred nonattainment areas as well as statewide activities.

2006 Early Action Compact Summit - Participation in the recent 2006 Early Action Compact (EAC) Summit held in Columbia, South Carolina on August 16-17, 2006 was tremendous. As the first of its kind, it attracted nearly 300 stakeholders from 5 different states including representatives from 24 counties and 7 Councils of Government. Participants included representatives from federal, state and local governments as well as industry representatives, environmental organizations as well as private citizens.

Topics covered included energy conservation, diesel retrofits, land use planning, alternative fuels, commuting options and multi-modal transportation, innovative education and outreach, health impacts/lifestyle and finding the funding. Key speakers

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included Bill Wehrum, Acting Assistant Administrator for Air & Radiation, U.S. Environmental Protection Agency, and Mark MacLeod, the Director for Special Projects in Environmental Defense's Climate and Air program working out of the Washington DC office. As has been our experience with the EAC process over the past years, direct involvement by stakeholders is a critical key to overall success with initiatives for improving air quality. The EAC Summit initiative certainly proved this point again. The exchange of ideas, information and interest experienced during the sessions and other opportunities, including breaks and meals was very beneficial.

These benefits will help us all to reach our objective of attainment for the 8 hour ground-level ozone standard in the near future and reinforces a process for addressing other air quality issues. Our over-arching goal of "Cleaner Air Forever" for South Carolina will be achieved through the cooperation and collaboration of the very individuals and organizations that were represented at the EAC Summit.

To expand our outreach to those who did not make it to the EAC Summit we have created a website where electronic copies of the EAC Summit materials can be downloaded. Information on this site includes speaker bios, presentations, additional information, Department staff, registered attendee contact information, list of vendors and contact information, a list of sponsors and event photos.

Emission Reduction Strategies – As a result of the EAC process and the desire to ensure air quality in South Carolina meets the federal standards, the Department has expanded outreach activities to include both ozone and $PM_{2.5}$. The current focus is to maintain the 8-hour ozone standard through the 2007 Ozone Season, thereby returning the deferred nonattainment areas to attainment and to develop strategies to help reduce emissions that contribute to $PM_{2.5}$ levels. Local governments are being asked to be proactive (stay ahead of the standards); strengthen local measures; and, take action ("Kick things up a Notch"). Myra Reece, Renee Shealy, and John Litton, BAQ Bureau Chief and Assistant Bureau Chiefs, have met with Anderson, Greenville, Spartanburg, Richland and Lexington Counties over the last several months. As a result, work in progress is being recognized. Effort is being made to work with the EAC contacts in all counties to ensure that all activities are being captured for inclusion in future EAC progress reports.

Climate Change Discussions – The Bureau of Air Quality (BAQ) has been engaged in climate change discussions with air agencies in other southeastern states including North Carolina, South Carolina, Georgia, Tennessee and, more recently, Virginia since early 2006. Discussions between the states have focused on climate change activities in the respective states, particularly North Carolina's Legislative Commission and Advisory Committee processes. BAQ has distributed some internal outreach with regard to climate change and is incorporating climate change into outreach materials and presentations. BAQ's Education and Outreach Section has responded to numerous requests from teachers for classroom visits addressing climate change, and has addressed similar requests that have been received from community groups.

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State Planning for Greenhouse Gas Mitigation

On February 16, 2007, Governor Sanford issued an Executive Order creating the Climate, Energy and Commerce Advisory Committee (CECAC). Department staff compiled background materials to include studies, current actions, and a draft list of potential participants that will comprise five technical work groups and the decision-making body, the CECAC. The process will follow the Center for Climate Strategies-facilitated study and adoption of carbon reduction policies. It is anticipated to take a year or more to complete. The first CECAC meeting took place May 3, 2007.

To develop a Climate, Energy, and Commerce Action Plan as directed by the Governor's Executive Order, the CECAC is tasked with completion of the following specific planning recommendations:

1. Review and approval of a current and comprehensive inventory and forecast of greenhouse gas (GHG) emissions in South Carolina from 1990 to 2020;

2. Development and recommendation of a comprehensive set of specific policy recommendations and associated analyses to reduce GHG emissions and enhance energy and economic policy in South Carolina by 2020 and beyond;

3. Development and recommendation of a set of recommended statewide GHG reduction goals and targets for implementation of these actions; and

4. Issuance of recommendations in the form of a final report to the Governor by June 2008.

Governor Sanford's CECAC includes:
Sen. John Courson, South Carolina Senate / Chairman
Dana Beach, Executive Director, South Carolina Coastal Conservation League
Crandall Close Bowles, President and CEO, Springs Mills
Jim Byrd, Deputy Director, Market Services Division, South Carolina Department of Insurance
Lonnie Carter, President and CEO, Santee Cooper
John Clark, Director, South Carolina Energy Office
Barry Falin, Vice President and General Manager of Carolina Operations,Voridian
Bob Fledderman, Manager, Environment and Regulatory Assurance, MeadWestvaco
John Frampton, Director, South Carolina Dept. of Natural Resources
Reggie Gallant, Vice President, Southern Zone, State Farm
Dr. Paul Gayes, Director, Center for Marine and Wetlands Studies, Coastal Carolina University
Emerson Gower, VP, Southern Region, Progress Energy Carolinas
Rep. Ben Hagood, South Carolina House of Representatives
Ladd Hall, Vice President and General Manager, Nucor Steel
Rep. Bill Herbkersman, South Carolina House of Representatives
Joe James, CEO, Corporation for Economic Opportunity

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Bob King, Deputy Commissioner, South Carolina Department of Health and Environmental Control
E. Bruce Morgan, Mayor, City of Union
Dr. Marcus, Newberry Former Dean, MUSC College of Medicine
Mike Olbrich, Plant Manager, BP Chemical
James E. Rogers, Chairman, President and CEO, Duke Energy Corporation
Bob Scott, President, South Carolina Forestry Association
Lanneau Siegling, Past Chairman, Hospitality Association of South Carolina
David Smalls, President, Walterboro-Colleton Chamber of Commerce
Steve Smith, Executive Director, Southern Alliance for Clean Energy
John Tiencken, Former CEO, Santee Cooper
Bill Timmerman, CEO, SCANA
Sen. Danny Verdin, South Carolina Senate
Hugh Weathers, Commissioner, Department of Agriculture
Johnny Williamson, CEO, South Carolina Soya, LLC
Brad Wyche, Executive Director, Upstate Forever

The Climate Registry

South Carolina joined with 31 other states as a founding member of The Climate Registry (TCR). BAQ staff is setting out a strategy for recruiting participation by regulated and non-regulated entities. On August 3, 2007, BAQ gave a presentation on TCR to the state Chamber of Commerce Technical Committee. About 60 business representatives, including manufacturing, electric utilities, attorneys and consultants attended.

The Climate Registry was established by states, tribes and provinces in North America as a mechanism to measure greenhouse gas (GHG) emissions consistently across industry sectors and borders. The Climate Registry encourages voluntary early actions to increase energy efficiency and decrease GHG emissions. The Climate Registry accounting infrastructure supports a wide variety of programs that reduce GHG emissions including voluntary, regulatory and market-based programs.

On October 4, 2007, Joel Levin, California Climate Action Registry's Vice President for Business Development, provided an overview of the Climate Registry. Mr. Levin is the California Climate Action Registry's Vice President for Business Development. He is responsible for educating participants from all economic sections and regions to register and certify their greenhouse gas emissions. Representatives from state and local governments, including Lexington County, as well as business and industry attended the discussion. Eight businesses nationally have signed Statements of Intent to join the registry as of November 14, 2007, none in South Carolina. However, South Carolina has set a goal of having three businesses sign up by January 15, 2008.

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Local Government

BAQ is collecting data from the City of Columbia to determine base year emissions inventory. BAQ is also assisting the cities of Greenville and Rock Hill to implement their US Mayors Climate Protection Agreement.

The City of Columbia's Climate Protection Committee is drawing up sustainability protocol for businesses to earn "green" certification. On September 24, 2007, the committee sponsored a successful **Green Business Summit** that focused on waste- and emission-reducing best management practices. The Green Business Summit kicked off the development of a protocol for businesses requiring a step by step implementation of practices. Completion earns the certification decal and public listing. As a follow-up, a "Green Business Boot Camp" was held on November 29, 2007. In this intensive, interactive workshop, Midlands businesses and nonprofit organizations developed Green Business plans that met the membership requirements of the City of Columbia's Green Business Program.

Businesses that develop a Green Business plan and submit it to the City of Columbia's Green Business program are awarded with a "City of Columbia Green Business Member" window decal and recognized by the City as a member of the Green Business Program.

Business Initiatives

The Home Builders Association of Greater Columbia formed the "Green Business Council of Greater Columbia" in August 2007. The Green Business Council of Greater Columbia will work to educate the public and constructions companies about what makes a green home green. The council will offer home builders a process by which they can certify their houses as green.

Energy Efficiency - The South Carolina Summit on Energy Efficiency (EE Summit) was held on April 30, 2007, in Columbia, South Carolina. The EE Summit brought together 175 participants representing a broad range of interests – electric and gas utilities, regulators, legislators, consumer and environmental advocates, industry, universities, schools, and regional transmission organizations. For additional information, see Number 11 – Energy Efficiency of this document.

Ground-level Ozone Awareness Week – The Governor of South Carolina declared April 1-7, 2007 as Ground-level Ozone Awareness Week. This is the eighth consecutive year this declaration has occurred.

Commuting Options – New "Take a Break from the Exhaust" participants for the 2006 Ground-level Ozone Season include:
The County of Lexington
Central Midlands Council of Governments
Winthrop University

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York Technical College
Bowater – York County
Citi Group – York County
Springs Industries – York County.

In 2006 the goal for the Department's Bureau of Air Quality (BAQ) was to reduce over 125,000 miles. The BAQ exceeded the goal by almost 25,000 miles. The reductions from the 2006 TABFTE program for participants within the State of South Carolina were:

Miles Reduced:	289,889 miles
VOC's Reduced:	1,076 pounds
NO_x Reduced:	684 pounds

The total reductions from the 2007 Ozone Season TABFTE program for the State of South Carolina only:
146, 991 miles reduced
592 pounds of VOCs reduced
411 pounds of NO_X reduced

Legislation - Members of the Upstate EAC counties (Anderson, Greenville, and Spartanburg) in coordination with the Palmetto State Clean Fuels Coalition and the South Carolina Chapter of the Sierra Club, supported statewide legislation that will provide tax incentives for purchase of alternative fuel and hybrid-propulsion vehicles and help reduce costs and provide tax credits for production and infrastructure for alternative fuels. On June 1, 2006, Governor Sanford signed an act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle credits allowed against a taxpayer's federal income tax liability.

Four bills were introduced into the 2007 South Carolina Legislature. These four bills are collectively known as "Energy Independence for South Carolina's Future." The bills address the dependence of foreign energy, the rising costs of energy on South Carolina, the effects of a building's indoor environment and protecting the environment.

Senate Bills 376 and 362 implement aggressive sustainable construction standards for public buildings and schools, using a high performance rating system known as LEED. The Sustainable Investment Act (Senate Bill 377) creates tax incentives for private developers to use "green" standards in constructing new or renovated commercial buildings. The bill also creates an expedited permitting process for developers employing LEED standards. The fourth bill (Senate Bill 368) requires the state's Fleet Management Program to select hybrid, plug-in hybrid, bio-diesel and Flex-Fuel Vehicles when price, performance and quality are comparable to traditional vehicles. This measure will reduce the state's spending while minimizing the vehicle emissions.

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In May 2007, a South Carolina Legislative House Transportation and Roadways Subcommittee amended and approved H. 3780 – "Transportation Performance and Accountability Act of 2007." This bill provides that the Department of Transportation will implement the Traffic Congestion Reduction Program whose purpose is to minimize traffic congestion along the state's highways in order to promote economic growth within South Carolina.

Also in May 2007, a South Carolina Legislative House Ways and Means Economic Development, Capitol Improvement, and Other Taxes Subcommittee approved H.3153. This bill establishes the Mass Transit Advisory Council to advise the Deputy Director for Mass Transit for the Department of Transportation on the mass transit needs and the specialized transportation needs of all areas of the State.

A school bus replacement law passed in June 2007 requires the state to provide funding to replace one-fifteenth of the school bus fleet each year. The law also requires the state to use biodiesel in the buses.

Senate Bill S243, The Hydrogen Infrastructure Act, was amended to include the key components of the Energy Freedom and Rural Development Act (H3649). S243 passed the South Carolina Senate and House of Representatives but was vetoed by the Governor; however, the Senate and House of Representatives overrode the Governor's veto. This bill advances the state's goal to create a thriving hydrogen and fuel cell cluster in South Carolina's economy and promotes the use and production of biofuels in South Carolina.

Alternative Fuels Bill (S.243)

On June 19, 2007, the SC House and Senate overruled the governor's veto of the Hydrogen Bill (S.243). The passage of this monumental energy bill will provide millions of dollars starting in 2008 for tax incentives, sales tax rebates, and incentive payments to encourage the development of renewable fuels and alternative energy in South Carolina. Additionally, H.3749 was passed that included a provision to establish a Renewable Energy Grants and Loans program. The following are a list of incentives:
Beginning July 1, 2007:

- The SC Renewable Energy Infrastructure Development Fund includes a grant program providing planning grants to aid in the time and resources required to submit grant proposals and matching grants for research and development and demonstration projects. The program will also include a low-interest revolving loan program designed to assist entities building renewable energy projects;
- The SC Hydrogen Infrastructure Development Fund provides grants to promote the development and deployment of hydrogen production, storage, distribution, and dispensing infrastructure and related products and services;
- The biofuels marketing program will promote public awareness;
- Free ethanol and biodiesel testing for SC producers became available;
- An expansion of the solar system tax credit to include electricity generation;

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- An increased tax credit for production of ethanol and biodiesel from alternative feedstocks, such as switchgrass, wood, waste cooking oil, animal fats, and algae;
- The requirement that school buses use B20 where feasible; and
- The requirement that construction of large state-owned buildings be "Green Buildings" and meet certain nationally recognized building standards.

Beginning October 1, 2007:

- Sales tax exemption for equipment operation, production, distribution, manufacture, or research of hydrogen or fuel cells. Also includes building materials and machinery used by a research district.

Beginning January 1, 2008:

- Income tax credit of up to $2,000 for plug-in hybrid vehicles purchases;
- Tax credits of up to $100,000 for research and development of renewable fuel feedstocks best suited for South Carolina, such as cellulosic ethanol and algae-based biodiesel;
- Income tax credits for contributions made by a taxpayer to the South Carolina Hydrogen Infrastructure Development Fund;
- Tax credits for the purchase and installation of equipment to produce electricity and gas from biomass resources including wood and wood waste, agricultural and animal waste, sewage, landfill gas, and other organic materials; and
- A requirement that all state-owned diesel pumps provide a minimum of five percent biodiesel.

Beginning July 1, 2008:

- Tax rebates up to $300 for the purchase or lease of vehicles that are flex-fuel (ethanol), hybrid, electric, or fuel efficient with an EPA city fuel economy of 30 mpg or greater;
- Incentive payments for biomass energy users ranging from one cent per kilowatt-hour or 9 cents per therm.

Beginning July 1, 2009:

- Five cents per gallon incentive payments will be available for retailers selling B20 biodiesel and E85 ethanol.

Outreach Efforts – During the first 6 months of 2006, information was sent to the EAC contacts including:

- Governor's Proclamation and the Departments news release for Ozone Awareness Week
- Information on national bike month and related activities
- Information of Car Care Awareness Month and related activities
- Information for National Air Quality Awareness Week (May 15 – 19, 2006)
- Earth Day 2006
- EnviroFlash
- 2006 Ground Level Ozone Season (April 1 – October 31)
- Ozone Action Tool – survey to assess and promote measures that reduce ozone.

Information during the last 6 months of 2006 provided to the EAC contacts included:

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- Information and news release on the 2006 SC EAC Summit held in Columbia, August 16 and 17, 2006
- Information and press release on open burning alternatives
- Information on an Emissions Reduction Campaign
- Information on the Energy Star Change a Light, Change the World Campaign 2006
- Climate Change 101: Understanding and Responding to Global Climate Change
- Information on the free showing of Kilowatt Ours: A Plan to Re-Energize America – shown in Clemson, Columbia, Florence and Charleston in September 2006
- Information on grant opportunities to include an EPA grant workshop that will be held in January 2007 in Greenville, Columbia and Augusta.

Information during the first 6 months of 2007 provided to the EAC contacts included:

- South Carolina Educational Television Explores South Carolina's Alternative Fuel Options - CNN's John King Hosts "Securing Our Future: From Farm to Fuel" on Friday, April 13, 2007 at 9 p.m.
- Information on April 22nd marking the 37th observance and celebration of Earth Day.
- Information and opportunities for the 2007 Ground-Level Ozone Season was sent to on March 29, 2007. Opportunities included the Mobile Source Outreach Assistance Grant offered by the EPA and the 2007 National Air Quality Awareness Week (April 30-May 4). Information was included on EPA and NOAA's National Weather Service compiling federal, state and local activities for inclusion on their website. The air quality project, "Mow Down Pollution" events, implemented by Richland and Lexington Counties on April 21, 2007, and hosted by York County on April 28, 2007, were included as opportunities. Attached to the e-mail was a copy of Governor Mark Sanford's proclamation for Ground Level Ozone Awareness Week (April 1-7).
- Information on the Ground-level Ozone Season and the new forecast region for SC sent February 27, 2007. Information included an announcement that forecasting for ground-level ozone will begin April 1 this year as a result of the Department observing elevated levels of ground-level ozone during the month of April 2006 and that the Department will be adding a new forecast region. The CATAWBA region will include York, Chester, and Lancaster counties. The Department is adding two counties to the existing PEE DEE forecast region. Marlboro and Dillon counties will join the other counties in the Pee Dee regional forecast in 2007.

Outreach Efforts - Car Care Awareness Month (April 2006) – In recognition of Car Care Awareness Month, the Department and Richland and Lexington counties organized a vehicle maintenance check event in April. The State Museum, Ben Satcher Ford and Pope Davis Tires helped sponsor this free event on April 1, from 10 a.m. until 2 p.m. at the State Museum on Gervais Street. A team of certified technicians made suggestions for improving vehicle safety and gas mileage. The technicians also performed vehicle

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checks and raised citizens' awareness about how proper maintenance of a vehicle can help to reduce air pollution and protect the public's health.

The goal of the event, held on April 1, 2006, was to increase the target audience's awareness about the importance of car maintenance in preserving good air quality. To reach this goal, several objectives were set, and our ability to meet those objectives is documented herein. The objectives were: to have 100 cars come through the car check lanes, create a replicable project that can be implemented in other areas across the state, and to educate drivers and volunteers who participated in the event about the importance role vehicle maintenance plays in preserving good air quality. The target audience was drivers local to the downtown Columbia area.

Outreach Efforts – "Mow Down Pollution" Event (April 21, 2007) - Lexington and Richland Counties in conjunction with local non-profit Keep the Midlands Beautiful, and the Department's Bureau of Air Quality (BAQ) planned and implemented the first lawn mower exchange in South Carolina. To encourage Columbia-area residents to do their part to "Spare the Air," the lawn mower exchange was held at the State Museum to Mow Down Pollution! The lawn mower exchange coincided with other activities the museum hosted to celebrate Earth Day. The event collected empty, functional gas powered lawn mowers and offered a discount between 30 percent and 55 percent off MSRP on Neuton cordless electric mowers. To compliment the lawn mower exchange, other partners were invited to exhibit Greenscaping information at the event. These partners helped extend the impact of the exchange by highlighting complimentary lawn and garden practices that help protect air quality.

Outreach Efforts - October 2007 - U.S. Walk to School Day - At 141 plus, South Carolina had more schools participating in this anti-obesity, enviro-friendly campaign than any other state except California.

Outreach Efforts – October 2007 - A push to educate consumers about the benefits and advantages of plug-in hybrid electric vehicles in North and South Carolina was kicked off in Charleston with the launch of the Plug-In Hybrid Coalition of the Carolinas. The Plug-In Hybrid Coalition of the Carolinas debuted at the annual meeting of the Southeastern Governmental Fleet Managers Association. During a session about plug-in hybrids attendees were asked to commit to the Plug-In Carolinas Challenge.

Grant Assistance – January 2007 - South Carolina and Georgia sponsored a timely opportunity, in cooperation with staff from the U.S. Environmental Protection Agency's (EPA) Region 4 Office. In advance of upcoming funding opportunities for various types of projects to address air quality issues through the EPA, a workshop was held for each of three areas of our state to provide information that may help local entities to improve their proposals for applying for these funding grants.

Staff from the Department's Bureau of Air Quality and the Georgia Environmental Protection Division worked with local government contacts in the Greenville, Columbia and Augusta/Aiken areas to host these workshops. The schedule for these workshops was as follows:

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1) January 16th.....1:00 - 4:00 p.m. for the Augusta/Aiken areas
Location: University Prompt Care Building - Suite 202
3121 Peach Orchard Road; Augusta, GA 30906
2) January 17th.....1:00 - 4:00 p.m. for the Central Midlands area
Location: Eau Claire Print Facility
3901 Ensor Avenue; Columbia, SC
3) January 18th.....9:00 a.m. - 12:00 p.m. for the Greenville/Spartanburg areas
Location: Greenville County Council Chamber
301 University Ridge; Greenville, SC

The workshop agenda included:

Explaining EPA's competitive grant process, to include
- -how to find EPA grant funding opportunities
- -how to prepare a strong project proposal
- -how to submit your proposal
- -how EPA selects projects
- -what happens after a project is selected.

The workshop was open to all interested parties. Organizations that are eligible to compete for EPA grant funds, includes state, local and tribal governments, universities and nonprofit organizations.

Mass Transit - The Central Midlands Council of Governments (CMCOG) is taking on a planning study for commuter rail transit services in the Central Midlands region. It will examine three potential commuter lines from Batesburg-Leesville, Camden and Newberry into downtown Columbia. The CMCOG region being studied includes the counties of Richland, Lexington, Newberry and Fairfield. Three public meetings were held during the first 6 months of 2006, to present preliminary planning and receive public feedback. Feedback was also accepted by mail fax, website and email.

Mass Transit - December 2007 - Mass transit is expected in South Carolina's Upstate under a plan by the city of Travelers Rest that would convert the abandoned 10-mile-long, northern segment of the Greenville & Northern Railroad into a "Carolina Swamp Rabbit Tram Trail." The plan is to convert the rail line, which runs from Greenville to Travelers Rest, into a multi-use trail that can be used for recreational and motorized transit. A 7-foot-wide microbus would travel a 10-foot wide asphalt strip constructed over the railroad bed, carrying passengers between downtown Greenville and downtown Travelers Rest. The plan is an intermediate step in response to U.S. Department of Transportation statistics showing that Georgia and South Carolina lead all states in the number of rural residents dependent on passenger rail as their only public transportation. The long-term goal of the plan is to preserve the integrity of the rail corridor for eventual conversion to a commuter rail line, while attempting to have the area's transportation infrastructure keep pace with expanding growth.

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School Busses – In the spring of 2006, the S.C. Department of Education announced a $500,000 Clean School Bus USA grant to help reduce school bus pollution. The state plans to replace a dozen 22 year old school buses, upgrade 132 other buses and convert 1,220 buses to B-20 fuel. Idle reduction devices will be installed on 200 buses.

In 2006, the S.C. Department of Education contracted to purchase 630 - 2006 model buses and 82 - 2007 model buses to replace 25 percent of the 1989 and older buses in the fleet. The Department of Education also ordered two - 2007 model plug-in diesel-electric hybrid buses that will be delivered in April 2007. The Department of Education has agreed to work with the Department to assign these new buses to routes in areas of the state where they will have the most benefit to air quality.

Through funding from a Supplemental Environmental Project, the Department of Education awarded a contract in 2006 for diesel particulate filters to be installed on approximately 100 school buses.

The Department of Education has worked with the State Procurement Office to establish a statewide contract for B20 biodiesel. The biodiesel will be available to purchase at the state contract price for all political subdivisions in the State. The Department of Education plans to convert the entire State fleet of school busses (over 5,700 busses) to B20 in 2007.

A school bus replacement law passed in June 2007 requires the state to provide funding to replace one-fifteenth of the school bus fleet each year. The law also requires the state to use biodiesel in the buses.

School Busses - December 2007 - South Carolina Department of Education - School Bus Initiative
Two plug-in hybrid electric buses with a 2007 emission compliant diesel engine fueled with ultra-low sulfur diesel (soon to be ultra low sulfur 20% biodiesel) were placed into service in South Carolina. One bus was placed in Richland County and the other in York County. A press release was issued on September 27, 2007, and a press conference was held on October 11, 2007.

School Busses - December 2007 Clean School Bus USA Grant - The South Carolina Department of Education submitted a grant proposal for the 2007 U.S. Environmental Protection Agency Clean School Bus USA grant, in conjunction with the Southeast Diesel Collaborative. Initial review indicates with some minor modifications, the proposal will be accepted and the Department of Education will be awarded the grant. The grant will provide 500 school buses with crankcase ventilation filters and anti-idling hardwear. The grant will also allow the Department of Education to create a computer program that will use GPS data to identify areas of excessive idling. The Department of Education has also requested additional funding for anti-idling awareness education.

School Busses - December 2007 School Bus Ridership Grant Proposal - Staff in the BAQ's Division of Air Planning Development and Outreach submitted a proposal to

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EPA's Mobile Source Outreach Competition Grant for 2007. This proposal is intended to work with an elementary and middle school in local areas (up to 3 areas) of the State to determine mechanisms to increase the utilization of school buses and carpooling to and from school by students. This project will include working with parents, students, faculty, and school administration to encourage better use of school buses for transportation.

Southeast Diesel Collaborative – The Southeast Diesel Collaborative (SEDC) is a new partnership between US EPA Region 4, State and local air quality programs, and other public and private entities and is intended to promote opportunities to reduce diesel emissions. The collaborative is modeled after other regional diesel collaboratives, which have proven beneficial for addressing a significant source of mobile source air pollution. On April 26, 2006, a Memorandum of Understanding (MOU) in support of the Southeast Diesel Collaborative was signed by Mr. William G. Gallardi, Assistant Bureau Chief, BAQ.

Throughout 2006, the SEDC continued to create partnerships and disseminate information for reductions of diesel emissions. The SEDC held a South Carolina stakeholders meeting in August 2006 in Columbia. A SEDC emerging fuels conference was held in Atlanta in December 2006. Through the SEDC the Department has been contacted by equipment vendors to exchange ideas on increasing sales for diesel retrofit devices. The Department is made aware of the products offered and the manufacturers gain insight into what areas of the state the equipment will have the most benefit to air quality.

In March 2007, the SEDC conducted a workshop for identifying available funding sources to implement clean diesel programs. Two Department employees attended the workshop and received the training materials and contacts to pursue funding for diesel emission reduction programs.

In June 2007, the SEDC held its second annual partners meeting in Atlanta, Georgia. The meeting provided an opportunity for the eight Region 4 state environmental commissioners, including South Carolina's, to establish a vision for future diesel emission reduction projects.

December 2007 - BAQ staff continue to participate in routine conference calls with the SEDC partners.

Alternative Fuels - State Ports Authority (SPA) **-** The Department continues to work with the SPA to reduce diesel emissions. In March 2007, the SPA signed a memorandum of agreement with the Department to partner in reducing port-related diesel emissions. In late September 2007, the SPA switched to cleaner burning, ultra-low sulfur diesel fuel ULSD three years prior to the EPA mandate (2010).

Alternative Fuels - Railroads – Diesel Emissions - The Department has initiated programs to address diesel emissions from railroads in South Carolina. During October

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and November 2007, the Department participated in a national and a regional conference to seek reductions in diesel emissions. The Department is working with CSX Railroad to implement some of those strategies in Charleston. In November 2007, the Division of Public Railways (South Carolina Department of Commerce) announced that all locomotives will be using ultra low sulfur diesel (ULSD) fuel five years earlier than the EPA mandate (2012). The Division of Public Railways uses an estimated 26,000 gallons of diesel fuel annually.

Alternative Fuels - October 2007 - Washington Savannah River Co. gave $175,000 to the Center for Hydrogen Research in Aiken for a hydrogen-fueled truck to demonstrate the viability of the alternative fuel. The center also announced plans for a refueling station to provide hydrogen for the truck and other hydrogen-powered vehicles. The Hydrogen Internal Combustion Engine vehicle, or HICE, is based on a full-size 2007 Chevrolet Silverado 1500 pickup. The truck will be powered solely by hydrogen. Options for the refueling location include either the Savannah River Research Campus or at a site along I-20.

Energy Efficiency - July 2007 – S.C. Hydrogen Infrastructure Development Act
The S.C. Hydrogen Infrastructure Development Act, establishing a $15 million fund to promote the development of a hydrogen economy was passed by the Legislature. While funding for the Hydrogen Infrastructure Development Act was not included in the state budget, legislators did include other critical funds. Through the University of South Carolina budget, EngenuitySC will get $100,000 to help with preparations for the National Hydrogen Association meeting to be held in Columbia in the spring of 2009. A National Hydrogen Association forum, "Hydrogen Uses in the Military," was held in Columbia this October. USC also got $1 million for continued funding for hydrogen and fuel research. The S.C. Hydrogen and Fuel Cell Alliance got $367,640 in recurring funding. The Hydrogen Infrastructure Development Act is recognition by the Legislature that nurturing a hydrogen and fuel cell cluster in South Carolina can have tremendous economic impact.

Energy Efficiency - August 2007 – Bi-Lo to promote green grocery bags - Reusable market bags have been around for years however, this is new for Bi-Lo, the Mauldin (Greenville County)-based grocer. Bi-Lo is piloting its green bag effort in about 80 of its more than 220 stores here and in Georgia and Tennessee. The Super Bi-Lo at the Village at Sandhill (Richland County) is participating in the pilot. Bi-Lo sells two versions of the green bags: a woven recycled plastic for 99 cents and a canvas one, priced at $2.99. Store management at the Columbia Super Bi-Lo said each time shoppers use any reusable bag, they receive a 5-cent per bag credit when they check out each shopping trip. It doesn't seem like much at first - but after 20 uses, a woven plastic bag pays for itself.

Energy Efficiency - October 2007 - Santee Cooper announced they will quadruple to 40 percent by 2020 the amount of electricity made from non-greenhouse gas sources and created a new department to oversee the effort. The state-owned utility serves most of Horry and Georgetown counties either directly or indirectly, with about 2 million

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residents statewide receiving power from it. The company also began purchasing excess power from customers who make electricity with solar panels and other generators.

Transportation Conformity – Currently, the only area subject to transportation conformity in South Carolina is the Rock Hill-Fort Mill Area Transportation Study Metropolitan Planning Organization (RFATS MPO) in York County. EPA has promulgated and proposed a number of revisions to the Transportation Conformity Rule since the time that South Carolina's SIP revision incorporating the South Carolina Transportation Conformity MOA was published in the *Federal Register* (69 CFR 4245) on January 29, 2004. On May 2, 2007, EPA published in the *Federal Register* a proposal to amend the transportation conformity rule to make it consistent with the CAA, as amended by SAFETEA-LU. The Department has initiated the process for revising South Carolina's Transportation Conformity SIP to incorporate amendments to the CAA as a result of SAFETEA-LU. Interagency partners have been contacted and will be involved in drafting the necessary revisions. The process will encompass stakeholder meetings, to include involvement of MPOs, government entities, and the general public. The first meeting was held on November 2, 2007. Interagency partners participating, included EPA Region 4, US DOT (FHWA and FTA), SC DOT, DHEC, and several MPOs.

While only one area in South Carolina is subject to transportation conformity, involving all interagency partners provides the opportunity to discuss mobile source issues and concerns with areas that may face the tough challenge of meeting the proposed 8-hour ozone standard. The Department is using this opportunity to encourage continued partnerships focusing on emission reduction strategies.

Community Outreach - The State of South Carolina agreed to conduct the project and submitted a request for funding which was included in their Performance Partnership Grant (PPG). Region 4 approved their request and awarded the funds ($142,500) in the PPG for the community activities in Greenville. South Carolina has conducted four community meetings (10/27/05, 11/14/05, 12/05/05, and 01/09/06) to establish and start the Greenville project. The next meeting is scheduled for February 13, 2006. There are five communities or neighborhoods involved in the meetings and project (Greater Sullivan Community Neighborhood Association, Sterling Neighborhood Association, West End Neighborhood Association, Haynie-Sirrine Neighborhood Association, and the Green Avenue Area Civic Association). The participants have selected a name for themselves – "Breathing for Life Community Coalition (BfLCC)." There is a good exchange of information and interaction between the participants at the meetings. This is due in large part to the organizational and community relationship skills of the State's staff and the active participation of the residents, community liaisons and pastors in the communities. State staff participating are from Greenville's environmental quality control and health department offices, the Bureau of Air Quality (BAQ) and EQC Administration.

While there is a wide range of possible projects which would include reducing toxic pollutants (e.g., diesel retrofits, indoor air quality projects), household hazardous waste reduction projects, anti-idling campaigns, integrated pest management programs, and or

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other projects from which the community can select, they have elected to start by having an essay, logo and drawing competition with the children in the five neighborhoods. The subject of the competition is "Breathing for Life – Your Health and the Environment." In addition to this project, the community would like to hold an "educational forum" (date to be announced). The forum will highlight winners of the environmental essay, logo and drawing contest. It was suggested that a Region 4 representative, possibly Beverly Banister, be present at the forum. She is a champion of the project would be an inspiration to the children who would be participating. The long term purpose of BfLCC is to find funding to implement the selected projects and to establish a permanent, ongoing effort to continue reductions of toxics risks to the community.

The Air Toxics Assessment and Implementation Section of the BAQ is overseeing the performance under the PPG related to the effort for the Greenville Project. When BfLCC determines that they want or need the Region to actively participate, the Section will provide information, technical support, training, and risk analysis as requested. In addition, EPA Region 4 as a primary author of the "How To" manual that walk communities step by step through performing an environmental project, has provide information on the availability of this document so that it can be used when it is determined that the concepts and processes should be applied in this project.

Additional meetings that have been held are February 13, February 27, March 13, March 27, April 24 and May 22 and June 19, 2006. Extra meetings were held in February and March 2006 to plan for the education forum.

An educational forum was held on April 8, 2006. Winners of the essay and drawing contests were announced and presented their prizes. A logo is being developed for the Coalition as a result of the logo drawing contest. In addition, education was provided on asthma, weatherization and air pollution. Guest speakers were Carol Kemker from EPA and Miss Crystal Garrett, Miss Lexington, SC, who gave her testimony on how she has managed living with asthma. A community member gave the history of the BfLCC. A feedback questionnaire was used for evaluation of the event. Comments were very positive and the community would like to have more informative events like this.

Future projects that are being planned are a household hazardous waste collection day in conjunction with a gas can exchange and providing EPA-certified woodstoves in homes that are using old woodstoves. Preliminary discussions have taken place with a school official about implementing school bus anti-idling programs in Greenville schools. Other partners that are helping with these projects are Greenville City and County officials.

Additional BfLCC meetings were held on July 31, August 28 and September 25, 2006. Knowing this project funding would end on September 30, 2006, discussion began at the June meeting on sustainability of the "Breathing for Life Community Coalition." BfLCC members agreed to remain organized and continue working as a group on other projects. Sustainability discussion continued at the July meeting where members discussed concerns they have about their community and what is good about their community. They also discussed what they see as "accomplishments" since the beginning of the project and what would they like to see accomplished. This discussion continued at the

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August and September meetings. The local health and environmental offices will continue to facilitate meetings and/or discussion as requested by the BfLCC. The BAQ will continue to provide assistance as needed.

With the goal of reducing air toxics, the BAQ entered into a contract with the City of Greenville to assist with air toxic reduction projects. The following projects were completed:

- August 12, 2006, a Household and Hazardous Waste (HHW) Collection day and gas can exchange were held. The Solid Waste Division and Recycling Coordinator for the City of Greenville were instrumental in organizing this event. This was the first HHW Collection day for the City of Greenville and it was possible through this EPA funding. Ray Gregory from Region 4 EPA attended the event. It was very successful with the following results:
    - 250 cars came and dropped off items;
    - Approximately 5,000-6,000 cans containing gasoline, paint, household cleaners, pesticides, etc. were collected. Other items collected were batteries, used tires, propane cylinders, and a container of mercury;
    - 200 environmentally-free gas cans were distributed; and,
    - Residents appreciated the effort and hope to have another event.

- City of Greenville staff met with the five neighborhood association presidents to identify homes in their neighborhood that needed their heating source repaired or replaced to a more efficient and less polluting one. Criteria used in identifying the homes were those using wood or coal, low-income elderly and disabled, and those who have medical conditions that warrant a different heating system. As a result, 20 homes were selected to have their heating source repaired or changed out. The City of Greenville contracted with local companies to assist with the work. These homes were also weatherized with storm windows, insulation and weather stripping and smoke and carbon monoxide detectors were installed. The following list provides details of the heating source repairs and/or change outs:
    - Two homes were heating with wood and had EPA-approved gas packs installed.
    - Two homes heating with kerosene because the gas furnace was broken had EPA-approved heat pumps installed.
    - One home was heating with kerosene because the oil furnace was broken and had a new EPA-approved oil furnace installed.
    - Two homes were heating with a small inefficient gas heater and had EPA-approved Rinnai vented heaters installed.
    - One home was using several kerosene heaters and had a Rinnai vented heater installed.
    - Two homes were heating with kerosene because their gas pack was broken and new gas packs were installed.
    - Five homes were using a gas or oil unit that needed servicing and all were serviced to be more efficient.
    - Two homes with old gas furnaces that ran a lot and did not heat well had new gas furnaces installed.

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- One home with an old gas unit that was not efficient had a new gas heater installed.
- One home had an old woodstove that was changed out to an EPA-certified woodstove.
- One home using a gas pack that did not work well and could not be repaired had a new gas pack installed.

- 115 self-venting kerosene cans were ordered and distributed in the five neighborhoods to homes still using kerosene for heat.

In addition to the PPG funding for this community outreach project, Greenville County government applied for a grant and was awarded funding to pilot an anti-idling program in a local school as well as other outreach programs on improving air quality.

Department Activities – The Department continues to leading by example:

a. BAQ staff for the past few years has adopted a strip of lawn in front of the Sims/Aycock Department Headquarters building and use an electric mower for cutting. Working in coordination with the facilities maintenance staff from the State Budget and Control Board, cutting this area with a gas-powered mower is discontinued during the ground-level ozone forecast season. A fact sheet has been made and often distributed to customers who inquire about our activity. In addition a sign is placed in the area to convey the message of this lawn area being adopted by staff using an electric lawn mower.
b. BAQ staff worked with the EAC contacts from Lexington County to create a sign that has been placed in front of the main Department Headquarters building to advertise the ground-level ozone forecast. Motorists traveling the busy corridor of Bull Street to I-277 are able to view the forecast sign each week day.
c. Inter-bureau workgroup on open burning. Staff from the Department's Bureau of Land and Waste Management and Bureau of Air is collaborating on the development of training tools for staff to improve consistency in dealing with open burning issues around the state. This includes interpretation of the current Agency regulations for both bureaus, messages regarding alternatives to open burning and communication/coordination with other agencies that may have some involvement with open burning (e.g., SC Forestry Commission, Fire Marshalls, etc.). Also, another objective of this workgroup is the development of an awareness campaign to convey messages regarding open burning regulations and alternatives for disposal (e.g., recycling, composting, etc.). These messages will be tailored to specific audiences based on waste streams. The Bureau Chiefs for the BLWM and BAQ have been presented this outline and are going to help identify resources for implementing these objectives. Additional information may be found in Number 4 – Regulatory Initiatives of the State Activities enclosure.
d. Project Discovery - Working with the state Public Education Television (ETV) agency, staff from all EQC bureaus, including the BAQ worked to develop an information segment on various aspects of the environment. BAQ staff, along with region staff developed a script and message related to alternatives to open burning. This series of messages aired on May 5, 2006 and was broadcast to

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students in schools statewide over the ETV channel. Here is a part of the message communicated regarding this show:

Project Discovery - A special program to highlight how students can help take better care of our environment will be our May 2006 edition of Project Discovery. Presented from Hilton Head Island as part of the ETV Road Show, Project Discovery host Tabitha Lewis and co-host, Paula Randler of SC DHEC leads students on a behind-the-scenes view of the waste water treatment plant located there to see just how this important life-sustaining resource is cleaned and returned to the environment. In addition, students will learn about the importance of keeping a healthy coastline. Picking up after a day at the beach is more than just a beautification issue and something everyone can do to help. We'll also learn about the importance of recycling and how we can take better care of our air by not burning trash. And, a trip to the landfill is also on tap to see where all that stuff we cannot recycle actually ends up.

Presented in cooperation with the Department, this program is designed for grades 1-8 and our toll-free phone line (1.800.763.ETV1) will be open for calls from students during the program. Join Project Discovery for the last program for this school year and be more prepared to enjoy clean water and air this summer as we pay more attention to how we impact our world around us and how we can help keep it clean for all to enjoy and appreciate both today and in the future. Please alert your teachers to this special program and plan to tape it for your school.

e. Emissions Reduction Campaign for 2007 - To further encourage the development and promotion of local initiatives, BAQ Outreach staff began researching the possibility of implementing a combined media and community outreach campaign focused on ground-level ozone in May 2006. The objectives were to engage local government in the priority areas (Anderson, Spartanburg, Greenville, Aiken, Richland, Lexington and York Counties) to develop local air quality initiatives with a significant potential to reduce ground-level ozone; to assist the efforts of local government entities who already have such plans in place; to promote ozone awareness and/or related events through television and radio announcements; and to encourage the public, through outreach events as well as media promotions, to voluntarily reduce vehicle emissions throughout the ozone season beginning in 2007.

Prior to the EAC Summit in August 2006, all the South Carolina COG contacts received a message informing them of the campaign and encouraging them, as well as their county and municipal governments, to participate. Activities which followed the EAC Summit included a conference call to discuss strategies and activities and follow-up discussions, via telephone and email, to those who were unable to participate. A sample radio script about proper vehicle maintenance, which the Department would produce internally at little or no cost, was also sent out for feedback from stakeholders interested in holding a car care event.

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More recently, a Clean Air Initiative has been implemented at the BAQ level which entails fostering relationships with local governments and working proactively with all regions of the state to improve air quality and to prevent significant deterioration. BAQ staff members have been assigned to specific COG areas for this purpose. As this initiative has gained momentum and staff members are becoming more closely involved with their assigned areas, re-evaluation of the campaign has shown that the Clean Air Initiative has the potential to accomplish virtually all of the same goals as the campaign. As such, the campaign planning is being suspended until further developments under the Clean Air Initiative demonstrate potential for the campaign to enhance the statewide effort now underway.

f. Bike to Work Events (2007) – May is National Bike Month, and Friday May 18, 2007, was "Bike-to-Work Day." The Department's State Nutrition and Physical Activity Consultants, Division of Injury and Violence Prevention, and Bureau of Air Quality encouraged Department staff in Columbia to participate in a "Bike-to-Work Day" ride coordinated by Central Midlands Council of Governments and the City of Columbia, and/or to bike to lunch together. The Columbia/CMCOG ride started at Boyd Plaza in Columbia (NW Corner of Hampton & Main). The ride took about 20 minutes for the average rider. Maps and routes were provided.

Because bicycle commuting helps reduce ground-level ozone pollution, global warming emissions and other pollutants, it is an air quality strategy being pursued around the state. Cycling has the potential to provide significant societal benefits in other aspects of life such as health, resource consumption, and the cost of transportation. Additional information may be found in Number 2 – Commuting Reduction Programs enclosure.

g. **"Safe Routes to School" Grant – 2007 funding cycle**

The South Carolina Department of Transportation (SCDOT) approved funding to develop comprehensive bicycle and pedestrian programs as part of the "Safe Routes to School Program." Partnering with SCDOT, local governments, parents, local law enforcement and educators, each school and community will develop a plan that encompasses both infrastructure and non-infrastructure components. One of the purposes outlined in the funding legislation for this program includes facilitating the planning, development, and implementation of projects and activities that will reduce traffic congestions, fuel consumption and air pollution in the vicinity of primary and middle schools. The schools for the 2007 funding cycle are: College Park Elementary School, Berkeley County; Alston Middle School, Dorchester County; Willow Drive Elementary School, Sumter County; North Vista Elementary School, Florence County; Wren Elementary/Middle School, Anderson County; Lone Oak Elementary School and Pine Street Elementary School, both of Spartanburg County; Rosewood Elementary School, Richland County; College Park Middle School, Berkeley County; Fairfield Middle School, Fairfield County; Stono Park Elementary School and Hunley Park

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Elementary School, both of Charleston County. Each of the selected schools will receive up to $200,000.00.

h. The **Bull Street Partners Carpool Group** provides employees of the Bull Street area offices of three State Agencies (Department of Health and Environmental Control, Department of Mental Health and Department of Social Services) an opportunity to form carpools, thereby saving money and fuel, reducing pollution and reducing the stress of commuting.

Additional information may be found in Number 2 - Commuting Reduction Programs enclosure.

Press Coverage – Recent coverage includes:

- On March 25, 2005, WIS-TV in Columbia aired a feature story highlighting alternative fueled vehicles. The story specifically covered the actions that the Department and local government were taking to utilize alternative fuels.
- On Friday, April 15, 2005, The State newspaper wrote a story on one TABFTE partner and his decision to give up his car for a bike and public transportation. This generated interest in more bike and pedestrian paths and public transportation in the Columbia area.

Additional listings of press releases may be found in Number 1 – Outreach and Education of the State Activities enclosure.

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1. Outreach and Education

Public involvement through education and outreach plays a major part in the success of an early action program whether it is a statewide program or a local program. The Air Education and Outreach Section (AEOS) is responsible for increasing awareness, educating, and encouraging behaviors for improving air quality among various segments of the population in South Carolina. As a result of the early action process, several fact sheets were updated and new fact sheets created. This information is available by contacting the office and is also available on the Department website (www.scdhec.net/baq/eap.html). This information has been provided to local areas to assist in the local education and outreach efforts.

School aged youth have been targeted with programs such as the following:

- Ozone Action Class – An interactive program focusing on how to reduce ground-level ozone forming air pollution through the outreach efforts of local schools; and,
- B2 @ School (Breathe Better Air at School)- a project designed to involve students, their parents, teachers and administrators in assessing idling activity on school grounds, and determining mechanisms for reducing idling by vehicles and/or school buses. Mechanisms include awareness activities, policy support/development and tools such as no-idling signs.

Resource materials in place or that have been developed for public outreach, include the following:

"Driving Smarter for Tomorrow" brochure
"Ozone Action Class" brochure
"Care About Air" coloring book
"Spare the Air" bookmark
"Share the Road: Getting around in South Carolina" brochure (08/06)
"Clean the Air*Save Gas: Turn the Key Be Idle Free!" poster (10/06)
Facts about ethanol as an alternative fuel (05/07)
VEHICLE MAINTENANCE AND AIR QUALITY (05/07)

Refer to Enclosure 2-1 for the ethanol facts and vehicle maintenance document.

October 31 - November 2, 2007 - Two AEOS staff members participated in the Annual South Carolina Science Council conference held in Myrtle Beach, South Carolina. Staff presented information to teachers on an air lesson plan that may be utilized in the classroom, as well as staffed an exhibit where materials for use with school-aged youth were available. Information about AEOS programs (e.g., B2-an anti-idling project) was also made available.

The "GreenScene Magazine" published by the Department's EQC Outreach Committee, provides a one-stop shop of the environmental education programs offered by the Department. The first issue published in the fall of 2002, contained an article entitled "Ozone is Not Just Another Season." This committee is responsible for numerous

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projects that promote environmental education, both internal and external to the Department. One of the projects is a series of monthly environmental e-mails sent to all Department staff. The May 2003 message was "Clean Air Month" and informed staff that Governor Sanford proclaimed May 1-7 as **Ozone Awareness Week**. A copy of the magazine, the message, and the proclamation were included in a previous progress report. Other activities include Earth Today Broadcast, Earth Camp, and, Kids Day events.

New graphics were introduced on the BAQ's web site May 1, 2003. The existing ozone forecast web page was revised to reflect all four forecasted regions in South Carolina and color coded to align with EPA's Air Quality Index. The new graphics makes the Air Quality Index easier to read and understand by the public who use this web site.

Website - One of the first outreach activities of the EAC process included the establishment of a website (www.scdhec.net/baq/eap.html) for stakeholders to obtain updated information regarding the early action process. The website address was given in the initial press release (August 28, 2002) and continues to be included on correspondence and presentations.

Ozone Events – The Department has sponsored Ozone Awareness events to educate areas on the ozone standard, forecasting and measures that can be taken to reduce ground-level ozone. Following, is a schedule and summary of the 2003 Ozone Events:

April 26, 2003 - Central Savannah River Area

"Kids Earth Day" held on Saturday, April 26, 2003, was attended by approximately 1,000 children residing in the Aiken/North Augusta area. The Department's Central Office and District Bureau of Air Quality (BAQ) staff assisted children in playing Air Jeopardy as well as leading them through an educational exhibit on ground-level ozone. Prizes were also distributed.

April 29, 2003 - Pee Dee Area

A community meeting was held at the Pee Dee Regional Council of Governments office in Florence. Various community members and media were invited to attend this meeting for an educational program on ground-level ozone and health implications due to ground-level ozone exposure. This event was well attended and received excellent media coverage.

May 1, 2003 - Central Midlands Area

A partnership with WACH 57 TV was formed with BAQ staff to promote the Bureau's "Ozone Action Class." This is a web-based program encouraging students to find solutions to reduce ground-level ozone pollution. Spears Street Elementary School in Newberry County was the first recognized Ozone Action Class by weatherman Cary Allen and BAQ staff member, Amy Curran. WACH 57 incorporated the day's events, along with promoting Ozone Awareness Week, on their nightly weather segment that evening.

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June 28, 2003 - Upstate

The BAQ and Recycling Office of the Bureau of Land and Waste Management partnered with the Upstate Air Quality Advisory Committee (Anderson, Greenville and Spartanburg Counties) to hold a gas can exchange event in this three county region. This was the first of a kind event for South Carolina. As well as new environmentally friendly gas cans, educational materials were distributed. Results of the Gas Can Exchange Event are included with the individual county reports.

Public Presentations - Numerous public presentations by Department staff regarding the 8-hour ozone standard and the early action process have been held. Since the process started there have been over 75 meetings in which Department staff promoted the benefits of the EAC process.

Greenscapes – The Department partnered with the South Carolina State Budget and Control Board's (B&CB) Horticulture services to implement a tree planting and environmental landscape project at the Department's central office and to conduct workshops on environmental benefits of trees for representatives of local and state government agencies. Funding for this effort was through a grant from the Urban and community Forestry Grant Assistance program administered through the South Carolina Forestry Commission and funded by the USDA Forest Service. Planting trees and reducing grass area results in less lawn mowing which helps reduce the emission of NO_x and VOC from gas powered equipment. For example, this project decreased the mowing area by 39 percent (original turf area was 24,816 sq. ft.; new mulch area 9,684 sq. ft., new turf area 15,132 sq. ft.). The time to mow this area has been cut in half, to less than 45 minutes.

To assist in promoting the incorporation of landscape planning to support the health of the environment, each EAC contact was invited to attend a presentation on May 25, 2005, to be provided by David J. Nowak, Ph.D. Dr. Nowak is a Project Leader with the USDA Forest Service, Northeastern Research Station in Syracuse, NY. Dr. Nowak is a principal scientist on the Chicago Urban Forest Climate Project and is a recipient of the American Forests Urban Forest Medal recognizing outstanding national contributions in urban forest research and the Distinguished Science Award of the Northeastern Research Station. His presentation is designed to provide an understanding of urban forests and their benefits and regulatory effects related to air and water quality.

a. Ozone forecast/outreach, education

The Department began forecasting for the 8-hour ozone standard in 1998 for the Upstate and Central Midlands areas of South Carolina. In 1999, the Central Savannah River area was added in the forecast and in 2003 the Pee Dee area was added. 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 the

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Department's website. The forecast serves as a public health advisory to protect those persons who are most at risk to the effects of ozone.

Prior to 2006, the Division of Air Planning, Development and Outreach was responsible for disseminating the ozone forecast to interested individuals and groups across the state.

Most counties participating in the EAC have assigned an air quality contact person that receives the daily forecast and is responsible for disseminating the ozone forecasts and related information on Ozone Action Days to stakeholders.

The Department and the SC Department of Transportation (DOT) have an agreement during the ground level ozone season. When an Ozone Awareness Day is forecasted in a particular region, Department staff contact DOT staff to activate the DOT Intelligent Transportation System (ITS) message board in the affected area. The ITS boards alert drivers that an Ozone Awareness Day has been forecasted for the next day and provides drivers with options and suggestion on how to deal with the upcoming Ozone Awareness Day. The Department's website is also included as a part of the message.

In 2004, the Department established a toll free telephone line for persons to call and receive the ground-level ozone forecast for the four areas of the state involved. Listed here is the number of calls for this "Ozone Hotline" for 2004 – 2006.

2004: 45 (only 3 months)
2005: 197
2006: 10 (thru May, 2006)
2006: 187 (June thru September 2006)

The number of contacts for the e-mail distribution for the 2005 ground-level ozone season was over 130 contacts.

Beginning with the 2006 ground-level ozone forecast season, the Department and the Bureau of Air Quality began participation in a new program that will make getting the forecast easier and more reliable. **EnviroFlash** is a program, sponsored by the EPA with State and local air quality agencies. **EnviroFlash** provides important air quality information such as forecasts and action day notifications via email or pager notification. The email includes the same local air quality forecast information which is coordinated through the news media, like television and radio.

EnviroFlash provides instant information that may be customized for individual needs. Subscribers can choose to receive the forecast everyday or only on forecasted Ozone Action Days. Air quality information allows subscribers to adjust lifestyle activities when necessary on unhealthy air quality days.

Participants in the BAQ's forecast system were provided information to an on-line subscription page and requested users to sign up, edit the reported information, or cancel the service. Subscribers are able to choose the type and frequency of service desired.

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EnviroFlash will be sent to your email or pager as soon as the ground level forecast is made. Persons are able to select from the Central Midlands, Upstate, Central Savannah River, or Pee Dee area. Subscribers to this free service may also receive the forecast for all four regions. See below for **EnviroFlash** subscriber statistics as of June 2006, for each zone. This information is split into categories, whereby "Green" level subscribers receive forecasts every day, "Yellow" level subscribers receive forecasts for "Yellow" forecasts and higher, etc.

Midlands - 81 subscribers
"Green" Level Subscribers: 12
"Yellow" Level Subscribers: 16
"Orange" Level Subscribers: 53

Upstate - 81 subscribers
"Green" Level Subscribers: 16
"Yellow" Level Subscribers: 11
"Orange" Level Subscribers: 51
"Red" Level Subscribers: 2
"Maroon" Level Subscribers: 1

CSRA - 19 subscribers
"Green" Level Subscribers: 5
"Yellow" Level Subscribers: 2
"Orange" Level Subscribers: 12

Pee Dee - 12 subscribers
"Green" Level Subscribers: 5
"Yellow" Level Subscribers: 0
"Orange" Level Subscribers: 7

The total number of subscribers, 193, may reflect more than just individuals receiving the forecast. Some subscribers may forward the email **EnviroFlash** delivers, to other employees at a worksite. The forecast may be utilized by local meteorologists to share with their TV audiences.

Subscribers for the 2006 Ground-level Ozone season through EnviroFlash (December 2006):

Midlands - 90 subscribers
"Green" Level Subscribers: 13
"Yellow" Level Subscribers: 18
"Orange" Level Subscribers: 58
"Red" Level Subscribers: 1

Upstate - 84 subscribers
"Green" Level Subscribers: 17

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"Yellow" Level Subscribers: 10
"Orange" Level Subscribers: 53
"Red" Level Subscribers: 3
"Maroon" Level Subscribers: 1

CSRA - 25 subscribers
"Green" Level Subscribers: 6
"Yellow" Level Subscribers: 3
"Orange" Level Subscribers: 16

Pee Dee - 13 subscribers
"Green" Level Subscribers: 5
"Yellow" Level Subscribers: 0
"Orange" Level Subscribers: 8

2007 Ozone Awareness Proclamation
For the eighth year in a row, the governor of South Carolina has signed a proclamation regarding ground-level ozone awareness week. In 2007, Governor Sanford signed a proclamation declaring April 1-7, as "Ozone Awareness Week." A news release was developed to help announce this proclamation and was distributed electronically to all EAC contacts for their use locally. A copy of the 2007 proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/OzoneAwarenessWeek.pdf.

2006 Ozone Awareness Proclamation
For the seventh year in a row, the governor of South Carolina has signed a proclamation regarding ground-level ozone awareness week. This year, Governor Sanford signed a proclamation declaring May 1-7, 2006, as "Ozone Awareness Week." A news release was developed to help announce this proclamation and was distributed electronically to all EAC contacts for their use locally. A copy of this year's proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/OzoneAwarenessWeek.pdf.

b. Developed Outreach Projects / Provided Outreach Materials

While the Department has not had the resources to track the education and outreach activities performed by non-Agency personnel in the recent past (i.e., no baseline data) to make comparisons, the EAC process has improved information regarding such activities. Because of the reporting requirements involved with the local participants towards meeting the EAC milestones, there have been numerous updates concerning outreach activities that have been initiated in the local areas. Material resources such as posters, brochures and radio and television Public Service Announcements (PSAs) developed by the Department have been requested for use by these local contacts.

- Gas Can Exchange - Using the BAQ's protocol developed for Gas Can Exchange events, Anderson County organized and planned its own gas can exchange (09/01/2005) with some limited assistance from BAQ staff. 200 new, environment

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friendly gas cans were distributed and 79 used gas cans collected. Results from Gas Can Exchange events held in other counties include:

Georgetown – 334 pounds VOC reductions
Greenville – 711 pounds VOC reductions
Greenwood – 334 pounds VOC reductions
Lexington – 348 pounds VOC reductions
Richland – 475 pounds VOC reductions

- Car Care Awareness (April 2006) - The BAQ has drafted a protocol for hosting a Car Care Awareness Project. The draft protocol outlines planning activities associated with this inaugural Car Care Awareness Project and will be shared with the EAC contacts for information and planning consideration.

- BAQ - Education and Outreach – School related activities

March 15, 2007 – At a Department Environmental Quality Control (EQC) RegionVI meeting, staff discussed the needs of the region for EAC efforts. Two areas of focus were identified: 1) Anti-idling in the schools (using b2 to kick it off), and 2) Reduce opening burning. Help enforcing the regulations (staff numbers are limited) is needed. Discussion also included the possibility of using the local fire department to help with open burning enforcement actions.

March 21, 2007 – Staff met with Gilbert Middle School (an EIC school) and presented to them the "Air Quality" kiosk panels to be displayed at their outdoor learning center area. Staff worked with several groups at the learning center focusing on the importance of air quality and the state of South Carolina's air quality.

April 21, 2007 – Earth Day at the State Museum. Staff provided a booth that focused on the importance of using native plants for air quality. A local "Master Gardner" assisted with the booth to learn the importance of using native plants providing her with information to share with clients and colleagues.

April 28, 2007 – Earth Day Birthday at the Museum of York County - Staff assisted with a lawn mower exchange and provided a booth with various publications for the participants including information on energy conservation, native gardening, ozone, driving smarter and other environmental interests.

May 10, 2007 - "Air Quality and Trees" presentation - Staff presented to the Northeast Beautification committee about the importance of trees and using native plants and shrubs. The committee has several projects going on in the Northeast area of Columbia, all of which focus on planning greenways, tree planting, and beautification areas. Several BAQ staff is on the "Trees for Two Notch" sub-committee.

May 23 – 25, 2007 – South Carolina Public Health Association (SCPHA) conference - Staff conducted provided presentations on the b2 program and EPA's "Tool for Schools"

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air quality program. A booth that included several publications on air quality issues (ambient and indoor) focusing on the health effects of poor air quality was provided.

June 6, 2007 - Fountain Inn Elementary School meeting - The school has been working for several weeks with county and city planners to implement b2. The school has taken the program beyond its anti-idling focus. The school has plans to plant shade trees, build benches, landscape needed areas, and re-route bus/carpool traffic.

June 6, 2007 - Conference call with Richland and Lexington counties - The two counties are applying for the "Barrett Lawrimore Memorial Regional Cooperation Award" using the lawn mower exchange that took place at the SC State Museum April 21, 2007. BAQ staff will be providing information.

June 7, 2007 - EQC Education and Outreach committee meeting - The decision was made to move forward with the proposal to award the Duke Energy funds to Greenville County to expand the b2 efforts to other local schools and to help Anderson County with their open burning campaign.

Staff has been involved for the past 3 years with Gilbert Middle School. Several outdoor workshops with the students on air quality have been conducted.

Staff has taught the 7th grade at Northside Middle School the science curriculum incorporating the health and environmental issues of air quality.

Crossroads Middle School, Rosewood Elementary School in Rock Hill and Fountain Inn Elementary School have implemented a no idling policy.

Greenville County was the recipient of a 2006 EPA grant to raise public awareness about air quality, and implement an anti-idling campaign in one county school. The anti-idling campaign is called B2-Breathe Better, and the idea is to spread the program through out the county-wide school district.

December 1, 2006 - Buck Station meeting/Duke Energy, Salisbury, NC - This was the second meeting with Duke Energy to discuss the Lee Station site for the outdoor education center in Anderson County. We visited this well used/established site to get an idea of where the project could be heading. Present at this meeting was a representative from Clemson University for a program called South Carolina Maps and Aerial Photographic Systems (SC MAPS), and a representative from the State Department of Education (Ed Falco). The site will initially be open to all middle school students from Anderson school districts.

November 1-3, 2006 - SC^2 Convention, Myrtle Beach, SC - Staff provided a booth for educators at the conference as well as a presentation on Breathe Better Air at School (B^2@ school) during one of the break out sessions (about 25 attended the session). There were at least 200 educators from all over the state at the conference. Over 60 pledges for the EPA program "Change a Light" Campaign were collected.

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November 14, 2006 - Project consult/presentation on Global Climate Change, Rosewood Elementary Rock Hill, SC - Staff presented to an audience of 102 5th grade students facts about global climate change, discussed impacts, contributions, and solutions for the school to present in a project locally, state wide, and globally.

October 3, 2006 - B2@ school district meeting, Chapin Middle School - Staff met with the approximately 45 science teachers from Lexington School District 5 to present the B^2@ school program.

October 5 and 19, 2006 – Using the Environment as the Integrating Context for Learning (EIC) Workshop, Gilbert, SC - Staff worked with the students from Gilbert Middle school that are participating in the EIC model. Field studies and investigations on air and water quality in the school's nearby wetland area were conducted. The total number of students in the model for this year is approximately 140.

October 10, 2006 - Lee Station meeting/Duke Energy, Anderson, SC - Staff met with Duke Energy to discuss the plans for the outdoor education center at Lee Station in Anderson County. Palmetto Middle School (an EIC school) will serve as the "host" school for the project. The center will initially be open to all middle school students from Anderson school districts.

August 29, 2006 - EAC Greenville meeting Greenville, SC - Staff met with Sandra Yudice and John Owings from Greenville County as well as several school district personnel to discuss implementation of an anti-idling campaign in the schools using B^2@ school as a model. The initial focus will be the middle schools, approximately 18 in the Greenville area.

July 27-28, 2006 - EIC teacher training, Kelly Mill Middle School, Columbia, SC - This two day teacher workshop focused on project ideas for the EIC schools in order to expand existing projects. Staff offered advice on how to keep the projects on track with the EIC model. Teachers that were new to the EIC program attended the workshop which included Gilbert Middle School in Lexington 1 and Kelly Mill Middle School in Richland 2.

June 21, 2006 - Take Action Today, Columbia, SC - This summer workshop provided information, demonstrated lesson plans/ideas, and provided several field trips for educators. All participants received an "Action for a Cleaner Tomorrow" CD to use in their classroom. The workshop is open to all educators in the state. There were 142 teachers attending this workshop.

June 22, 2006 - Museum of York County summer camp, Rock Hill, SC - The one day class focusing on ground-level ozone. There were approximately 16 students in the class that day ranging from third to fifth grade.

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May 5, 2006 - Project Discovery, Hilton Head, South Carolina – In collaboration with the South Carolina Educational Television (SCETV) several segments were taped on environmental issues pertaining to the Beaufort area. The segments included a live broadcast where callers could call in with questions on the issues. The BAQ segment focused on open burning. The SCETV viewing area includes the entire state.

April 19, 2006 - York County - Rosewood Elementary - worked with an Environmental Club on understanding and investigating environmental issues.

July 18, 2005 - Bethel Christian Camp - Gaston, SC. Guest speaker/presentation at the camp for "Environmental Day"

March 24, 2006 - Satchel Ford Elementary School - Presentation for Science Day

March 2006 - Central Carolina Technical College (Sumter County), Education and Outreach Support, Environmental Symposium

March 2006 - Keep Beaufort County Beaufort, Local Schools (Beaufort County), Education and Outreach Support, Earth Day Events

March 2006 - Southeast Elementary (Richland County), Presentation for Career Day, Education and Outreach Support

March 2006 - Hampton Conservation District (Hampton County), Education and Outreach Support – Environmental Activity Books, Local Schools

Congaree-Wood Elementary (Lexington County) Education and Outreach Support – Earth Day Activities

Mauldin Middle School (Greenville County) Education and Outreach Support – Earth Day Activities

May 7, 2005 - Earth Fair Irmo, (Saluda Shoals, Lexington County), exhibit for state wide Earth Fair

December 2004 – Present - air pollution reduction program at Crossroads Middle School (Lexington County), Education and Outreach support, environmental school project for SCDHEC pilot program

February 2005 - Pine Grove Elem. School (Richland County), presentation for Science Day

April 15, 2005 - Forest Heights Elem. School (Richland County), presentation for Science Day

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October 2004 – March 2005 Sanders Middle School (Richland County), Education and Outreach support

Provide approximately 100 "Driving Smarter" brochures every other month to be placed at the Richland County Administration building.

March 2005 - Berry Shoals Elem. School, (Spartanburg County), educational materials, Special science awards

April 30, 2005 - Museum of York County (York County), exhibit, Earth Day Birthday

2002-present, focus on air pollution reduction strategies - Rawlinson Road Middle School (York County), education and outreach support, environmental school project through the South Carolina Department of Education

- **EAC Ozone Action Needs Assessment Tool -** A survey tool for the 2006 Ozone Season was developed and sent to EAC contacts to: 1) assess their current initiatives, 2) determine their needs for education/information resources and activities and 3) identify how BAQ staff could best support their efforts. Contact was made by BAQ staff with all responders via email and/or telephone for follow-through. A copy of this tool is available.

c. *Breathe Better @ School* Program

The*B^2@ school* (Breathe Better Air at School) program's main focus is reducing air pollution around school campuses so everyone can breathe better. Solutions to reduce air pollution are made possible through the efforts of students, faculty, staff, community and local agencies. The *B^2@ school* has many accomplishments to be proud of its first year in existence, the first, receiving the EPA Children's Environmental Health Recognition Award for 2006! Research shows that children, especially those with respiratory conditions, are more sensitive to air pollution. A key component of the *B^2@ school* program is policy change within the school. A good example of this is a local school's new policy included in the student/ parent handbook that reads, "We request/advise that any individual in a vehicle that is waiting on a student or adult please turn their car off if weather is permitting. We hope to reduce respiratory problems for our students, staff and improve the air quality in our environment." The school has "No Idling" signs around the campus which were purchased as a result of winning a $750.00 **"Champions of the Environment"** award. The number of visits to the office for asthma incidences has decreased since the implementation of the "No Idling" policy, and the *B^2@ school* coordinator was inducted into the "GreenSteps" Hall of Fame for her commitment to environmental education.

Another accomplishment of the *B^2@ school* program is that it is a component of an EPA Clean School Bus grant awarding the state $500,000 targeted for reducing air pollution through anti-idling programs, retrofitting old school buses and building new ones. As the

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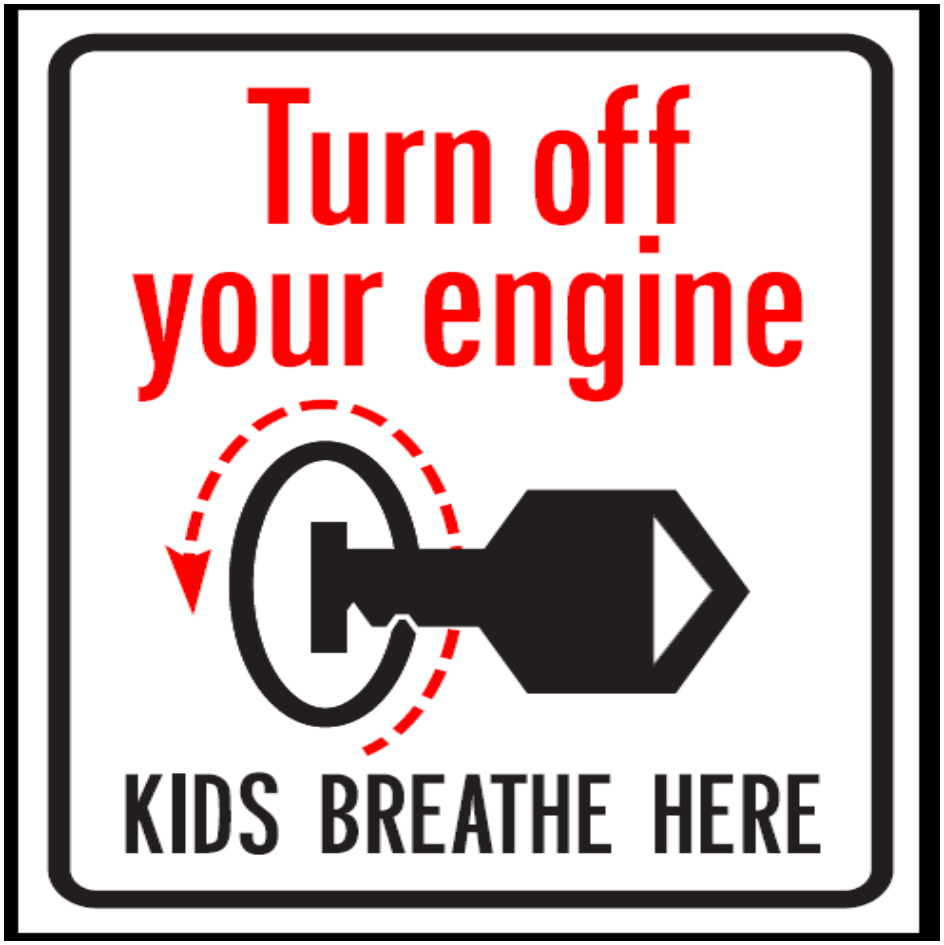
B²@ school program expands, the goal is to continue reducing air pollution around school campuses and improving children's health in South Carolina. Information is available at http://greenstepschools.com/page1.html

Future plans include working with the Lexington County EAC contact to implement the *B2@ school* program at three Lexington County middle schools. The plans include providing "No Idling signs for those three middle schools as well.

June 2007 – The following sign is utilized at participating schools implementing anti-idling measures.



December 2007- To enable better access, a website for this project has been developed and is located at the following link:
http://www.scdhec.gov/environment/baq/docs/edu/B2/b2originalprotocol.pdf

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d. South Carolina Educators trained with Action for a Cleaner Tomorrow

In FY05, 28 educators were trained on the Department's environmental curriculum, Action for a Cleaner Tomorrow. There have been 26 trainings with 724 teachers trained from July 2005 through June 2006.

e. Car Care Awareness Month Projects

April 2007
Suddeth Automotive in Richland County offered Free National Car Care Month Inspections. The inspections were offered on Monday thru Friday between 9 AM and 4:30 PM during the entire month of April. In addition, Suddeth Automotive offered a Free Women's Car Care Seminar on Saturday April 28. Door prizes, drawings and refreshments were offered. The Department supplied "Driving Smarter For Tomorrow" brochures which included tips to save money, improve vehicle reliability, reduce air pollution, and maximize fuel economy.

April 2006
In recognition of Car Care Awareness Month, the Department and Richland and Lexington counties organized a vehicle maintenance check event in April. The State Museum, Ben Satcher Ford and Pope Davis Tires helped sponsor this free event on April 1, from 10 a.m. until 2 p.m. at the State Museum on Gervais Street. A team of certified technicians made suggestions for improving vehicle safety and gas mileage. The technicians also performed vehicle checks and raised citizens' awareness about how proper maintenance of a vehicle can help to reduce air pollution and protect the public's health.

The goal of the event, held on April 1, 2006, was to increase the target audience's awareness about the importance of car maintenance in preserving good air quality. To reach this goal, several objectives were set, and our ability to meet those objectives is documented herein. The objectives were: to have 100 cars come through the car check lanes, create a replicable project that can be implemented in other areas across the state, and to educate drivers and volunteers who participated in the event about the importance role vehicle maintenance plays in preserving good air quality. The target audience was drivers local to the downtown Columbia area.

This event was on a large scale, and approximately 60 cars were assessed during the four-hour event. At least 2 more technicians would have been needed to have reached the first objective. This is based on the average time per car was approximately 15 minutes, from the time the pre-survey was taken to the time the post- survey was collected and information was provided to the participant.

To help promote this event, a news release was issued by *The State* on April 1, 2006, titled – DHEC helps drivers focus on car care with expert advice.

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Statistical information for this project:
Tire issues:

- **5 vehicles**, or 8 percent, had at least one tire with low tread. Most states recommend tire tread to be 3/32 inches or higher.
- Since each vehicle varies on tire pressure, stats on how many vehicles had low tire pressure are not available. Over half of the vehicles at the event needed tire pressure adjustments in at least one tire or more.

The level of:

- **C**O_2 (standard is: 14-16 percent) 0 vehicles, or 0 percent, exceeded the standard
- HC (standard is: 100) 10 vehicles, or 17 percent, exceeded the standard
- CO (standard is: 1.0 percent) 7 vehicles, or 12 percent, exceeded the standard
- O_2 (standard is: 1.0 percent) 13 vehicles, or 22 percent, exceeded the standard

OBD light on: 6 vehicles, or 10 percent, exceeded the standard

Air Filter: Air filters in 15 vehicles, or 25 percent, needed attention

The BAQ has drafted a protocol for hosting a Car Care Awareness Project. The draft protocol outlines planning activities associated with this inaugural Car Care Awareness Project and will be shared with the EAC contacts for information and planning consideration.

f. Earth Week

2007 - Governor Sanford signed a proclamation declaring April 22-28, 2007 as "Earth Week" in support of the efforts described above. A copy of this proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/earthweek.pdf.

The Department, with the help of volunteer staff, celebrated Earth Day 2007 throughout the state. During the month of April and the first part of May, staff participated in many community Earth Day events including grade schools, colleges, churches, hospitals, historic parks and private industry (BMW). Staff presented on topics such as air sampling, criteria pollutants, ozone formation, open burning, electric lawn mowers, hybrid electric vehicles, and greenscaping. Distributed information discussed particulate pollution and health, automobile emissions, spill-proof gas cans, the benefits of urban trees, and energy conservation. School aged children were enthused to receive promotional items such as environmental activity booklets, recycled pencils, and several themed posters included ways to help reduce air pollution.

Many adults were also excited about their newfound environmental concepts such as the use of native plants, compact florescent light bulbs, alternate fuels and the display of hybrid vehicles at events around the state. Many onlookers stated that they planned or hoped to make a hybrid car their next vehicle of purchase. Information that was collected through an evaluation tool is still being collated and will be available.

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Earth Day Activities – 2007

Activities included:

Air sampling and monitoring presentation at Coker College
Lawn Mower Exchange at the S.C. State Museum
First Annual Kids Earth Day in Camden
Gas Can Exchange in Greenville
N. Augusta Kids Day in Aiken County
Earth Day at Park Circle in Charleston
Saluda Shoals Park Earth Fair

Over ten-thousand (10,000) environmental materials were distributed which included:

"Particulate Matter and Your Health" brochures
"Ozone and Your Health" brochures
"Drive Smarter" brochures
"Don't Spill When You Fill" brochures
"Good Up High, Bad Near By" ozone posters
"Air is Everywhere" posters
"Champions of the Environment" pencils
B2 @ School postcards
BLWM Recycling Posters
Spare the Air coloring books
Air Pollutants bookmarks
EPA 'No Idling Campaign" VHS video
"Earth Today" VHS video
Energy Conservation pamphlets
Hybrid Vehicles and Auto Emissions fact sheets
Fish's Wish Books
BOW pencils
BOW bookmarks
Petwaste magnets

Earth Day Website Resources were also identified and provided at this web address:
http://www.scdhec.gov/environment/earthtoday/schools.htm

2006 - Governor Sanford signed a proclamation declaring April 16-22, 2006 as "Earth Week" in support of the efforts described above. A copy of this proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/earthweek.pdf

Earth Day 2006 included DHEC celebrating **Earth Day** with participating schools all around the state with help from volunteer staff. Throughout the month of April staff visited with registered schools and watched DHEC's Emmy-award winning *Earth Today*

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video with students. Following the video, staff held question and answer sessions, lead environmental projects, and distributed promotional items such as wildflower seed packets, activity booklets, recycled pencils and posters.

With an initial target goal to reach 6,000 students, volunteers extended outreach to over 11,000 general audience members in twenty (20) of the forty-six (46) counties. In addition, The *Earth Today* video was among the top 100 videos, among 3,406, requested from SCETV's Streamline Program for the month of April.

Staff found students enthused about the video and eager to participate in the follow-up questions. Several schools have already expressed the desire to participate in next year's Earth Day events while the Department anticipates hearing of the environmental efforts initiated by participating school in the coming months.

Many adults were also excited about their newfound environmental concepts such as alternate fuels and the display of hybrid vehicles at events around the state. Many onlookers stated that they planned or hoped to make a hybrid car their next vehicle of purchase. Information that was collected through an evaluation tool is still being collated at this time, but will be available.

Earth Day Activities - Friday, April 21, 2006

The Department set a goal for 2006 to send employees into more than 200 classrooms across the state to help raise environmental awareness among our students. Employees viewed the Department's three year running, Emmy-winning video *Earth Today* with students and answering questions afterward. The Agency's Earth Day materials were available for staff visiting with classrooms.

Via the S.C. Dept of Education, Science teachers and Media Specialist around the state were invited to register and participate. The Department's website included Earth Day plans and information for teachers to register: http://www.scdhec.gov/earthtoday/.

Additional information on the agency's plans for Earth Day and Education and Outreach services was available during the following briefings scheduled for March at the Department's Central Office in Columbia on the following dates:
Friday, March 3, 2006 - 10 a.m.
Friday, March 10, 2006 - 10 a.m.
Friday, March 17, 2006 - 2 p.m.
Friday, March 24, 2006 - 10 a.m.
Friday, March 31, 2006 - 10 a.m.

The following are Earth Day 2006 participants in which Education and Outreach Support was provided:

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McLees Elem	Anderson
Starr Elem	Anderson
Wren Elem	Anderson
Grove Elem	Greenville
Armstrong Elem	Greenville
Liberty Elem	Pickens
Greenview Elem	Greenville
Calvary Christian Central	Greenville
Lone Oak Elem School	Spartanburg
Cannons Elem	Spartanburg
Inman Elem	Spartanburg
DR Hill Middle	Spartanburg
West View Elem	Spartanburg
USCS Upstate	Spartanburg
Great Falls Middle	Chester
Rosewood Elem	York
Andrew Jackson Middle School	Lancaster
Jefferson Elem	York
Gold Hill Elem	York
Indian Land Elem/Middle School	Lancaster
Chester Park Elem School of Arts	Chester
Cotton Belt Elem	York
A R Rucker Middle	Lancaster
Chester Park Elem School of Arts	Chester
Heath Springs Elem	
Bethel Hanberry Elem	Richland
Lexington Elem	Lexington
Plainview Elem	Chesterfield
Schofield Middle	Aiken
Paul Knox Middle	Aiken
Warrenville Elem	Aiken
N. Augusta Earth Day	Aiken
Aiken's Earth Day	Aiken

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Carolina Forest Middle	Horry
Jasper County High	Jasper
Cottageville Elem	Colleton
Rosewood Elem	Richland
North Springs Elem	Richland
H.B. Rhame Elem	Richland
Forest Lake Elem	Richland
North Springs Elem	Richland
Montessori School of Camden	Kershaw
Forest Heights Elem	Richland
White Knoll Middle	Lexington
Rice Creek Elem	Richland
Lake Murray Elem	Lexington
Congaree-Wood Elem	
Sandhills Intermediate	Lexington
Lake Murray Elem	Lexington
Bethel Academy	Richland
St. Peter Academy	Richland
Earth Fare Earth Day	Richland

g. Small, Gas-powered Engine Exchange Project

- Staff is currently meeting with EAC contacts in Greenville, Richland and Lexington counties to discuss the development of a small gas engine exchange project. Specifically, the project is targeting the exchange of gas-powered lawn mowers for electric mowers. A copy of the logic model for planning this event is available**.** Also available is a draft needs assessment tool to assist the planners in gathering information to help identify support/barriers to supporting this project. It is tentatively planned to be utilized with a sample of the target audience prior to finalizing planning for implementation of this project.

December 2007 - Richland and Lexington Counties and BAQ staff are planning a lawnmower exchange event to be held in 2008. A planning meeting was held on September 11, 2007. The target date for the event is the Spring of 2008.

November 2007 - The Education and Outreach section of the Department's BAQ will be coordinating a "Mow Down Pollution"- Lawn Mower Exchange event and promoting energy efficiency activities, particularly related to use of computer equipment, with local government in the Duke Energy service area in South Carolina. These activities will present opportunities to raise awareness of air quality issues in the Upstate of South Carolina and reduce emissions of air pollution. The funds ($6500.00) will be used for but not limited to: advertising and promotion, creating brochures and other written materials,

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providing promotional items and subsidizing the cost of the electric lawn equipment. This project will be completed by December 31, 2008.

June 2007 – "Mow Down Pollution" Event (April 21, 2007) - Lexington and Richland Counties in conjunction with local non-profit Keep the Midlands Beautiful, and the Department's Bureau of Air Quality (BAQ) planned and implemented the first lawn mower exchange in South Carolina. To encourage Columbia-area residents to do their part to "Spare the Air," the lawn mower exchange was held at the State Museum to Mow Down Pollution! The lawn mower exchange coincided with other activities the museum hosted to celebrate Earth Day. The event collected empty, functional gas powered lawn mowers and offered a discount between 30 percent and 55 percent off MSRP on Neuton cordless electric mowers. To compliment the lawn mower exchange, other partners were invited to exhibit Greenscaping information at the event. These partners helped extend the impact of the exchange by highlighting complimentary lawn and garden practices that help protect air quality. The Columbia event collected 155 gas-powered mowers as trade-in. These mowers were recycled by Lexington County and thereby removed from operation. Our estimated emission reductions are 6.8665 tons VOC per year and 14.1205 tons CO per year (based on EPA emissions for 2 cycle gas mowers). Refer to Attachment 2-2 for the DRAFT "Mow Down Pollution" report and the participant survey.

- December 2006 - EAC contacts in Richland and Lexington Counties are continuing to plan for a small gas-powered lawn equipment exchange. A survey tool has been developed and is being utilized at various events held in these two counties to gauge citizen interest for such an event. The notes from the most recent meeting of the planning committee for this project are available. Here is the memorandum language being utilized with the survey tool:

"The following message is brought to you by a partnership of Lexington County, Richland County, Keep the Midlands Beautiful, and SC DHEC.

As part of South Carolina's 2007 Emissions Reduction Campaign, you have been selected to participate in a voluntary survey to help us improve our community's Air Quality. The link below will take you to a survey that will ask you questions about your lawnmower use. We will use your answers to help us plan a **"Trade It In For Cleaner Air"** lawn mower exchange, currently scheduled for March/April 2007 for Lexington and Richland Counties.

The **"Trade It In For Cleaner Air"** Event will offer participants a great discount on a new electric lawn mower when they bring in their old gas-powered mower to be recycled. *A trade-in will not be required.*

Operating a lawn mower releases chemicals that create Ground Level Ozone, a federally regulated criteria air pollutant. This is especially true of old lawn mowers, and includes leaf blowers, weed trimmers, chainsaws, and other gas-powered lawn equipment. By

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participating in the event, residents will be able to get a great deal on a new electric mower, AND promote good Air Quality *at the same time*!

For more information about the **"Trade It In For Cleaner Air"** Event, please call 803-898-2233. For more information about South Carolina's 2007 Emissions Reduction Campaign, please call… More information about Ground Level Ozone, including it's impact on your health, please visit www.scdhec.gov".

Press Coverage

Over the last several years, numerous press releases, news publications and television reports have been done on the early action process. Additional articles for specific areas may be found in the local progress reports submitted by the participating areas.

2007

Upstate residents cautioned about ozone conditions (September 5, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070905-01.htm

Upstate residents cautioned about ozone conditions (August 3, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070803-02.htm

Upstate residents cautioned about ozone conditions (August 15, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070815-01.htm

Residents cautioned about ozone conditions (June 21, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070621-03.htm

Climate Registry established (May 2007)
http://www.scdhec.gov/administration/news/2007/nr20070509-01.htm

Upstate residents cautioned about ozone conditions (May 2007)
http://www.scdhec.gov/administration/news/2007/nr20070501-02.htm

Lawn mower exchange program announced (April 2007)
http://www.scdhec.gov/administration/news/2007/nr20070409-02.htm

Fountain Inn Elementary School group named Champions of the Environment (April 2007)—Part of B2@School Effort
http://www.scdhec.gov/administration/news/2007/nr20070402-01.htm

Ground-level Ozone forecasts begin with new date and new areas (March 2007)
http://www.scdhec.gov/administration/news/2007/nr20070326-01.htm

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Alternatives to Open Burning (November 2006)
http://www.scdhec.gov/administration/news/2006/nr20061108-03.htm

Citizens Encouraged to Reduce Open Burning (October 2006)
http://www.scdhec.gov/administration/news/2006/nr20061009-02.htm

Ground-Level Ozone Alert (August 2006)
http://www.scdhec.gov/administration/news/2006/nr20060802-01.htm

Ground-Level Ozone Alert (August 2006)
http://www.scdhec.gov/administration/news/2006/nr20060801-01.htm

SmartRide (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060731-01.htm

Ground-Level Ozone Alert (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060720-03.htm

EAC Summit (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060720-02.htm

Ground-Level Ozone Alert (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060719-02.htm

Ground-Level Ozone Alert (June 2006)
http://www.scdhec.gov/administration/news/2006/nr20060718-01.htm

Ground-Level Ozone Alert (June 2006)
http://www.scdhec.gov/administration/news/2006/nr20060621-01.htm

Ground-Level Ozone Awareness Week/Proclamation (Aril 2006)
http://www.scdhec.net/administration/news/2006/nr20060428-01.htm

Earth Day (April 2006)
http://www.scdhec.net/administration/news/2006/nr20060420-01.htm

Car Care Event (March 2006)
http://www.scdhec.net/administration/news/2006/nr20060320-04.htm

Open Burning (November 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200511/nr11BurningGreenville05.htm

Open Burning (October 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200510/nr10OpenBurning05.htm

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Ozone Warning (July 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200507/nr07OzoneMidlands05.htm

Ozone Warning (July 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200507/nr07OzoneUpstate05.htm

Ozone Warning (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06OzoneAlert6-23-05.htm

SmartRide/Free Ride-OAC (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06FreeRide05.htm

SmartRide (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06SmartRide05.htm

Ozone Forecasting (April 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200404/nr04OzoneSeason04.htm

Gas Can Exchange (June 2004)
http://www.scdhec.net/administration/news_archive/releases/pdf_files/2004GasCanExch.jpg

Gas Can Exchange (June 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200406/nr06GreenwoodCans04.htm

Non-Road Diesel Rule (May 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200405/nr05DieselRule04.htm

Ozone Alert (May 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200405/nr05-06Ozone%20alert04.htm

Ozone Hotline (July 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07OzoneHotline04.htm

Cutting Diesel Emissions (July 2004)

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http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07DieselEmissions04.htm

New OB Regulations (July 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07BurningRules04.htm

Truck Stop Electrification (October 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200410/nr10MAElectric04.htm

Gas Can Exchange (October 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200410/nr10MidlandsCans04.htm

GreenScapes Project (November 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200411/nr11GreenScape04.htm

August 28, 2002 – DHEC press release – "Planning for Cleaner Air Sooner"

September 3, 2002 – Bureau of National Affairs Daily Environment out of Atlanta announced South Carolina's decision to take advantage of EPA's offer to implement early measures to meet the 8-hour ozone standard.

September 5, 2002 – Greenville News – "Upstate will meet new clean air standards before deadline, DHEC says"

Fall 2002 – The Palmetto Planner – A Publication of the South Carolina Chapter of the American Planning Association – included article titled "The Bureau of Air Quality's Early Action Plan for the 8-Hour Ozone Standard.

September 25, 2002 – DHEC press release – "Meeting on air quality plan set for Oct. 1"

October 1, 2002 – The State – "Groups oppose state's ozone plan"

October 4 – Greenville News – "Early air effort could keep EPA at bay"

October 4 – Spartanburg Herald-Journal - "DHEC outlines clean-air proposal; State health officials on Thursday explained to an Upstate audience a proposal they say is a common-sense approach to cleaning up South Carolina's air sooner."

October 8, 2002 – Morning News – "Pee Dee air quality not up to par of EPA"

October 17, 2002 – Charleston Post and Courier – "State asked to get a jump on tougher ozone standards" – Article summarizing public meeting held in Charleston by DHEC.

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November 14, 2002 – Anderson Independent-Mail – “Government agrees to ozone deadline”

November 22, 2002 – Spartanburg Herald-Journal – “Air quality resolution wins support”

November 27, 2002 – Clean Air Today – “SC Officials Discuss Air Quality Plans at Summit”

December 2002 – Spartanburg Herald Journal – “Council votes to join 3-county compact to improve air quality”

December 2002 – Augusta Chronicle – “City considers air-quality plan”

January 2003 – The Charlotte Observer – “York County is trying to get jump on upcoming new standards”

January 30, 2003 – Darlington News and Press – “Ozone problem threatens local economy, DHEC reps, local industry meet to help county avert federal penalties”

February 21, 2003 – DHEC press release – “Ozone early action update meeting Feb. 26”

February 27, 2003 – Anderson Independent Mail – “State wants ideas to clean the air”

February 27, 2003 – The State – “S.C. making plans to clean up its air”

April 28, 2003 – DHEC press release – “Ozone forecasting begins in Pee Dee”

April 28, 2003 – Morning News – “Pee Dee counties added to ozone program”

April 29, 2003 – The Post and Courier – “4 counties to be added to S.C.’s ozone forecast”

April 30, 2003 – Morning News – “Greater ozone awareness brought to Pee Dee”

May 13, 2003 – Anderson Independent Mail – “Group creates plan to reduce Upstate Ozone”

May 15, 2003 – DHEC press release – “Meeting set to discuss air quality proposal”

June 9, 2003 – Anderson Independent Mail – “State warns of sun’s rays and ozone today”

June 9, 2003 – DHEC press release – “Legislators support air quality early action plans”

June 11, 2003 – DHEC press release – “Gas can trade will help air quality” (also includes Public Service Announcements)

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2. Commuting Reduction Programs

a. Take A Break From The Exhaust (TABFTE)

The "Take a Break from the Exhaust" (TABFTE) project developed by the Department, is an interactive alternative commute program in which employees are asked to take voluntary actions to help reduce emissions from mobile sources, such as cars and trucks to help improve air quality. Some examples of these actions include: carpooling to work, staying in for lunch, working an alternate work schedule, telecommuting, using mass transit, bicycling or walking to work. The TABFTE project was awarded the *Governor's 2003Pollution Prevention Award for State Agencies*. The project's software tracking tool was important in supporting the Bureau of Air Quality's (BAQ) application to participate in the U.S. Environmental Protection Agency and U.S. Department of Transportation's *Best Workplace for Commuters* voluntary program, which as of 2005 the BAQ holds the only designation in South Carolina.

Prior to 2004, the Department focused on behavior changes including, carpooling, riding a bicycle to work and staying in for lunch. In 2004, the Department began estimating emission reductions.

Reductions for 2004 Ozone Season:
BAQ reduced just over 100,000 miles in 2004
598 pounds of VOCs reduced
393 pounds of NO_x reduced
5,494 pounds CO reduced

The utilization of the TABFTE grew in 2005, with the Bureau of Water (BOW), Bureau of Land & Waste Management (BLWM), the SC State Energy Office (SCEO) and the Wisconsin Department of Natural Resources using this program. The BAQ also partnered with the SC Department of Transportation and the SCEO to promote rider ship on the SmartRide alternative transportation project during Ground-level Ozone Season.

On Friday, April 15, 2005, *The State* newspaper wrote a story on one TABFTE partner and his decision to give up his car for a bike and public transportation. This generated interest in more bike and pedestrian paths and public transportation in the Columbia area.

In 2005 the goal for BAQ was to reduce over 100,000 miles. Staff within the BAQ surpassed this goal by almost 40,000 miles! Another goal was to have the TABFTE program reduce 150,000 miles overall. Results program wide showed that the goal was almost DOUBLED!

2005 TABFTE participants included:
Bureau of Air Quality
Bureau of Water
Bureau of Land and Waste Management
South Carolina Energy Office

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Wisconsin Department of Natural Resources

Total Reductions for 2005 Ozone Season for South Carolina only:
286,889 miles reduced
1,076 pounds of VOC's reduced
684 pounds of NO_x reduced

Individual reductions for 2005 Ozone Season:

Bureau of Air Quality, SCDHEC: In 2005, BAQ had 111 participants and reduced 139,264 miles during the season. This season the BAQ has reduced 248,700 grams **(548 pounds)** of VOC's and 172,786 grams **(318 pounds)** of NO_x.

Bureau of Water (BOW), SCDHEC: 2005 was BOW's first year of participation. 1n 2005, BOW had 98 participants and reduced 100,881 miles during the season. This season, BOW reduced 178,948 grams **(395 pounds)** of VOC's and 124,127 grams **(274 pounds)** of NO_x.

Bureau of Land and Waste Management, SCDHEC: BLWM expressed an interest in TABFTE about half way through the season. Even though BLWM plans to participate in full in 2006, the thirty-two participants reduced over 25,852 miles. This season, BLWM reduced 46,086 grams **(102 pounds)** of VOC's and 31,650 grams **(70 pounds)** of NO_x.

South Carolina Energy Office: SCEO provided the grant that enabled TABFTE to come into existence back in 2000. This year, SCEO decided to participate in TABFTE after we made a presentation to their group in February. Even though they are a small group, SCEO reduced 7,892 miles this year. This season, SCEO reduced 14,172 grams **(31 pounds)** of VOC's and 9,798 grams **(22 pounds)** of NO_x.

Wisconsin Department of Natural Resources (WDNR): While attending a National Air Quality Conference in San Francisco, staff spoke with a few people about TABFTE. WDNR expressed an interest, and since TABFTE is a web-based program, we added them to our list of users. In 2005 the twenty participants reduced over 15,513 miles and had a reduction of 18,304 grams **(40 pounds)** of VOC's and 15,266 grams **(34 pounds)** of NO_x.

2006 TABFTE participants:
Bureau of Air Quality
Bureau of Water
Bureau of Land and Waste Management
South Carolina Energy Office
Wisconsin Department of Natural Resources
Lexington County Government
Central Midlands Council of Governments
Winthrop University - York County
York Technical College

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Bowater - York County
Citi Group - York County
Springs Industries - York County

Results for the 2006 Ground-Level Ozone Season will be provided with the December 2006 Progress Report. As of the date of this submittal, 7 participants have joined the program for the 2006 ground-level ozone season bringing the total number of TABFTE participants to 12.

The following table is an updated list of all participants for the 2006 TABFTE project. It should be noted that participation for TABFTE in 2006 was mixed. Some of the groups that participated in the past did not have as high a turnout as before, while groups added for 2006 may not have had a very high participation rate the first season. As noted in the table below, a number of local governments were added during the 2006 season. The Department hopes to encourage more local governments to participate during the 2007 ground-level ozone season, with an emphasis on counties in nonattainment deferred areas of the state.

Entity Name	City	State	AQI Region
Bowater	Catawba	SC	NA
Bureau of Air Quality	Columbia	SC	Midlands
Bureau of Land and Waste Management	Columbia	SC	Midlands
Bureau of Water	Columbia	SC	Midlands
Central Midlands Council of Governments	Columbia	SC	Midlands
Citigroup	Ft. Mill	SC	NA
Clean Air Works	Charlotte	NC	NA
Florence County	Florence	SC	Pee Dee
County of Lexington	Lexington	SC	Midlands
Jefferson County Department of Health	Birmingham	AL	NA
Kentucky Division for Air Quality	Frankfort	KY	NA
Madison Environmental Group, Inc.	Madison	WI	NA
South Carolina Energy Office	Columbia	SC	Midlands
Springs Industries	Fort Mill	SC	NA
Wisconsin DNR	Milwaukee	WI	NA
Winthrop University	Rock Hill	SC	NA
York Technical College	Rock Hill	SC	NA

The Department as a whole posted impressive numbers but involvement in BOW and BLWM was off for 2006. One of the goals for 2007 is to establish a permanent contact in each of those areas to help encourage participation. This was discussed at the Environmental Quality Control (EQC) Outreach meeting on November 8, 2006. In 2006,

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the Department reduced almost 150,000 miles traveled, over 590 pounds of VOC's and over 400 pounds of NO_x.

Total Reductions for 2006 Ozone Season for South Carolina only:
162,000 miles reduced
609 pounds of VOC's reduced
387 pounds of NO_x reduced

A number of companies in the upstate were added during the 2006 season as well. While their reductions were not as impressive due to their limited involvement for the season, it is expected that they will contribute more in the 2007 season. Hopefully with the "Clean Air Forever" effort underway the TABFTE project will add many more companies prior to the 2007 ground-level ozone season.

Results for the 2007 ground-level ozone season will be provided in December 2007.

TABFTE has expanded from January 2007 to May 31, 2007. Florence County has expressed an interest in participating and has been set up on the program. Columbia: The Central Midlands Council of Governments (CMCOG) has also been signed up and is participating in the program. The TABFTE program has also been presented during these COG meetings to other State and Local agencies within the area. Plans are to have at least five more meetings with the CMCOG to promote TABFTE. Aiken: TABFTE was presented to stakeholders on two separate occasions in the Aiken area. Although no groups have formally signed up yet, there was interest expressed in the program and follow-up will be conducted to encourage more participation.

December 2007: The four major participants for the TABFTE program in SC for 2007 were: BAQ, BLWM, CMCOG, and the SCEO. The County of Lexington and the City of Columbia are planning on adopting the program for 2008. The BAQ also plans to focus on other state agencies, counties, and major companies prior to the 2008 season.

Total Reductions for 2007 Ozone Season for South Carolina only:
146, 991 miles reduced
592 pounds of VOCs reduced
411 pounds of NO_X reduced

Outside of South Carolina, we had two major locations that participated. One was the Mid-America Regional Council in Kansas, Missouri which included a number of companies. The other was the Wisconsin Department of Natural Resources. **Total Reductions for 2007 Ozone Season for these two locations only:**
547,587 miles reduced
2,107 pounds of VOCs reduced
1,455 pounds of NO_X reduced

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TABFTE Reductions for 2007			
	Miles	**VOC (grams)**	**NO_x (grams)**
Within South Carolina			
Bureau of Air Quality	140,326	255,904	178,004
Bureau of Land and Waste Management	12	525	356
Central Midlands Council of Governments	5,082	9,123	6,305
SC Energy Office	1,571	2,731	1,890
Outside of South Carolina			
Mid America Regional Council	525,810	923,358	637,835
Wisconsin Dept of Natural Resources	21,777	32,560	22,178

b. SmartRide Program

In October 2003, the South Carolina Department of Transportation (SCDOT) conducted the SmartRide Research Project. For four weeks, the SCDOT provided commuter focused transit service and gathered information regarding the use of alternative forms of transportation. The project was a temporary mass transit service that focused on the needs, concerns and preferences of working commuters. Between October 6th and October 31st, 2003, the SmartRide Research Project served an average of 68 riders daily and provided a total of 2,730 passenger trips to and from work. The Smart Ride Research Project represents a strategy that can potentially improve traffic congestion and air quality conditions in South Carolina. The effective utilization of an expanded network of commuter-focused transit operations could result in the reduction of vehicle miles traveled each year.

As a result of the SmartRide Research Project, in June 2004, "SMARTRIDE" returned to the Central Midlands area and continues today. Santee Wateree Regional Transportation Authority began commuter service originating from Camden to the Columbia area and the Central Midlands Regional Transportation Authority began commuter service from the City of Newberry with stops in Little Mountain and Chapin and then on to Columbia. The development of similar "SMARTRIDE" projects in other areas of the State is anticipated.

During the 2005 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides were offered for those days designated as Ozone Action Days. The BAQ helped promote this effort by providing posters and public service announcements. In addition, the BAQ provided $500.00 to help off-set the cost. During the 2006 Ozone Season, free rides on Ozone Action Days will again be offered.

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<u>SmartRide Statistics for 2005:</u>
Passenger Boardings:
Total Newberry – Columbia:
January - November 2005
4,932 boardings
Increase of 200 percent starting with 338 in January and 659 in November

Total Camden – Columbia:
July1 - October 30, 2005
4,770 boardings
The number of boarding approximately doubled per month from July 2004 to June 2005.

Emissions Reductions (Lexington, Newberry, Kershaw, and Richland):
207 pounds NO_x
153 pounds VOC
3,166 pounds CO

<u>SmartRide Statistics for June 2006:</u>
Passenger Boardings:
Total Camden – Columbia:
November 2005 – May 2006
7,514 boardings

Emissions Reductions (Kershaw and Richland):
684 pounds NO_x
943 pounds VOC

<u>SmartRide Statistics for December 2006:</u>
Passenger Boardings:
Total Camden – Columbia:
November 2005 – November 2006
14,301 boardings

Emissions Reductions (Kershaw and Richland):
1,368 pounds NO_x
2,152 pounds VOC

Passenger Boardings:
Total Newberry – Columbia:
November 2005 – October 2006
6,408 boardings

Emissions Reductions (Newberry and Richland):
613 pounds NO_x
964 pounds VOC

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Again for the 2006 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides were offered for those days designated as Ozone Action Days.

During the 2007 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides will be again be offered for those days designated as Ozone Action Days. BAQ staff met on June 12, 2007, with the new SCDOT project coordinator. Discussions included issuing a press release; updating the SmartRide website; increasing ridership; and, possible expansions.

December 2007 – BAQ staff plan on meeting with the SmartRide project coordinator later this year or early 2008 to assist with the development of expanding routes to other areas in the Midlands.

SmartRide Statistics for December 2007:
Passenger Boardings:
Total Camden – Columbia:
November 2006 – October 2007
12,332 boardings

Emissions Reductions (Kershaw and Richland):
1,642 pounds NO_x
2,269 pounds VOC

Passenger Boardings:
Total Newberry – Columbia:
November 2006 – October 2007
11,709 boardings

Emissions Reductions (Newberry and Richland):
1,584 pounds NO_x
995 pounds VOC

c. SIGIS carpool matching program

The Department initiated a web-based, map based carpooling program in December 2005. The Shared and Integrated Geographic Information System (SIGIS) program facilitates ridesharing opportunities throughout the state by allowing interested employees to map their commute trip information and view the trips entered by other employees. The program is available to 4,987 Department employees in eight environmental quality control offices, eight regional public heath offices, four Ocean and Coastal Resources Management Offices, and eight office locations in Columbia. At this time there are approximately forty-five participants. The program has undergone some

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recent refinements. A second agency-wide email notification about the program was sent out on June 27, 2006 from Earl Hunter, Commissioner of the Department.

As of December 2006 the total number of participants in the SIGIS program is 54. A total of 34 employees added their names to the list this year.

As of June 2007 the total number of participants in the SIGIS program is 64. Nine new employees have added their names to the list so far this year.

d. Best Workplace for Commuters

The Bureau of Air Quality was designated as a "Best Workplace for Commuters" on February 3, 2005. Currently, the BAQ holds the only designation in South Carolina. However, BAQ continues to promote this program to EAC areas and to other program areas within the Department.

As of December 2006, the BAQ continues to maintain the "Best Workplaces for Commuters" (BWC) status, based on records from the TABFTE project. BAQ staff continues to promote BWC to local stakeholders as a part of our general outreach campaign. A recent presentation to Lexington County included information on BWC. An insert to be included in the EPA "Best Workplaces for Commuters" brochure has been developed. This insert is more closely tailored to target South Carolina business professionals, local governments, and other organizations. Initial feedback has been positive however there are a number of organizations that are still unaware of the benefits possible by participating in this program. A goal for 2007 is to continue to promote this opportunity to other programs within the Department as well as any other organization looking for a voluntary measure proven to benefit employees and air quality alike.

June 2007 – EPA will no longer fund the BWC program. The Department will continue to promote best workplace practices to other programs within the Department as well as other organizations seeking voluntary measures proven to benefit employees and air quality.

December 2007 - EPA has since announced that the Center for Urban Transportation Research (CUTR) at the University of South Florida will assume responsibility for management of the program when the EPA relinquished it on October 1st. The Department continues to meet the minimum requirements.

e. Audio-conferencing

The Department offers employees 3 audio-conferencing choices based on the number of participants (up to 6, up to 30, or up to 144 lines). Department employees as well as other state agency employees were faced with travel restrictions in the late summer

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months of 2005. Employees were notified via e-mail of the audio-conferencing capability.

The Department continued to offer audio-conferencing capabilities for 2006 and 2007.

f. Duke Energy

Duke Energy is sponsoring a pilot program to subsidize public transportation costs for Charlotte-area employees. The pilot program, September 1 through December 31, 2006 will provide subsidies and incentives around bus transit, carpools and vanpools for full-time and part-time employees, including the Catawba Nuclear Station located in York, South Carolina. Company executives recognize that environmental stewardship is a shared responsibility and that along with the company investment in emission controls at power plants, transit subsidy is also an important piece of the effort to reduce ozone-related emissions.

Duke Energy has also provided funding in the amount of $5,000 to the County of Greenville, with the Department's BAQ as the administrator of this grant to implement activities to address air quality. The timeframe for this grant is March 1, 2007 to December 31, 2007. A copy of the grant agreement and authorization by the County of Greenville is attached in Enclosure 2-3.

g. Bike to Work Events - 2007

May is National Bike Month, and Friday May 18, 2007 was "Bike-to-Work Day." The Department's State Nutrition and Physical Activity Consultants, Division of Injury and Violence Prevention, and Bureau of Air Quality encouraged Department staff in Columbia to participate in a "Bike-to-Work Day" ride coordinated by Central Midlands Council of Governments and the City of Columbia, and/or to bike to lunch together. The Columbia/CMCOG ride started at Boyd Plaza in Columbia (NW Corner of Hampton & Main). The ride took about 20 minutes for the average rider. Maps and routes were provided.

Because bicycle commuting helps reduce ground-level ozone pollution, global warming emissions and other pollutants, it is an air quality strategy being pursued around the state. Cycling has the potential to provide significant societal benefits in other aspects of life such as health, resource consumption, and the cost of transportation.

Bike to Work Week biking events were held this year in Greenville, Columbia, Spartanburg and Rock Hill, and an awareness event was held in Summerville. The Department shared information about Bike to Work Day with all EAC contacts. The cities of Spartanburg and Columbia are working towards "Bicycle-Friendly Community" designations.

Eight people from the Department participated in the Bike to Work Day ride around the statehouse coordinated by the City of Columbia and the Central Midlands Council of

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Governments. They included Brandy Armstrong, Leslie Coolidge, Jay Daniels, Shawn Gerald, Michael Juras, Heinz Kaiser, Maeve Mason, and Paul Wojoski. The Department contingent made a substantial contribution to the ride. A group of ten biked to lunch at the Taste of China, including Brandy, Leslie, Shawn, Heinz, Michael, Paul, as well as Brian and Lynn Barnes, Debra Briggs-Monroe, and BAQ Chief Myra Reece! Amy Curran and Marian Nanney walked to join the group, to make a party of twelve.

A new commuter bike was on loan for the day, and was used for both the morning ride (by Maeve) and the lunch trip (by Myra). Amy Curran, Dianne Minasian and Marian Nanney rode the bike around Sims/Aycock campus in the afternoon.

h. Bike Commuting for Air Quality

Spartanburg has received a bronze level Bicycle Friendly Community designation in September 2007. Charleston, Greenville, Rock Hill and Columbia are also working towards designation. Columbia is holding twice-a-month meetings and a monthly lunchtime ride.

i. Bull Street Partners Carpool Group (Organized late summer 2007)

The Bull Street Partners Carpool Group provides employees of the Bull Street area offices of three State agencies (Department of Health and Environmental Control, Department of Mental Health and Department of Social Services) an opportunity to form carpools, thereby saving money and fuel, reducing pollution and reducing the stress of commuting.

The Department's Bureau of Air Quality sent an electronic mail message to contacts in the three state agencies located at the corner of Bull and Harden Streets. The e-mail encourages people interested in regular carpooling, occasional carpooling, or people who are willing to provide a ride home to sign up. The emails have very gone out to two of the three agencies, the third agency e-mail will be sent out shortly. Seven people have signed up to date, and feedback from the agencies about the program has been very positive. 'Goody Bags" of air quality promotional materials are being provided to people from the Department's sister agencies who sign up.

j. September 2007 - "Safe Routes to School" Program is 100 percent Federally Funded

The South Carolina Department of Transportation Commission approved funding for 12 schools to develop comprehensive bicycle and pedestrian programs as part of the newly established "Safe Routes to School Program." Selected schools and their respective communities will soon begin the planning phase of the Safe Routes to School funding process. By partnering with SCDOT, local governments, parents, local law enforcement and educators, each school and community will develop a plan that encompasses both infrastructure and non-infrastructure components. Projects and programs will begin in early 2008. In addition to encouraging children to walk and bicycle to school and to

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make walking and bicycling safer, the Safe Routes to School Program recognizes this effort as an activity that will reduce traffic congestion, fuel consumption and air pollution.

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3. Ground Level Ozone Awareness Week Proclaimed

2005

Governor Mark Sanford proclaimed **March 28 – April 1, 2005** as Ozone Awareness Week in South Carolina. The EAC areas used the proclamation to launch their 2005 Ozone Awareness efforts. Some of these efforts included:

• *The State* newspaper (which is widely circulated in Richland and Lexington Counties) ran an article recognizing Richland County staff's effort to promote Ground-level Ozone Awareness Week, their work to provide alternative fuel for county flex-fuel vehicles and the link of their county web page for the SCDHEC ozone forecast.

• Richland County staff sent out a press release (03/25/05) to promote Ground-level Ozone Awareness Week and provided additional information on their web page: www.rcgov.us. An email was sent (03/29/05) to almost 900 county employees promoting the week.

• Lexington County EAC contact distributed (03/23/05) Ground-level Ozone Awareness information in paychecks to 1,300 employees.

• Anderson County staff sent out a news release (03/28/05) on Ground-level Ozone Awareness Week and promoted the week on a local radio station, WRIX 103.1FM. An article on Ground-level Ozone was also placed on their county web page: www.andersoncountysc.org.

• SCDHEC staff provided interviews on Ground-level Ozone Awareness Week to two radio stations: News Talk for Charleston 1250AM (03/29/05) and Columbia WVOC 560AM (03/30/05).

• SCDHEC staff provided an interview for WIS-TV in Columbia for Ground-level Ozone Awareness Week. Information may be found at this link: http://www.wistv.com/Global/story.asp?S=3132984&nav=0RaMXyjF.

• The Charleston County Administrator sent an email (03/28/05) to county employees regarding Ground-level Ozone Awareness Week and staff set up a display in their Public Services Building to provide more information.

• Laurens County EAC contact distributed (03/22/05) news release to two local newspapers, and included tips on cleaner air and the Governor's proclamation for Ground-level Ozone Awareness Week. A similar package of information was distributed to 300 county employees.

• The York County EAC contact worked with the York County Council to declare March 28-April 1, Ground-level Ozone Awareness Week. Ground-level Ozone Awareness bookmarks were mailed, along with the county council agenda, to 300 citizens.

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The following includes materials that were requested by the EAC areas:

County/COG	Item	Number
Chester	Spare the Air – paycheck inclusions	250
Cherokee	Ozone and Your Health	50
Greenville	Ozone and Your Health	200
	Learn Before You Burn	200
	Coloring Books – Spare the Air	100
	Pencils	150
	PDF of Display	1
	Air PSA	1
Charleston	Learn Before You Burn	200
Georgetown	Air is Everywhere Posters	5
Lexington	Air PSA	6
Anderson	Air PSA	1
Spartanburg	Air PSA	1
Appalachian COG	Air PSA	1
Richland	Air PSA	1
Central Midlands COG	Air PSA	1
York	Air PSA	1
Catawba	Air PSA	1
Abbeville	Air PSA	1
Abbeville	Ozone and Your Health (for Paycheck)	200
Allendale	Ozone and Your Health	200
York	Learn Before You Burn	500
	Gas Can Exchange Brochures	100
Aiken	Ozone and Your Health	100
	Coloring Books – Spare the Air	450
	CO2 Brochures 150	150
	Driving Smarter 450	450
	Learn Before You Burn 150	150
	Learn Before You Burn Spanish	100
	Pencils	1 Box (500)
Pickens	Notepads	25
	Pencils	25
	Air Fresheners	25
	Ozone Posters	25
	Care About Air coloring books	25

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All counties received:

Coloring Book
Bookmarks (*It All Adds Up To Cleaner Air*)
Posters (*Ozone, Air is Everywhere, Good Up High*)
Ozone and Your Health Brochure and Electronic Version
Instructions to link to the SCDHEC Bureau of Air Quality website
Note Pad
Pencil
Information on EPA website
Draft Press Release
Electronic Version of Proclamation
25 Things To Improve Air Quality flyer and Electronic Version

Department contributions:

Letters and 2,000 posters to doctors' offices statewide regarding ozone
Distributing 5,000 flyers in paychecks
Press releases
E-mail about Ozone and Proclamation sent to Air Program staff

2006

Governor Mark Sanford proclaimed **May 1 – May 7, 2006** as Ozone Awareness Week in South Carolina. This was the seventh consecutive year for this proclamation. A news release was issued by the Department on April 28, 2006.

An **Ozone Action Needs Assessment Tool** (Tool) was sent to all of the EAC contacts. The Tool was developed to assist local areas in promoting awareness of the 2006 8-hour Ozone Season and the Early Action Compact (EAC) process. Local areas were encouraged to promote and implement measures that will reduce ozone precursors within their county. The Tool offered suggestions for strategies that will increase awareness and thereby create a positive impact on public health and the environment. Local areas were asked to review the list of activities/strategies and indicate if they have already implemented; will implement in 2006; request additional information/assistance; or are not interested. The Tool was returned by nineteen EAC contacts. Staff within the division contacted those counties that returned the Tool and are providing additional information and assistance.

An example of a request from an EAC regarding this follow-up:
Spartanburg County requested a number of outreach materials and was provided:
150 Clean Air Kid Bookmarks
10 Ozone Action Class Brochures
10 DHEC Environmental Outreach Booklets
100 Drive Smarter for tomorrow
10 Good Up High, Bad Nearby Posters (Small)
10 Good Up High, Bad Nearby Posters (Large)

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2007

Governor Mark Sanford proclaimed **April 1 – April 7, 2007** as Ozone Awareness Week in South Carolina. This was the seventh consecutive year for this proclamation.

A news release was issued by the Department on March 26, 2007. The Department's BAQ has over the past two years observed elevated levels of ground-level ozone during the month of April. In 2007, management made the decision to begin forecasting for ground-level ozone a month earlier than in previous years to alert South Carolinians in the event elevated levels occur early. The forecast area was expanded this year to include a new region and the addition of two counties to an existing forecast region. Added is the Catawba region which includes York, Chester and Lancaster counties. Marlboro and Dillon counties have been added to the Pee Dee regional forecast.

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4. Regulatory Initiatives

In early 2003, the Department began meeting with industry representatives, environmentalists, local governments, and other interested parties to develop state-wide regulations for the purpose of getting additional Oxides of Nitrogen (NO_x) and Volatile Organic Compounds (VOC) reductions to assist us with the EACs. NOx reductions were focused on during these meetings because modeling indicates that, with respect to ozone formation, NO_x is the critical pollutant. Furthermore, sensitivity analysis has demonstrated that VOC reductions have very little impact on ozone in South Carolina. The EAC process resulted in the promulgation of one new statewide regulation to control NO_x from stationary sources. In addition, the existing open burning regulation was revised to add more stringent restrictions. Upon publication in the June 25' 2004 issue of the *State Register*, the EAC regulations became effective. (It is important to note that local officials and industrial leaders supported the Department's promulgation of the Control of NO_x Regulation and the amendments to the open burning regulation.)

Regulation 61-62.5, Standard 5.2, Control of Oxides of Nitrogen

The Control of Oxides of Nitrogen NO_x Regulation (R.61-62.5, Standard 5.2), while not needed to demonstrate attainment, will help ensure the areas attain and maintain the 8-hour ozone standard. The Control of NO_x Regulation requires Best Available Control Technology (BACT)-level controls on all stationary sources that emit or have the potential to emit NO_x. Many of these sources would not otherwise be required to control their NO_x emissions. For example, under the Clean Air Act requirements, the preconstruction review program referred to as New Source Review (NSR) only applies to larger sources (generally those with potential emissions greater than 100 tons per year or more). For sources with emissions below these levels, there are generally no controls for NO_x required.

This newly-developed regulation is applied statewide to new and existing stationary sources of NOx emissions. Larger sources that have undergone a BACT review for NO_x are exempt from the regulation; however, larger sources that have taken limits to opt out of a Prevention of Significant Deterioration (PSD) review will still be required to comply with this regulation, which covers sources ranging from boilers and turbines to fluidized bed combustors and lime kilns. For existing sources, the regulation only applies when an applicable unit undergoes a burner replacement, at which time the burner must be replaced with a low burner or equivalent technology capable of achieving a 30% reduction from uncontrolled levels.

Appendix 13 of the December 2004 EAC SIP submittal provides estimated NO_x reductions that are expected as a result of the implementation of this new regulation. These estimates have also been included in Appendix 16 of the December 2004 EAC SIP as part of the county-level emission reductions for the EAC areas. The tables are divided into three groups (two of the tables provide expected NO_x from regulation 61-62.5, Standard 5.2; the third table provides reductions expected from the revisions to the open

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burning regulation). The first table in Appendix 13 of the December 2004 EAC SIP provides estimates based on the percent reduction to be achieved for new sources. The reductions for new sources vary greatly depending on the source type. For instance, new combined-cycle natural gas turbines of less than 50 megawatts capacity must have controls installed that will achieve the equivalent of a 94% reduction from uncontrolled levels. The control requirements will help ensure that the growth of NO_x emissions is controlled. The second table in Appendix 13 of the December 2004 EAC SIP pertains to estimated reductions from existing sources. As this regulation will be triggered upon the replacement of burners at existing sources, it may take a number of years for these reductions to be realized. However, these estimates, based on the number of applicable sources in the inventory, indicate that when fully implemented, the regulation has the potential to reduce NO_x emissions by 2,913.51 tons per year. It is important to note that these reductions were not used to support the modeling demonstration. Even without these additional control measures, which will apply statewide rather than just in select areas, modeling analysis indicates that all monitors will be attaining the standard by 2007. However, the reductions from these regulations are quantifiable, permanent, and will ensure that South Carolina gets cleaner air sooner.

Regulation 61-62.2, Prohibition of Open Burning

The most significant revisions to this regulation are as follows: deleting the exception for the burning of household trash, revising the exception for the burning of construction waste, and revising the exception for fires set for the purpose of firefighter training. The burning of household trash presents health and environmental concerns for many communities. The smoke generated from these activities is a nuisance to some and a health threat to others with asthma or other respiratory problems. Furthermore, the Department spends a lot of staff time and resources responding to complaints related to these activities. Regulation 61-62.2 had previously prohibited the burning of household waste except where other disposal options were not available. This activity is now clearly prohibited, which should provide the clarity necessary to help us enforce this restriction.

With respect to the exception for the burning of construction waste, the Department has revised this provision to allow only residential construction waste to be burned. Residential construction waste can only be burned outside of the ozone season (which runs April 1 through October 30), between the hours of 9:00 a.m. and 3:00 p.m., and must be conducted at least five hundred feet from any occupied structure. Furthermore, only certain "clean" wastes are allowed to be burned. ("Clean" wastes would be residential construction waste free of heavy oils, wood treatment products, asphaltic materials, natural or synthetic rubber, or any other trade wastes which would produce smoke in excess of forty percent capacity.) Again, the Department believes that the burning of construction waste presents health and environmental concerns for many; prohibiting a significant portion of this waste from being burned will alleviate some of these concerns and provide additional NO_x reductions.

Finally, the exception for the purpose of firefighter training has been revised to ensure that minimum health, environmental and safety concerns are addressed. Prior Department

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approval is required in order to obtain the exemption as a permanently established training site. Fires set for the purpose of fire-fighter training at non-permanent locations must receive Department approval prior to the initiation of any burning activity.

Based on the Department's 1999 emissions inventory, residential burning of household waste generates 2,379 tons of NO_x and 11,896 tons of VOCs in the state annually. Such emissions reductions can be realized with the Department's implementation of the ban on burning of household waste. Emissions inventory data also indicate that an annual reduction of 147 tons of NO_x and 625 tons of PM would be realized under the revisions to the residential construction waste burning provision (see Appendix 13 of the December 2004 EAC SIP for further information). Although information on the reduction of NO_x and VOCs resulting from the ban on burning commercial construction waste is not available, it is presumed that substantial reductions of those pollutants will occur with the implementation of this prohibition. Additionally, Appendix 16 of the December 2004 EAC SIP includes county-level emission reductions and descriptions for the EAC areas.

On April 14, 2005, the Department issued a news release reminding citizens in SC of the revised regulations. Additional news releases were sent out during the fall of 2005 to encourage citizens to use alternatives for disposing of yard trash.

On October 9, 2006, the Department issued a news release encouraging citizens to reduce open burning of yard debris. Additional news releases during the fall of 2006 included October 15, 2006, "Open burning poses threats" in the Anderson County – Independent Mail; October 2006 and "Alternatives to burning waste urged" in the Greenville News. Lexington County officials are working with stakeholders to reduce open burning within the County. On October 25, 2006, The State published an article on officials considering restricting fires in subdivisions and construction sites. For additional information regarding the discussions in Lexington County see Enclosure 3 – Local EAC Activities.

A workgroup was established in 2005 that includes staff representation from the Department's Bureau of Land and Waste Management (BLWM) and the Bureau of Air Quality (BAQ). The intent of this workgroup has been to develop a tool for staff, especially regional inspectors, to more clearly outline the regulations the two Bureaus have related to Open Burning regulations. This is an effort to enable staff to more effectively use these regulations in the response to complaints on open burning. Accompanying the work of this group will be training of staff in the use of this new tool and the development of an outreach plan to increase awareness of the public regarding open burning, and alternatives to this action. A plan (DRAFT Open Burning Campaign Logic Model; June 2006) is attached. Workgroup meeting notes are available. The resource tool mentioned above has been developed and is awaiting management approval as of December 1, 2006.

On April, 26, 2007, the Waste Disposal Matrix Document tool described above was approved for use internally with staff in the BLWM and BAQ. A meeting of the inter-bureau workgroup is scheduled for June 28, 2007 to discuss the development of a training plan to use this tool with the appropriate staff.

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On September 28, 2007, the managers of the education and outreach sections for the BLWM and for the BAQ met with staff from the Agency Media Services to discuss the development of a statewide Open Burning information campaign. This campaign is tentatively set to begin in the Spring of 2008 and will include TV and radio PSAs, and print materials targeting various key audiences with messages on options to open burning materials.

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Open Burning Campaign Logic Model

Draft June 6, 2006

a. Create a Program Logic Model
    i. Identify the impacts (outcomes) of the project on the intended audience and/or issue. Start with the broadest, or long-term outcome, then add the steps (mid- and short-term outcomes) needed to get there.
    ii. List the activities and outputs needed to achieve the outcomes.
    iii. List the resources needed and/or available.
    iv. Read the model left-to-right as a series of "If…then…" statements.
    v. Restate the outcomes as SMART objectives.
        1. Specific
        2. Measurable
        3. Audience-directed
        4. Ambitious
        5. Realistic
        6. Time-bound

Impacts:

1. Public Awareness
    a. Gain knowledge about the pollution caused by open burning various materials
    b. Positive experience
        i. Positively affect attitude toward DHEC, counties, partners
        ii. Realize there is something each person or contractor can contribute to the pollution solution
        iii. Positive feeling about alternatives to open burning waste products from various sources
    c. Behavior Change
        i. Recycling materials where possible
        ii. Reducing the amount of materials burned
        iii. Transporting materials to appropriate landfill
    d. Spreading the word
        i. Participants will spread the word about the event to their families, friends, business associates
            1. It must be well organized
2. Short Term Outcomes
    a. Positive reaction
    b. Increased awareness of open burning as source of air pollution
    c. Increased awareness of options
3. Mid term Outcomes
    a. Use of recycling alternatives (curb side, drop-off stations)
    b. Spread the word
4. Long term outcomes

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a. User begins to realize impact of daily activities on environment
b. Word spreads and project grows, impact more people
    i. Message about air quality spreads with project, begins to take hold in people's minds, making it easier to reach them with future projects
c. Reduction in open burning complaints to regional staff

5. Resources
    a. DHEC staff
    b. Early Action Compact Partners (local government)
    c. Art Studio/BLWM-Office of Recycling/Air Education & Outreach Section
        i. Development of brochures (including Spanish versions); Also utilize existing materials where appropriate.
        ii. PSA (both TV and Radio) development; General message: "Open burning is bad for your health, the environment and it is illegal in many instances. Reduce, Re-use, And Recycle. Specific messages may be developed dependent upon resources.
    d. Development of a web-page specific to open burning issues that is linked by both BLWM and BAQ.
    e. Partners- Forestry Commission, Fire Stations, Fire Marshall
    f. Partner contacts
    g. Knowledge of other states who have done this project before
6. Activities
    a. Gather information from other states for prototype
    b. Identify and Inform partners
    c. Identify locations for possible press conference(s) - major urban areas?
    d. Identify funding (PPA)
    e. Utilize access to teachers to utilize lessons to share with students regarding open burning messages.
    f. Document project
    g. Meet with team to organize details
    h. Advertise messages via TV/Radio; conferences/meetings
    i. Host press conference(s)- Release PSAs and informational materials
    j. Document and publicize results
7. Impacts
    a. If we can properly reach the various segment audiences, and we may be able to affect the issue of open burning.
    b. If we garner the involvement and leadership of the EACs, we can build and strengthen our relationship and our joint commitment to improving air quality.
    c. If we can find funding, we can more broadly disseminate our message(s) to the appropriate audiences.
8. Objectives
    a. Utilize TV PSAs in the Upstate, Central Midlands, York County and Central Savannah River Area, and Coast areas.
    b. Ensure significant involvement from local government leadership, especially EAC partners.

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c. Begin campaign in mid-March 2007.

9. Planning
    a. Identify primary target audiences
    b. Identify partners to help with planning and execution
    c. Identify evaluation methods
    d. Identify sponsors to help with funding
    e. Identify appropriate message(s) for audiences
    f. Secure funding
    g. Develop necessary media tools
    h. Advertise
    i. Report planning and progress
    j. Identify weak spots
    k. Address weak spots
    l. Host news conference event(s)
    m. Analyze results
    n. Final report
    o. Meet to discuss outcome and follow-up work

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5. Assist local areas in determining emission reductions

South Carolina 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 maintaining the 8-hour ozone standard within their respective area. The emission reduction strategies submitted by the local areas contain both quantifiable and directionally sound measures, it should be noted that none of them were included in the attainment demonstration model for 2007.

The EAC process encourages state and local areas to design control strategies that best fit their specific needs. As part of this process the Department began meeting in 2002 with local governments, industry representatives, environmental groups, and other state and federal agencies in an effort to develop state and local control strategies to reduce ozone precursors as part of the commitments under the compacts. The Department tackled these requirements from many different perspectives. The Department met with the local EAC areas to consult with them and provide them with assistance on developing the local plans. The Department formed stakeholder groups and conducted meetings in an effort to develop statewide regulations to achieve additional reductions in ozone precursors to support the EAC process.

This effort continues and as a result of the 2006 SC Early Action Compact Summit has expanded. Bureau of Air Quality (BAQ) staff have been assigned to work with local government officials based on the State Council of Governments (COG) structure. This is a recent shift in our strategy for outreach to local and state government. BAQ staff will work with local contacts, assess their planning and determine how the BAQ may offer assistance. Recent examples of this type of work has been the "Motor Vehicle Maintenance Project," expansion of the "Take a Break for the Exhaust Project," and the potential expansion for the "Breathe Better Air at School Project."

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6. Clean Air Initiatives for Government Entities

Bureau of Air Quality (BAQ) staff were charged with the task of developing, implementing and marketing a plan for reducing precursors to ground-level ozone emissions by state government that supports the Early Action State Implementation Plan initiative. Bureau staff solicited participation from other state government agencies to include the transportation sector and property maintenance agencies. Also included were local Council of Governments and the Palmetto State Clean Fuels Coalition. A major accomplishment of the group is the passing of a Concurrent Resolution by the South Carolina State Legislature on May 14, 2003. This resolution supports the activities of the Department's establishment and implementation of the state's early action approach for complying with the 8-hour ozone standard and provides for the establishment of an intergovernmental workgroup for the purpose of promoting behaviors and policies to reduce air pollution throughout the state of South Carolina.

In 2005, three policies (telecommuting, alternate work schedules and variable work hours) in the Department's Administrative Policy Manual were updated to encourage these activities to help protect ambient air quality.

Other accomplishments through April 2005 included the following:
• Richland County requested air quality articles for use in their staff newsletter and information regarding the EPA *Energy Star* Power Management program to share with county administration.
• A staff person from the South Carolina Department of Transportation (SCDOT) was designated to receive the Department's Ground-level Ozone Forecast and to distribute it via e-mail to approximately 5,000 staff. SCDOT utilizes the Department's Ozone Forecast Internet link for the forecast on their web page. SCDOT roadside emergency signs in the Upstate and Midlands will be utilized for Ground-level Ozone Action Alerts. The number of signs by county (April 2005) is: Anderson (1), Greenville (5), Spartanburg (7), Oconee (1), Richland (5), Lexington (2), and Orangeburg (10).
• The South Carolina State Energy Office implemented "Take a Break from the Exhaust" in their office during the 2005 Ozone Season.

The utilization of the TABFTE grew in 2005, with the Bureau of Water, Land & Waste Management and the SC State Energy Office using this program. (Detailed information on the TABFTE program may be found under Commuting Reduction Options (2.a.) of this report.) The BAQ also partnered with the SCDOT and the Energy Office to promote ridership on the SmartRide Alternative Transportation project during Ground-level Ozone Season.

In 2006, the utilization of the TABFTE continued to increase. New partners included Bowater, CitiGroup, Springs Industries, Winthrop University and York Technical College all located within York County. In addition, Lexington County Government and the Central Midlands Council of Governments offered the program to employees. (Detailed information on the TABFTE program may be found under Commuting Reduction Options (2.a.) of this report.) Partnerships with the SCDOT and the Energy

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Office to promote ridership on the SmartRide Alternative Transportation project continued for 2006. SCDOT includes messages on the Intelligent Transportation System (ITS) Boards around the State encouraging citizens to car-pool on Ozone Action Days.

Work with both state and local governments to develop activities in support of "Cleaner Air Sooner" is on-going, although not in the formal workgroup called CAIGE. BAQ staff has determined that outreach activities need to be developed on a local and individual need basis. Thus, at this time staff has been assigned to work with local government officials based on the State Council of Governments (COG) structure.

This is a recent shift in our strategy for outreach to local and state government. BAQ staff will work with local contacts, assess their planning and determine how the BAQ may offer assistance in terms of resources and project development. Recent examples of this type of work has been the "Motor Vehicle Maintenance Project," expansion of the "Take a Break for the Exhaust Project," and the potential expansion for the "Breathe Better Air at School Project."

BAQ staff offer consultation services for exploring, developing, implementing and evaluating these types of projects based on local and state agency interests and initiative. This approach, rather than a formal, central based workgroup, offers more flexibility and support to these entities based on individual organizational need and plans.

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7. Smart Highways

The Smart Highways effort through the EAC process addresses transportation planning and any impact transportation might have on air quality. This approach is not a requirement of the EAC and is not being done in any other EAC area in the country. It is an example of the commitment by air quality and transportation agencies at the local, state, and federal level. In the event that deferral of the effective date of the nonattainment designation is withdrawn, these areas will be fully prepared to address the full regulatory requirements of Transportation Conformity. In addition, South Carolina already has in place the necessary consultation procedures to address traditional transportation conformity requirements for all pollutants in any nonattainment area. Again, this initiative is something no other state has accomplished.

The parties involved in the interagency meetings developed a Smart Highways checklist to be used in transportation planning. This checklist is intended solely as an informational guideline to be used in reviewing Long Range Transportation Plans and Transportation Improvement Programs for adequacy of their documentation and will be used during long range transportation plan updates as required by 23 CFR 450.322. A copy of the Smart Highways Checklist is attached in Appendix 12 of the December 2004 EAC SIP. Air quality and transportation officials engaged in these interagency meetings include the Metropolitan Planning Organizations (MPOs) from the deferred nonattainment EAC areas (Anderson Area Transportation Study (ANATS), Greenville-Pickens Area Transportation Study (GPATS), Spartanburg Area Transportation Study (SPATS) and the Columbia Area Transportation Study (COATS)), the South Carolina Department of Transportation, Federal Highway Administration South Carolina Division, EPA Region 4, Federal Transit Administration, and the South Carolina Department of Health and Environmental Control.

As a result of this effort, each of the four Metropolitan Planning Organizations (MPOs) in deferred nonattainment areas (Greenville, Anderson, Spartanburg, Richland and Lexington counties) demonstrated that their respective long-range transportation plan eliminates or reduces violations of the national ambient air quality standards (NAAQS).

Copies of the four MPO reports may be found at:
http://www.scdhec.gov/eqc/baq/html/eap_Smart_Highways.html.

The documentation in the reports was the subject of interagency consultation. Interagency consultation began in January 2003, and continued through completion of the emissions analysis with regular meetings to discuss and agree upon schedules, model parameters, latest planning assumptions, horizon years, exempt projects, and regionally significant projects. In addition, each of the MPOs provided public review of this report in accordance with the respective MPOs public involvement policy. A key element of the public involvement process is a public review of transportation planning documents including the Long-Range Transportation Plan.

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Using 2002 as the base year, the following table shows that the emissions expected from implementing the proposed MPO long-range transportation plan(s) are less than emissions from either the baseline case or the no-build case for 2007. Further emission reductions are forecasted for the longer term. The specific numbers can be found in each MPOs report.

	ANATS		GPATS		SPATS		COATS	
	NO_x	VOC	NO_x	VOC	NO_x	VOC	NO_x	VOC
2002	7.703	4.354	30.213	19.276	17.96	10.58	45.295	27.135
2007	5.507	2.94	21.58	13.648	11.86	6.83	32.017	18.962
Reduction tpd	2.196	1.414	8.633	5.628	6.1	3.75	13.278	8.173
Reduction tpy	801.54	516.11	3151.045	2054.22	2226.5	1368.75	4846.47	2983.145

tpd = tons per day
tpy = tons per year

EAC Reinforcement of Planning Initiatives at the Local Level
The EAC process has allowed contact with counties at a critical time in their comprehensive planning process. Many are in the midst of updating their 5 and 10-year plans. The dates for completing these do not coincide with EAC dates but improving air quality does not have a “sunset" provision. Many counties have already begun or completed changes to their land use plans that reduce sprawl and traffic congestion.

Anderson County
Highlights of the Anderson County Land Use and Development Standards include items that develop standards with respect to landscaping and open space, promote public health and safety through the reduction of noise pollution, storm water runoff and air pollution.
Also included are development standards with “Greenways” defined which link residential areas with other open space areas. These greenways may contain bicycle paths, footpaths, and bridle paths. Additionally, intensity standards (designed principally to regulate land use in accordance with the design function and carrying capacity of the road on which it is located) are being developed.

Greenville County
Smart Growth America has said about the City of Greenville, “The city has the right idea about how communities should be designed.” It has chosen Greenville as one of four cities and counties nationwide to work with to turn smart growth ideas into better development for Greenville. Efforts include spreading the kind of development happening downtown to its more suburban edges including more sidewalks, buildings closer to the street, smaller parking lots and more landscaping.

Greenville County’s Comprehensive Plan encourages the development of industrial parks so aesthetics, design, screening and land use impacts can be better managed. Plans are being worked on to revise the county Zoning Ordinance to create new residential zoning classifications that permit design innovations such as open space, varying setbacks,

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cluster development, varying lot sizes, and mixed uses with extensive landscaping. Through incentives, it would also encourage developers to build in the urban area of the county. Transit goals in the Comprehensive Plan encourage residents to use alternative modes of transportation for travel.

Greenville County Planning Commission, on behalf of the City of Mauldin and the City of Simpsonville, retained Day Wilburn Associates to prepare a Transit Development Plan for the Mauldin-Simpsonville Urbanized Area. Information regarding the results of this study can be found in the Greenville County portion of this document.

Spartanburg County

Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified land management ordinance. Some important strategies include:

- Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants.
- Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development.
- Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended 1/4 acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, open character.

To address transit needs Spartanburg County is working to provide convenient, coordinated, accessible and affordable transit service under the administration of a single transit agency, controlled by a Joint Transit Commission appointed by city and county government. This includes interfacing the transit system with other transportation modes including highways, airports, rail, intercity bus, school buses, and bikeway/trail systems. Components of this approach include developing alternative funding sources to promote public transit as a low cost alternative to the automobile and as a means of lessening traffic congestion.

To promote bicycle and pedestrian facilities, a governmental committee composed of local officials whose mission is to promote alternative transportation systems in the county has been created. The committee is also responsible for the procurement of funding for the implementation of such facilities. Securing a public and private partnership to oversee the implementation of proposed improvements and promote the use of alternative transportation through educational, promotional and incentive programs is also being addressed.

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Lexington County
On January 22, 2005, Lexington County Council received statewide recognition from the *South Carolina Wildlife Federation* for its landscape ordinance. The Federation's Forestry award was in recognition of leadership and vision through comprehensive urban forestry programs recently implemented. Due to the variety of issues involved in a project of this magnitude, the county sought input from experts in landscaping and urban forestry as well as the public in developing the Ordinance. While the County's Ordinance is directed primarily at commercial development, it actually focuses on six different categories. The most important aspect of the *Lexington County Landscape Ordinance* is that its format enables it to be duplicated in any community regardless of location, political environment, or intensity of development. Air quality benefits of this ordinance are that it will help reduce emissions because of reduced use of gas powered yard equipment and the use of canopy trees in parking lots to cut down on evaporative emissions.

Components of the Lexington County Comprehensive Plan encourage the development of traffic-intensive commercial, industrial and higher density residential land uses near existing major roads, railroads and interstate highways. It discourages low-density residential development near existing major roads and interstate highways and encourages development patterns such that future growth can be effectively served by public transportation. It also provides for safe transportation facilities for bike and pedestrian usage and promotes the compatibility of different land uses as an alternative to completely segregating residential, commercial, industrial, agricultural and other uses from one another. Another effort includes working within the Central Midlands Council of Governments to ensure that the Columbia Area Transportation Plan (COATS) assists in the reversal of the "sprawl" development pattern.

Per an October 5, 2006 article in *The State* newspaper, Lexington Town Council approved spending $14,000 to install equipment to synchronize traffic flow in the downtown Lexington area. The equipment will monitor traffic at 20 intersections and allow state traffic officials to adjust the length of lights to improve traffic movement on the roads. This is one of several changes implemented to reduce traffic congestion.

Richland County
Effective July 1, 2005, Richland County began using a vastly updated Land Development Code (LDC) to address a number of issues that citizens have brought to the attention of the county over the years such as transportation, community appearance, conservation, water quality and affordable housing. The central reason for drafting the updated LDC was to revise the county's land development regulations as needed to make certain they accomplish the goals and objectives of the comprehensive plan.

Among its many purposes, the LDC specifies planning requirements that seek to "lessen congestion in the roads." For the first time, site plans for major land development must include a traffic management plan: "An evaluation of the effect of traffic generated by a development on the operation and safety of the adjacent public roads. Such analysis shall include an identification of traffic impact mitigation measures needed to improve the

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safety, operation, and flow of vehicular and pedestrian movement into and out of the development."

Richland County Council sponsored a neighborhood meeting on April 16, 2005, to share information on planning, design, and development of livable communities. Dr.
Chuck Bohl, an internationally recognized expert on this topic is scheduled to speak.
Richland County has also contracted with the Palmetto Conservation Foundation (PCF) to address how land use, transportation, parks, and trails can be incorporated into a greenway network that builds on the Three Rivers Greenway and Palmetto Trail and promote integrating physical activity into daily routines. The primary activities of focus are bicycle/pedestrian transportation, safe routes to school, and community planning. In combination with Bicycle/Pedestrian planning now underway at the Columbia Metropolitan Planning Organization, car commuters will have additional commuter options. PCF has already participated in a successful active living campaign in Spartanburg, South Carolina, which brings, in part, an air quality benefit that Columbia and Richland County want to emulate.

As part of its temporary funding solution to the Central Midlands Regional Transit Authority (CMRTA) crisis, Richland County Council established a Transportation Study Commission to study public transit, road improvements, and walking and bicycle trails. The 33 member commission is expected to release a final report in Spring 2008, as well as a recommendation for funding high-priority transportation projects. The commission will study transportation issues that are regional in nature. As a result, members will be made up of appointments from Richland and Lexington County Councils, the City Councils in Columbia, Cayce, and West Columbia.

On December 6, 2006, Councilwomen Val Hutchinson and Joyce Dickerson held an informational meeting with residents and leaders from the rapidly growing Northeast area of Richland County. The meeting included a presentation by Norm Whitaker, head of the Central Midlands Council of Governments, regarding the transportation priorities and funding mechanisms for roads in the Northeast. Mr. Whitaker explained the correlation between congestion, growth, and air quality in the Northeast, and informed attendees that that ozone monitor located at Sandhill has the potential to draw the entire two-county region into non-compliance. The committee resolved to meet on a quarterly basis in an effort to centralize the often fractured discussion of transportation needs on this rapidly growing area of the county. Councilwomen Dickerson and Hutchinson also received suggestions from the group as to how Council can better plan for transportation needs in the Northeast, including accelerating an update of the county's comprehensive plan, as well as a comprehensive countywide transportation plan.

Richland County's Transportation Study Commission will be hosting a series of public meetings to receive input from the citizens on ways that the county can improve all modes of transportation. A copy of the meeting announcement may be found in Enclosure 2-4. Each meeting will have three breakout sessions: Roads, Transit, and Greenways/Pedestrian/Bike Paths.

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While this commission will be looking at ways to improve the transportation network, it will also be looking at the impact of transportation on the air quality attainment status. The meetings were open to anyone who lives, works, or visits Richland County.

October 2007 - Berkeley, Charleston and Dorchester counties

Region 4 EPA and the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) provided a series of training workshops on how each of us can work with our elected officials and communities to coordinate on Smart Growth Strategies. The strategies included promoting better land use and transportation as well as improved bicycle and pedestrian facilities. EPA supports this strategic training as a way of reducing energy costs and protecting air and water quality.

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8. Other Point Source Reductions

As noted in the June 2003 EAC Progress Report, Bureau of Air Quality staff met with individual industry representatives in an effort to negotiate emission reductions. The intent was to focus on several large NO_x emitters, particularly those with few existing NO_x controls that are impacting potential nonattainment areas, to negotiate reductions through the permitting process or consent agreement. This was done in lieu of developing statewide regulations on existing industrial sources. Meetings with various industries were held on May 1, 2003, June 2, 2003, and June 11, 2003.

Appendix 10 of the December 2004 EAC SIP included copies of the agreements with these facilities. As part of the EAC process, several of the largest existing industrial sources in the Upstate and Midlands areas of South Carolina have voluntarily committed to reduce and/or limit their NO_x emissions. These negotiations were the direct result of the EAC process as are the NO_x reductions that will result from them. SCE& G - Wateree in Richland County installed Selective Catalytic Reduction (SCR) on two coal-fired boilers to comply with the NO_x SIP Call and has agreed to take permit limits on these units as their commitment to the EAC process. International Paper in Richland County agreed to take an annual allowable NO_x emission reduction of 1000 tons, facility wide.

In addition, Duke Power in Anderson County has committed to install and operate low NO_x combustion controls on two coal-fired boiler units (controls were installed in 2001 on the other boiler at the facility) and to limit the NO_x emissions from these units to an emission rate of 0.27lbs/MMBtu. This is a $7 million investment by Duke Power that will result in approximately 850 tons of NO_x reduced annually. As part of this process, Transcontinental Gas Pipeline Corporation (Transco), which operates the internal combustion engines at Station 140 in Spartanburg County, began early implementation of the NO_x emission reductions required by Phase II of EPA's NO_x SIP Call regulation. In accordance with the federal requirements, Phase II is required to be fully implemented by 2007. As part of the EAC process, Transco performed engine overhauls and engine combustion modifications on 13 engines during the 2005 calendar year so that these NO_x emission reductions were captured well ahead of the federal timeline. The goal is to have all NO_x reductions quantified and certified before the end of the 2006 calendar year, allowing Transco to take credit for NO_x reductions prior to the start of the 2007 Ozone Season. August 2006 testing reports of the 13 units at Transco revealed emissions were significantly below the control period emissions limit established in the facility's permit. The South Carolina Electric and Gas installed NO_x reducing technology on some of its coal-fired boilers at the Canadys, McMeekin, and Urquhart plants. All units have NO_x continuous emission monitors in place. These actions are permanent and quantifiable and were not required by any federal or state regulation. These actions were taken to demonstrate the facility's commitment to the EAC process.

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9. Palmetto State Clean Fuels Coalition Initiatives

The Palmetto State Clean Fuels Coalition (PSCFC) is part of the Clean Cities program and is one of 88 designated coalitions in the United States. The Department of Energy approved the application for PSCFC's designation in 2003, recognizing the commitment of the stakeholders to building an alternative fuels market in South Carolina. http://www.palmettocleanfuels.org

Prior to receiving the official designation, stakeholders were involved in a number of alternative fuel activities. On October 17, 2001 – a station supplying ethanol and biodiesel opened in the Aiken area. The station is privately owned and sells fuels to both the government and the public and was the first of its kind in the United States. In conjunction with the opening, on October 18, 2001 – Governor Hodges signed an Executive Order supporting the use of alternative fuels and requiring state agencies, when feasible to utilize alternative fuels when operating alternative fuel vehicles.

On April 2, 2002, the Department held a ceremony to officially announce the availability of E85 at the 2600 Bull Street location in Columbia. The fueling site consists of a 10,000 gallon E85 tank. The Department spent $105,000 for modifications to existing tanks and was the first state agency to offer E85 in Columbia to county, federal and state governments.

There are currently 33 publicly accessible E85 refueling infrastructure stations in the Columbia, Greenville, and Aiken areas. Two more stations will come on-line in 2006 in the Rock Hill/Fort Mill area. During 2005, South Carolina opened more publicly accessible E85 refueling sites than the State of Iowa.

A recent survey (2005) identified a total of 1,232 alternative fuel vehicles actually operating on alternative fuel in the nine-county PSCFC service area. Of these vehicles, 691 (56.1%) were E-85 flex fuel, 461 (37.4%) were operating on B20 biodiesel, 42 (3.4%) were operating on propane, 20 (1.62%) operating on compressed natural gas, and 18 (1.5%) are electric vehicles. Many of these vehicles are owned by PSCFC stakeholders.

Survey respondents indicated that they planned to buy and operate more AFVs in the next five years. Taken together, these stakeholders will add 2,005 operational AFVs to the road through 2008. This represents an annual increase of approximately 21.5% or roughly 401 vehicles annually.

The 2006 calendar-year survey should be available for the June 2007 EAC Progress Report.

June 2007

The 2006 calendar-year survey is available through the PSCFC website. The survey revealed an overall increase in the number of alternative fueled vehicles. This in part is

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due to expanding the participation in the survey as well as additional fleets, including industry and government, turning to alternative fueled vehicles.

The 2006 survey identified a total of 6,916 alternative fuel vehicles actually operating on alternative fuel in the nine-county PSCFC service area. Of these vehicles, 3,754 were E-85 flex fuel, 2,709 were operating on B20 biodiesel, 356 were operating on propane, 72 operating on compressed natural gas, and 25 electric vehicles.

Other activities involving the PSCFC include:

Columbia CNG Initiative - In 2000, the PSCFC worked closely with the Central Midlands Regional Transit Authority (RTA) Board of Directors as they made decisions regarding the fate of Columbia's bus fleet. The Board decided to purchase 7 new compressed natural gas (CNG) transit buses when they replaced SCE&G's aging bus fleet. These buses were delivered in December 2002 and are running successfully on CNG. They are expected to reduce nitrogen dioxide and hydrocarbon emissions by 6,296 pounds per year over a ten-year period, which will result in a cleaner downtown area.

Because of the RTA's commitment to alternative fuels, the Energy Office worked with others to expand the capacity of Columbia's only CNG refueling station. This station is located on the corner of Flora Street and Assembly Street, right across from the Capital City Bombers baseball stadium. This station refuels not only the buses, but also federal, state and local government fleets. It is also open to the public, and accepts both Visa and Master Card.

Ethanol Refueling Infrastructure - In April 2005, six fueling stations in the Columbia and Greenville areas kicked off their sale of ethanol (E85) with E85 for $.85 events. E85 is the term for motor fuel blends of 85 percent ethanol and 15 percent gasoline and is an alternative fuel as defined by the U.S. Department of Energy. Besides its superior performance characteristics (octane=105), ethanol burns cleaner than gasoline, and it is a completely renewable, domestic, environmentally friendly fuel that enhances the nation's economy and energy independence.

PSCFC and Stakeholders Receive Funding for Two Special Project Proposals in 2005:

1. York Technical College: Ethanol Refueling Infrastructure: The SCEO received $25,191 in federal funds with a cost share of $18,500 for a total project cost of $43,691 to establish an ethanol (E-85) fueling station in Rock Hill, S.C. to support the use of E-85 in the existing and future fleets of the City of Rock Hill, York County Natural Gas, the City of Clover, Palmetto Clean Fuels Coalition and York Technical College. The E-85 fueling station will be located at the main Rock Hill maintenance facility and will consist of a 12,000 gallon below ground tank converted from an existing unleaded fuel tank. The refueling station will support 59 ethanol flex fuel vehicles currently using gasoline in the fleets of Rock Hill, Palmetto Clean Fuels Coalition, York County Natural Gas Authority, the City of Clover and York Technical College.

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2. PSCFC - Clean Cities Coalition Support - Palmetto State Clean Fuels Coalition: The SCEO received $20,000 in federal funds with a cost share of $27,822 for a total project cost of $47,822 for a coordinator support grant for the Palmetto State Clean Fuels Coalition (PSCFC). The purpose of this project is to ensure continued coordination and staffing of the PSCFC by the Catawba Regional Council of Governments. Funding will ensure continued momentum in the nine-county PSCFC region for projects, marketing, and increased use of alternative fuel and alternative fuel vehicles. Funding will enable promotion and building of infrastructure to support increasing use of alternative fuels by state and local government in the PSCFC region.

Biofuels Showcase - The Palmetto State Clean Fuels Coalition (PSCFC) hosted a Biofuels Showcase on November 18, 2005. This event showcased ethanol and biodiesel and featured a Ride and Drive event where participants had a chance to drive the alternative fueled vehicles on display. Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvement, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges. On October 14, 2005, the PSCFC hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.

Billion Gallon Celebration - Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvements, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges. On October 14, 2005, the Palmetto State Clean Fuels Coalition hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.

Southeastern Alternative Fuels Task Force Workshop
Department staff along with Palmetto Cities Clean Fuel Coalition coordinator, Wendy Bell and South Carolina Energy Office, Chantal Fryer participated in and helped to support the planning and implementation of this workshop held in Tennessee, June 6-7, 2005. Website for the SEAFTF is: http://www.sealtfuels.org/. Evaluation results for this workshop are available.

As of the December 2005 Progress Report, there were 23 public E85 refueling sites in South Carolina with 4 additional stations planned with the next 6 months. In addition to the E-85 refueling sties located at the Department's Bull Street office in Columbia, there were 5 other refueling sites that are not open to the public (2 in Aiken County at the Savannah River Site; 1 in Berkeley County at Santee Cooper; and 2 in Horry County). In 2006, the University of South Carolina and the City of Rock Hill each have plans to install an E85 refueling site; bringing the total number of non-public refueling sites to 8

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during 2006. In addition to E85, there were 3 biodiesel public sites in South Carolina. B2 at Spinx and 2 United Energy Sites.

As of June 2006, there were 34 public E85 refueling sites in South Carolina. In addition, there are 14 public biodiesel (B20) refueling sites in South Carolina.

As of December 2006, there were 40 public E85 and 42 public B20 refueling sites in South Carolina. Two sites, one of which will be located in the City of Rock Hill (York County) will be opening soon. Under a recent grant award, PSCFC received funding for 2 additional E85 sites and a B20 site in the Rock Hill area.

The 2006 calendar-year survey should be available for the June 2007 EAC Progress Report. The survey will include information such as the City of Rock Hill converting their entire diesel fleet, on-road and off-road to B20; the City of Union and Union County both are now using B20; and, Fort Jackson is using E85 in non-tactical vehicles.

On August 15, 2006, Bell Exxon in Union opened E85 and B20 dispensers that will service the City of Union and Union County AFVs. Southeast Biodiesel hosted a grand opening for their Charleston facility on October 27, 2006. Production at this facility is expected to being in January 2007.

A grand opening was held on December 6, 2006 for Carolina Soya located in the City of Estill, Hampton County. The facility is expected to be operational in March 2007 and will produce up to 30 million gallons of soybean-based biodiesel fuel per year.

PSCFC provided a moderator/speaker for the 2006 SC EAC Summit held in Columbia on August 16 and 17. A presentation on alternative fuels by the PSCFC was also given at the Southeast Governmental Fleet Managers Association meeting in October 2006.

December 2007 – There are currently 49 public E85 and 49 public B20 refueling sites in South Carolina. PSCFC is in the process of funding 7 more sites. An additional 12 E85 sites will be installed over the next 6-8 months.

September 19, 2007 – South Carolina Biodiesel Fuel Quality Symposium
The South Carolina Biodiesel Fuel Quality Symposium took an in-depth look at the latest regulatory, environmental, and technical developments impacting the fastest-growing renewable fuel industry in South Carolina. The event's technical program provided participants with a basic understanding of how biodiesel is produced, fuel management, fuel quality, component compatibility, regulatory issues, and incentives. Speakers include recognized experts in their respective fields including industry professionals, regulators, local and state officials, fleet managers, retailers, distributors, and producers.

Legislation - Members of the Upstate EAC counties (Anderson, Greenville, and Spartanburg) in coordination with the Palmetto State Clean Fuels Coalition and the South Carolina Chapter of the Sierra Club, supported statewide legislation that will provide tax incentives for purchase of alternative fuel and hybrid-propulsion vehicles and help reduce

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costs and provide tax credits for production and infrastructure for alternative fuels. On June 1, 2006, Governor Sanford signed an act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle credits allowed against a taxpayer's federal income tax liability.

October 10, 2006 - National AFV Day Odyssey: Showcasing Cleaner More Energy-Efficient Choices in Transportation - hosted by York Technical College. This public event enables Americans to learn about the benefits of alternative fuel and hybrid electric cars, vans, trucks, and buses. The event was an opportunity for the public to get close-up look at a number of alternative fuel and hybrid electric vehicles—including vehicles from Honda, Ford and Toyota—and to meet experts who can answer questions about the future of transportation. Workshops were conducted throughout the day on AFV and hybrid electric vehicles to include what makes hybrids different, how they came about, and how they operate. Participants will also be able to view natural gas, bio-diesel and electric fueled vehicles from the City of Rock Hill and a hybrid lineman's truck from Duke-Energy. National AFV Day Odyssey is coordinated by the National Alternative Fuels Training Consortium, headquartered at West Virginia University, and includes a group of 27 higher-education institutions dedicated to educating technicians and the public about clean, cost-effective vehicles. York Technical College's partners include the South Carolina Energy Office, South Carolina Department of Health and Environmental Control, Palmetto Clean Fuels Coalition, Centralina Clean Fuels Coalition, the City of Rock Hill and Duke Energy.

These combined efforts continue to exhibit the State's dedication to renewable energy.

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10. Tree City USA

Tree City USA encourages municipalities and areas to have strong urban forestry programs. In the fall of 2005, the Bureau of Air Quality sent an electronic mail message to all 45 EAC areas in South Carolina asking the counties to encourage municipalities within their county to help participate in this program that can benefit air quality.

As of June 2006, there were 39 designated areas in South Carolina, an additional 2 from the December 2005 Progress Report.

The Tree City USA program is sponsored by The National Arbor Day Foundation in cooperation with the USDA Forest Service and the National Association of State Foresters. According to the National Arbor Day Foundation website (http://www.arborday.org/programs/treecities.cfm?chosenstate=South_Carolina) as of December 2006 there are 40 designated areas in South Carolina.

As of June 2007, there are still 40 designated areas in South Carolina.

As of December 2007, there are 39 designated areas in South Carolina.

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11. Energy Efficiency

a. ENERGY STAR

Energy Benchmarking/Portfolio Manager Report January 2005-September 2005

The Department received $5,000 in additional Section 105 grant monies to promote the ENERGY STAR Energy Benchmarking program in our area. Below is a summary of the Bureau of Air Quality's (BAQ) efforts in promoting this program through September of 2005.

Efforts were made on two fronts to promote Energy Star. The first effort was to install Energy Star with the BAQ and then expand the program throughout the rest of the Department. Starting in October of 2006, BAQ began tracking energy consumption for the Bull Street office building, which is also home to the Bureau of Water, some Health Services offices and the Department's administration. This information will be used as a baseline to show progress in reducing energy consumption. Research has been done into energy conserving upgrades already completed. BAQ is developing a comprehensive energy efficiency program for the Bull Street building that will include identifying best practices for staff and tracking of energy use.

The second front was to involve other state agencies and local governments through outreach efforts to try to get them to utilize Energy Star. To assist with those efforts, BAQ registered as an Energy Star Driver in February 2007. Since September 2006, information about the benefits of energy conservation, including Energy Star, have been included in presentations to Spartanburg County, Greenville County, the City of Greenville, Oconee County, Lexington County, as well as various other stakeholder groups participating in Greenville County's public awareness campaign. To assist with these efforts, BAQ has developed an educational postcard that recipients can use to register for the "Change a Lightbulb" Pledge. These postcards and other informational brochures are distributed at all of the Department's public events.

South Carolina Department of Health and Environmental Control

The BAQ already had 80% of its computers installed with monitor power management enabled. However, all of the monitors had longer shutdown times than the Energy Star default of 10 minutes. Therefore, the BAQ saved five minutes on 25% of the monitors, 15 minutes on 45% of the monitors, and over 20 minutes on 30% of the monitors that had power management engaged.

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The numbers calculated from EPA's calculator program are below:

RESULTS--Savings Per Year

Energy	
Current Use	25,216 kWh
Future Use	18,127 kWh
Savings	7,089 kWh
Dollars	
Current Cost	$2,169
Future Cost	$1,559
Savings	$610
Percent	
Savings	28%

Since the BAQ's successful installation of Energy Star, other Bureau's within the Department are now starting the process of installing Energy Star. Once the Information Technology (IT) staff has completed the necessary installation on the respective servers, the Bureau of Water and the Bureau of Land and Waste Management will be joining the Energy Star team. With the addition of these two Bureaus, the number of computer monitors will increase from around 150 to over 500.

Other State Agencies and Local Governments

During the reporting period BAQ staff met with staff at other state agencies to provide them information about Energy Star. Staff met with the South Carolina Energy Office, the South Carolina Department of Transportation, and the South Carolina Department of Education. At least one Agency (South Carolina Energy Office) has expressed an interest in implementing Energy Star and BAQ staff will be working with them to do so.

As part of the EAC process Energy Star is being used as an example of how local governments can save money, and also help reduce air pollution. Staff have provided flyers and used PowerPoint presentation to demonstrate local government contacts the benefits of Energy Star and how to implement the program.

Department staff created and distributed Energy Star pledge postcards at the South Carolina Science Council Conference in November 2006. Participants returned 54 pledge cards, with pledges to replace over 200 incandescent bulbs with compact fluorescents. The cards were also distributed to 5th graders at Rosewood Elementary School.

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Recent Activities and Future Plans

BAQ staff plan to finish installing Energy Star at the Bureau of Water and the Bureau of Land and Waste Management. We also plan on expanding Energy Star to the rest of the Department. Along with the installation to the South Carolina Energy Office, staff plans to revisit the Energy Star issue with the South Carolina Department of Transportation and the South Carolina Department of Education in hopes of convincing them to install Energy Star.

We will also continue using outreach materials and presentations to inform counties and local governments about the advantages of Energy Star and assist them with implementing the program.

Over the past 6 months (June – December 2006) the BAQ has continued to work with local and state contacts to promote EPA "Energy Star" products. Recently, in addition to promoting and encouraging the use of computer monitor power saving software, staff is responding to requests for assistance to draft responses to grants. A recent request from a partner in a state Council of Government (COG) area prompted BAQ to develop the following proposal. While this proposal may or may not be introduced by this COG, the information will be made available by BAQ staff to other contacts interested in pursuing energy efficiency reduction strategies. Also developed and available is the project design and evaluation along with the project logic model.

Energy Star Upgrade Proposal - October 2006:

We propose to upgrade local facilities in the area to demonstrate the ease and effectiveness with which energy reductions can be made. At the core of our proposal are the ideas suggested by the national Energy Star Campaign. We propose the following upgrades to participating facilities:

- Upgrade incandescent light bulbs with CFL light bulbs
  - At a cost of $10 per unit
  - With an energy savings of 66% per bulb
- Upgrade any existing T 12 fluorescent light fixtures with T8 ballasts and bulbs
  - At an average cost of $25 per unit
  - With an energy savings of about 30% per fixture
- Upgrade computer system with automatic sleep modes
  - At no cost
  - With an energy savings of about $10-$50/computer annually

In addition, we propose to investigate and report where additional savings could be realized. In particular, we plan to look at exit sign efficiency and upgrade costs, overhead diffuser and reflector efficiency and upgrade costs, automatic shut-off savings and installation costs, as well as other items such as interior paint color and occupant behavior patterns.

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Every participating facility will first be analyzed to determine baseline energy consumption. Gains in energy efficiency as a result of the upgrades will be measured against this baseline. Upgrades should be extensive enough to demonstrate a real energy savings, while leaving room for improvement should the facility take the initiative to complete the upgrades and invest in further improvements as suggested in the report. The analysis conducted to establish the energy consumption baseline for the facility will also be useful in encouraging that facility to sign-up as an Energy Star Partner.

Energy Conservation and Air Quality Awareness shall be promoted through informational presentations, brochures, and displays at the participating facility throughout the upgrade process. In this way, we hope to impact employee energy conservation behaviors at home, as well as at the workplace. Sponsor and partner logos will be displayed along with or on these informational fliers, kiosks, and presentations.

Finally, the improvements, suggestions for additional upgrades, energy savings, and emission reductions will all be documented in the project report. The report findings shall be made known to the participating management and employees, and shall be used to promote similar campaigns in other areas across the state. Bulbs containing mercury that are replaced as a part of the upgrade will be recycled and/or disposed of properly, and mercury awareness will be a sub-set of the awareness campaign.

Change a Light and Change the World with Energy Star

The BAQ also promoted the **Change a Light and Change the World with Energy Star** in October 2006 to staff within the Department via email. The informational message utilized (listed below) was also shared with EAC contacts statewide. Staff also developed a pledge card and utilized a small inventory of CFLs during a conference with school science teachers (South Carolina Science Council) in October. For this conference, 60 teachers returned the pledge card to take the action of changing a light bulb to a CFL to help reduce Global Climate Change, and 45 signed to buy recycled products and support recycling efforts.

Informational Message:

ENERGY STAR Change a Light, Change the World Campaign 2006
Need a Bright Idea? Here's One:
There is a National effort underway to Change a Light and Change the World with Energy Star, beginning on October 4, 2006 with the National Change a Light Day.

At the campaign's heart, the ENERGY STAR Change a Light pledge is a simple, but vital method of forming a community of inspired individuals across the nation, committing to help reduce the risks of global climate change and to save energy. The pledge asks the individual to change a light in his or her home to an energy-efficient (ENERGY STAR qualified) one.

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It couldn't be easier to participate at www.naco.org/changealight. Employees are even then offered a $1.50 off coupon to purchase their light bulb from Office Depot if they so choose! Just indicate the county in which you live, along with the other information requested in the pledge. You will then be directed to the coupon site for the light bulb.

The goal is to encourage at least 500,000 people nationwide to take the ENERGY STAR Change a Light Pledge over the course of the campaign year.

This is an effort to help save energy, money, and reduce greenhouse emissions. Citizens across our nation are being encouraged to pledge to change one light at home to an energy-efficient model.

You typically spend more to light your home than you do to operate your refrigerator all year long. If you're still using traditional incandescent bulbs and inefficient fixtures, a lot of energy and money is being wasted. As we all are aware, pollution, albeit controlled, is an environmental side effect of energy generation. Reducing energy generation needs through conservation measures, thereby, minimizes emission levels of pollutants.

Please do your part to "Help Spare the Air!"

December 2007 – The Department made a commitment to do our part to save energy, improve air quality and reduce greenhouse gas emissions. By joining the national ENERGY STAR Change a Light, Change the World Campaign as a pledge driver, the Department set a goal to encourage 500 employees to commit online to replace at least one inefficient incandescent light bulb at home with a highly efficient ENERGY STAR labeled option such as a compact fluorescent light bulb (CFL). As of November 30, 2007, the Department exceeded the goal of 500 pledges. Department employees made 751 pledges to replace incandescent light bulbs with a more energy efficient option such as a CFL. This is over 150 percent of our goal. The 751 participants pledged to replace 6,396 incandescent light bulbs which will save more than 1,803,672 kWh of energy and 2,615,964 pounds of greenhouse gas emissions.

b. South Carolina Energy Office

2007
South Carolina Summit on Energy Efficiency

The South Carolina Summit on Energy Efficiency (EE Summit) was held on April 30, 2007 in Columbia, South Carolina. The EE Summit brought together 175 participants representing a broad range of interests – electric and gas utilities, regulators, legislators, consumer and environmental advocates, industry, universities, schools, and regional transmission organizations. A complete list of the attendees is available. The goals of the EE Summit were:

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- To use the National Action Plan for Energy Efficiency as a springboard for discussion and action in South Carolina;
- To learn about and discuss the benefits of energy efficiency to South Carolina, including utilities, consumers (residential, commercial, and industrial), the state economy, and the environment;
- To share information on the key challenges to increased energy efficiency and consumer awareness in South Carolina; and
- To jointly discuss proposed initiatives that can begin to address challenges of increased energy efficiency and consumer awareness.

Over the course of the day three panels of stakeholders and experts addressed:
(1) Why energy efficiency makes economic and environmental sense for South Carolina;

(2) Challenges to increased energy efficiency and consumer awareness in South Carolina; and,

(3) A roundtable discussion of opportunities to address challenges and take energy efficiency to the next level in South Carolina.

For a summary of the speaker remarks and discussion following each of the panels as well as the full agenda a PowerPoint slides is available through the South Carolina Energy Office at http://www.energy.sc.gov/news.aspx.

2006
The South Carolina Energy Office (SCEO) released an Annual Report for 2006. Some items addressed in the report include:

1. The SCEO promotes energy efficiency in government agencies and public schools by encouraging the adoption of programs and procedures designed to capture and measure energy use, analyze key energy data for the development and implementation of energy saving measures, and incorporate these improvements into a master energy plan. In addition, the SCEO provides energy audits or assessments, special grants, or low interest loans to encourage installation of energy efficient equipment or systems improvements in public facilities.

2. The SCEO promotes the use of renewable energies and sustainable development practices throughout the state to offset and replace traditional methods of energy generation and consumption and to mitigate environmental degradation and the loss of economic investment. Renewable technologies such as solar, biomass, wind, hydrogen, and geothermal energy sources can help South Carolina depend less and spend less on imported energy while improving the state's environment. A description of projects such as landfill gas to energy, solar technology, biomass renewable energy, green power and hydrogen may be found at the SCEO website: http://www.energy.sc.gov/index.aspx

3. Transportation – This section discusses the SCEO role in Palmetto State Clean Fuels Coalition; Alternative Fuel Refueling Infrastructure; Alternative Fuel Vehicles; Take a

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Break from the Exhaust; and Truckstop Electrification**.** The Palmetto State Clean Fuels Coalition (PSCFC) is a SCEO-sponsored group of public and private stakeholders. The PSCFC and its stakeholders continued to improve access to alternative fuels for the public by installing alternative fuels infrastructure and educating public and private sector fleet managers, the general public, fueling station owners, and government entities. In FY06 the SCEO partnered with the PSCFC for a DOE grant of $20,000 to promote and encourage growth of alternative fuel infrastructure.

4. Public Information - This section discusses the ways in which the SCEO reaches a variety of audiences in the state.

5. EarthCraft Houses - The SCEO continued its partnerships with the Home Builders Association of Greenville, Charleston Trident Home Builders Association, and Southface Energy Institute to pilot the EarthCraft House program for the Greenville and Charleston areas. In FY06 the partnership built 18 EarthCraft Houses and trained over 100 builders and other building industry professionals. Three leading builders in the low country have made a commitment to build 80 percent of their homes to EarthCraft House standards, and a leading Upstate builder has committed to building 100 percent of his houses to EarthCraft standards. One EarthCraft builder training was conducted this year for Crescent Resources, LLC, a low country development at Palmetto Bluffs, a large upscale residential project between Charleston and Savannah. The success of the EarthCraft House program in Charleston and Greenville has led to participation by developers and builders in Hilton Head, Bluffton, and other parts of the state.

6. Landfill Gas to Energy Projects - Landfill Gas to Energy Projects - Since 1999, the SCEO has partnered with the US EPA Landfill Methane Outreach Program (LMOP) to evaluate, reclaim and use landfill gas for energy in the state. Strong efforts on Landfill Gas to Energy (LFGTE) projects have resulted in significant energy and environmental benefits for South Carolina.

Santee Cooper has installed generating stations at Horry County Landfill near Conway which produce 3.3 megawatts (MW) of power and are expected to increase to 9 MW. A second facility located at Allied Waste's Lee County Landfill generates 5.4 MW of electricity and is expected to increase to 21 MW. In FY06, an energy project at Screaming Eagle Landfill in Richland County was completed. It is generating 5.5 MW of green power and is expected to increase to 11 MW. An energy facility at Anderson Regional Landfill will be completed in early FY07, generating 5.5 MW, eventually increasing to 13 MW. These facilities bring Santee Cooper's green power generation to a current total of 19.7 MW and a projected total of 54 MW. Three upcoming projects, including the Richland Northeast Landfill, Oak Ridge Landfill in Dorchester County, and the Hickory Hill Landfill in Jasper County, will bring the projected total to 71 MW by 2012.

The largest LFGTE project to date, the Palmetto Landfill in Spartanburg County produces the equivalent of 10 MW of electricity and will soon upgrade to 12 MW. The landfill gas produced at this site is sent to BMW's automotive manufacturing facility near Greer. The methane powers four turbines. BMW plans to retrofit the system in FY07 to supply 40 percent of the plant's electrical needs and 100 percent of thermal needs. BMW will be the

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first automotive manufacturing plant in the country to utilize landfill gas for its paint shop. The gas will fuel 23 oven burners and provide indirect heat for the area. This will greatly reduce the factory's reliance on natural gas and reduce carbon dioxide emissions by 17,000 tons per year. Another South Carolina factory, JW Aluminum, announced plans in FY06 to build a smeltering plant at the Berkeley County Landfill and derive most of its energy from landfill gas at the site. According to the US EPA, this $5 million project will be the first of its kind in the country.

At the end of the 2006 legislative session, the South Carolina General Assembly passed S.1245, which included a provision providing tax credits for manufacturers to use landfill gas. Beginning in FY07, a manufacturing facility can get 25 percent of the landfill gas energy equipment costs in a business income tax credit.

2005

The SC Energy Office released an Annual Report for 2005. Four items addressed in the report include:

1. The SC Energy Office promotes energy efficiency in government agencies and public schools by encouraging them to measure their energy use, analyze their building envelopes and mechanical systems, incorporate energy improvements into their master plans, and implement energy-saving measures. The SC Energy Office also provides grants and loans to encourage installation of energy efficient equipment and capital improvements in state agencies.

2. The SC Energy Office promotes the use of renewable energies and sustainable development practices throughout the state to offset and replace traditional methods of energy generation and consumption and to mitigate environmental degradation and the loss of economic investment. Renewable technologies such as solar, biomass, wind, hydrogen, and geothermal energy sources can help South Carolina depend less and spend less on imported energy while improving the state's environment. A description of projects such as landfill gas to energy, solar technology, biomass renewable energy, green power and hydrogen is included.

3. Transportation – This section discusses the SC Energy Office role in Palmetto State Clean Fuels Coalition; Alternative Fuel Refueling Infrastructure; Alternative Fuel Vehicles; Take a Break from the Exhaust; and Truckstop Electrification**.**

4. Public Information – This section discusses the ways in which the SC Energy Office reaches a variety of audiences in the state.

c. Energy Wise

Pilot program sponsored by the Office of Economic Opportunity (OEO) on behalf of the South Carolina Governor's Office. Energy Wise is an adult energy education initiative coupled with low-cost energy efficiency measures and agency staff training. All program participants received energy education from a local community action agency as well as a

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kit of energy efficiency measures to install in their homes. Data was collected and analyzed to determine energy and cost savings generated by participants and the program. www.state.sc.us/energy/PDFs/AR_V_3.doc

d. Michelin Energy Reductions in Spartanburg, SC

Michelin Spartanburg Manufacturing in Spartanburg, SC plans to reduce water usage by four million gallons and its energy use by more than 40,000MM Btu's.

e. Duke Energy Efficiency Program

Duke Energy Corporation asked the North Carolina Utilities Commission (NCUC) to consider new energy efficiency programs that would help the Charlotte-based utility continue to meet rising consumer demand for electricity. In what Duke Energy calls its "save-a-watt" model, the company would replace existing energy efficiency programs with new ones and shut down older coal plants. Duke Energy can reduce demand by 666 megawatts during the summer under its existing programs in North Carolina and South Carolina, according to the company. The new program proposes to reduce demand by up to 1,700 megawatts after four years, a key metric in meeting the company's expected customer demand growth. Under Duke Energy's proposal, customers would pay for the programs with an energy efficiency "rider" that would be included in their power bill and adjusted annually. The company asked the commission for a first year rider of $0.001129 per kilowatt-hour for residential customers and $0.000940 for nonresidential customers.

Duke Energy Carolinas has had an ongoing dialogue on the save-a-watt plan with customers, environmentalists, the NCUC Public Staff and other stakeholders in a collaborative group since last August. These conversations and feedback received played a key role in the development of the program.

The following are the save-a-watt energy efficiency programs Duke Energy Carolinas is proposing:

Residential Assessments – to help residential customers identify opportunities to use energy more efficiently through a mail-in analysis, on-line analysis and on-site energy audit. Participating customers will receive either an energy efficiency kit or compact fluorescent light bulbs at the time of the audit to begin their energy savings immediately.

Non-Residential Energy Assessments – to help commercial and industrial customers identify opportunities to use energy more efficiently through an on-line analysis, telephone interviews and on-site energy audits.

Smart $aver® – to provide residential customers with incentive payments to install more energy-efficient equipment, such as compact fluorescent light bulbs and high-efficiency air conditioners and heat pumps. The commercial and industrial customer program will

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provide incentives to install high-efficiency lighting, heating, ventilation, and air conditioning equipment, motors and pumps.

Low Income Service – to assist low income residential customers with energy efficiency measures using kits or assistance in purchasing equipment and weatherizing homes.

Power Manager – to enable residential customers to receive a monthly credit from July to October in exchange for allowing Duke Energy to cycle their central air conditioning in times of peak power demand.

PowerShare® – to enable commercial and industrial customers to receive a credit on their bills in exchange for reducing their electric use in times of peak power demand.
Residential Bill Check Pilot – to evaluate the use of new technology to provide customers with a monthly report analyzing their energy use and comparing it to weather patterns and other issues that relate to energy use. The pilot will initially test new technologies in up to 200 homes in the Charlotte area.

Efficiency Savings Plan Pilot – to evaluate allowing residential, commercial and industrial customers to install energy efficiency products with no up-front payment, allowing customers to save money by reducing their energy use. Customer would pay for these products through an added charge to their power bill.

Advanced Power Manager Pilot – to evaluate new technologies and advanced metering to study the feasibility of an energy management system that enables customers to participate in energy efficiency without disrupting their lifestyle or normal business practices.

f. Computer Energy Use Audit - 2007

In an effort to improve energy efficiency in its own facilities, the Department performed an internal computer energy use audit. The study tracked computer energy use over a number of computer use test cases. It was determined that there was significant opportunity to decrease energy use, reduce emissions and save money through better computer power management. As a result, employee education is taking place and new policy is being considered.

g. Town Hall Meeting - Conservation on Energy - June 27, 2007

Hosted by Conoco Phillips and the University of SC, invited panelists represented organizations active in renewable energy and energy efficiency, business and industry, the environment and conservation. John Litton with the BAQ was a panelist.

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h. Green Power Solar Schools Program – August 2007

Aiken Electric Cooperative and Santee Cooper announced the formation of the Green Power Solar Schools program in the cooperative territory, and that New Ellenton Middle School has been selected as the Green Power Solar Schools program participant.

The initiative is designed to encourage interest in the environment and demonstrate the feasibility and limitations of renewable power generation. Each school will receive a 2 kilowatt solar power system, which will provide a teaching, research and hands-on demonstration opportunity for students. A focus of the project is the use of a new renewable energy curriculum endorsed by the South Carolina Department of Education.

The program continues the Electric Cooperatives of South Carolina's and Santee Cooper's efforts to promote renewable energy, and fulfill Santee Cooper's commitment to reinvest Green Power funds back into renewable resources across South Carolina.

i. Want Discounts on Energy Efficient Light Bulbs? (September 2007)

Progress Energy is offering discounts on compact fluorescent light bulbs at 11 Home Depot stores in North and South Carolina. The energy efficient bulbs will be available with the 1 dollar discount from October first to December 30th. The companies say they plan to sell up to 200,000 of the 40, 60 and 100-watt bulbs. Progress Energy is trying to gauge consumer acceptance and awareness of the fluorescent bulbs. If the program is successful at the North and South Carolina stores, it could expand.

j. Palmetto Clean Energy – September 2007

SCANA Corp., Duke Energy Corp. and Progress Energy Inc. will start selling "green power" to their South Carolina customers early next year through a nonprofit group established by the state. The three utilities will market the renewable energy to the 1.3 million homes and businesses that they serve in the state, while the newly formed organization, dubbed Palmetto Clean Energy, or PaCE, will buy the power from small Southeastern companies that generate electricity with wind turbines, solar panels and landfill gas.

k. Waste Management - September 2007

In September, Waste Management, Inc. announced a major national initiative to expand the number of landfill gas to energy (LFGTE) facilities. The program will result in the creation of an additional 60 renewable energy facilities across the country -- including the potential of two additional facilities in South Carolina -- over the next five years.

Waste Management currently operates LFTGE facilities at Elgin and Wellford. The two LFGTE plants generate nearly 16 MW of electricity -- enough to power 15,000 homes per year. The company also has two other landfills in St. George and Ridgeland, which could host a LFGTE facility. As part of the national initiative, WM will generate more than 700 megawatts of clean renewable energy -- enough to power 700,000 homes or replace over eight million barrels of oil per year.

l. South Carolina Electric Cooperatives Invest in Conservation and Renewable Energy – October 2007

South Carolina's 20 electric cooperatives plan to invest up to $10 million per year towards renewable energy and energy efficiency measures. The investment includes a three-pronged approach to improving the environment and saving energy. The following three measures represent the beginning of this process.
-Encouraging homegrown renewable energy (a pilot program for net metering.)
-Producing efficiencies to save energy and money (a program to place energy efficient compact fluorescent lights (CFLs) in the home of every cooperative member in the state, approximately seven million bulbs within 10 years).
-Investing resources in clean energy research (a partnership with the University of South Carolina to develop technology that reduces carbon dioxide and other emissions from coal-fired power plants).

m. Alternative Energy Tax Credits – November 2007

This year, South Carolina began offering a number of new tax credits for people and businesses investing in alternative energy. A state tax credit that took effect in 2007 covers 25 percent of the cost of solar equipment for hot water, heating, cooling, or generating electricity, as an income tax credit worth up to $3,500 or half an individual's tax liability. The credit can be carried over for up to 10 years. For new homes, according to the U.S. Department of Energy, solar water heating systems can save money immediately, when the monthly energy savings are compared to the amount a system adds to the cost of a 30-year mortgage.

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1. Outreach and Education					
a. Ozone forecast/outreach,education	To make South Carolinians aware of daily air quality forecasts for ozone season to alert sensitive groups and increase awareness to motivate more people towards lifestyle changes, especially on ozone action days.	Beginning with the 2006 ground-level ozone forecast season, the Department and the BAQ began participation with EnviroFlash, sponsored by the EPA with State and local air quality agencies. EnviroFlash provides important air quality information such as forecasts and action day notifications via email or pager notification. The email includes the same local air quality forecast information which is coordinated through the news media, like television and radio. Enviroflash is being promoted in our priority areas and staff are working on an Enviroflash "icon link" to be added to partners' websites to faciliate access to the forecast.	July 2004		
		Forecasting for ground-level ozone began April 1, 2007 as a result of the Department observing elevated levels of ground-level ozone during the month of April. The Department added a new forecast region. The CATAWBA region now includes York, Chester, and Lancaster counties. And, the Department is added two counties to the existing PEE DEE forecast region. Marlboro and Dillon counties joined the other counties in the Pee Dee regional forecast in 2007. In 2007, the BAQ partnered with the BLWM (each providing $35,000) to fund $70,000 worth of airtime for two 15 second PSAs, one dealing with Ozone Awareness and the other recycling yard debris.	February 2007		
b. Developed Outreach Projects / Provided Outreach Materials	Gas Can Exchange	Anderson County organized and planned its own gas can exchange (09/10/2005) with some limited assistance from SCDHEC/BAQ staff. 200 new, environment friendly gas cans were distributed, and 79 used gas cans collected.	9/10/2005		
	New materials developed	Facts about ethanol as an alternative fuel (05/07) VEHICLE MAINTENANCE AND AIR QUALITY (05/07) The Benefits of Using Alternate Modes of Transportation Refer to Enclosure 2 of the June 2007 EAC Progress Report for South Carolina	5/1/2007 06/07		
	BAQ - Education and Outreach – School related activities	BAQ staff participated in a number of meetings and provided trainings at various meetings and schools.	2006		

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c. Breathe Better Program	Program started focusing on seeking reductions in air pollution around schools. The program has been expanded to include business, industry and other places where idling may occur.	Working with a middle school in the Midlands area of Columbia, SCDHEC/BAQ staff helped initiate education materials to support no idling for school buses and car pool drivers. The school developed and implemented a no-idling policy for the grounds. This school was recognized by the Agency's "Champions of the Environment" program. Information is available at http://greenstepschools.com/page1.html To enable better access, a website for this project has been developed and is located at the following link: http://www.scdhec.gov/environment/baq/docs/edu/B2/b2originalprotocol.pdf	2005 December 2007		
		June 6, 2007 - Fountain Inn Elementary School The school has been working for several weeks with county and city planners to implement b2. The school has taken the program beyond its anti-idling focus. The school has plans to plant shade trees, build benches, landscape needed areas, and re-route bus/carpool traffic. Crossroads Middle School, Rosewood Elementary School in Rock Hill and Fountain Inn Elementary School have implemented a no idling policy. Greenville County was the recipient of a 2006 EPA grant to raise public awareness about air quality, and implement an anti-idling campaign in one county school. The anti-idling campaign is called B2-Breathe Better, and the idea is to spread the program through out the county-wide school district. July 2007 - Two "Turn off your engine" signs were placed in the SCDHEC visitor parking lot to encourage anti-idling. A copy of the sign was submitted in the June 2006 EAC Progress Report.	2007		

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A. Control Measure/Activity	B. Control Measure/Activity Description	C. Current Status	D. Date Occurred	G. Pollutants	H. Additional Information
d. Other School and Community Related Activities	BAQ - Education and Outreach – Staff provide education and outreach support to schools and community organizations.	March 21, 2007 – Gilbert Middle School - staff presented the "Air Quality" kiosk panels for display at their outdoor learning center area. Staff worked with several groups at the learning center focusing on the importance of air quality and the state of South Carolina's air quality. May 10, 2007 - "Air Quality and Trees" presentation - Staff presented to the Northeast Beautification committee about the importance of trees and using native plants and shrubs. The committee has several projects going on in the Northeast area of Columbia, all of which focus on planning greenways, tree planting, and beautification areas. Several BAQ staff is on the "Trees for Two Notch" sub-committee. May 23 – 25, 2007 – South Carolina Public Health Association (SCPHA) conference - Staff conducted provided presentations on the b2 program and EPA's "Tool for Schools" air quality program. A booth that included several publications on air quality issues (ambient and indoor) focusing on the health effects of poor air quality was provided. Staff has taught the 7th grade at Northside Middle School the science curr Staff has been involved for the past 3 years with Gilbert Middle School. S			
e. SC Educators trained with Action for a Cleaner Tomorrow	Environmental Education training for teachers	FY 05 saw 28 educators trained From July 2005 through June 2006 - there have been 26 trainings with 724 teachers trained.	yearly training opportunities		
f. Car Care Awareness Month Project	Increase the target audience's awareness about the importance of car maintenance in preserving good air quality	The Department and Richland and Lexington counties organized a vehicle maintenance check event in April. The State Museum, Ben Satcher Ford and Pope Davis Tires helped sponsor this free event on April 1, from 10 a.m. until 2 p.m. at the State Museum on Gervais Street. A team of certified technicians made suggestions for improving vehicle safety and gas mileage.	2006		
	Increase the target audience's awareness about the importance of car maintenance in preserving good air quality	Suddeth Automotive,Richland County offered Free National Car Care Month Inspections on Monday thru Friday between 9 AM and 4:30 PM during the month of April; also offered was a Free Women's Care Care Seminar on Saturday April 28th. The Department supplied "Driving Smarter For Tomorrow" brochures which included tips to save money, improve vehicle reliability, reduce air pollution, and maximize fuel economy.	April 2007		

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g. 2006 SC EAC Summit	2006 Early Action Compact (EAC) Summit held in Columbia, SC on August 16-17, 2006 *Attracted nearly 300 stakeholders from 5 different states including representatives from 24 counties and 7 Councils of Government *Participants included representatives from federal, state and local governments as well as industry representatives, environmental organizations as well as private citizens	Topics included energy conservation, diesel retrofits, land use planning, alternative fuels, commuting options and multi-modal transportation, innovative education and outreach, health impacts/lifestyle and finding the funding. Key speakers - Bill Wehrum, Acting Assistant Administrator for Air & Radiation, U.S. EPA, Mark MacLeod, Director for Special Projects in Environmental Defense's Climate and Air program of the Washington DC office.	August 2006		
h. Earth Week 2007 Activities	**2007** - Governor Sanford signed a proclamation declaring April 22-28, 2007 as "Earth Week" The Department, with the help of volunteer staff, celebrated Earth Day 2007 throughout the state. During the month of April and the first part of May, staff participated in many community Earth Day events including grade schools, colleges, churches, hospitals, historic parks and private industry (BMW). Over ten-thousand (10,000) environmental materials were distributed.	Staff presented on topics such as air sampling, criteria pollutants, ozone formation, open burning, electric lawn mowers, hybrid electric vehicles, and greenscaping. Distributed information discussed particulate pollution and health, automobile emissions, spill-proof gas cans, the benefits of urban trees, and energy conservation. School aged children were enthused to receive promotional items such as environmental activity booklets, recycled pencils, and several themed posters included ways to help reduce air pollution. 2007 Activities included: Air sampling and monitoring presentation at Coker College Lawn Mower Exchange at the S.C. State Museum First Annual Kids Earth Day in Camden Gas Can Exchange in Greenville N. Augusta Kids Day in Aiken County Earth Day at Park Circle in Charleston Saluda Shoals Park Earth Fair	April 2004 and continues		A copy of this proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/earthweek.pdf.
i. Small, Gas-powered Engine Exchange Project	Project targeting the exchange of gas-powered lawn mowers for electric mowers.	EAC contacts in Richland and Lexington Counties are continuing to plan for a small gas-powered lawn equipment exchange. A survey tool has been developed and is being utilized at various events held in these two counties to gauge citizen interest for such an event.	2006		

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A. Control Measure/Activity	B. Control Measure/Activity Description	C. Current Status	D. Date Occurred	G. Pollutants	H. Additional Information
	"Mow Down Pollution" Event (April 21, 2007) - Lexington and Richland Counties;Keep the Midlands Beautiful, and the BAQ planned and implemented the first lawn mower exchange in SC. To encourage Columbia-area residents to do their part to "Spare the Air," the lawn mower exchange was held at the State Museum to Mow Down Pollution! Estimated emission reductions are 6.8665 tons VOC per year and 14.1205 tons CO per year (based on EPA emissions for 2 cycle gas mowers). A DRAFT "Mow Down Pollution" report and the participant survey was include with the June 2007 EAC Progress Report.	The event collected empty, functional gas powered lawn mowers and offered a discount between 30 percent and 55 percent off MSRP on Neuton cordless electric mowers. To compliment the lawn mower exchange, other partners were invited to exhibit Greenscaping information at the event. These partners helped extend the impact of the exchange by highlighting complimentary lawn and garden practices that help protect air quality. The Columbia event collected 155 gas-powered mowers as trade-in. These mowers were recycled by Lexington County and thereby removed from operation. Since most of the mowers appeared to be two stroke engines, our estimated emission reductions are 6.8665 tons VOC per year and 14.1205 tons CO per year.	2007		
	Lawnmower Exchange Event - 2008 Richland and Lexington Counties and DHEC-BAQ are planning a lawnmower exchange event to be held in 2008.	A planning meeting was held on September 11, 2007. The target date for the event is the Spring of 2008.	2007		
	"Mow Down Pollution"- Lawn Mower Exchange event to be held prior to Dec. 31, 2008 with local government in the Duke Energy service area.	The Education and Outreach Section of the BAQ will be coordinating a "Mow Down Pollution"- Lawn Mower Exchange event and promoting energy efficiency activities, particularly related to use of computer equipment, with local government in the Duke Energy service area in South Carolina. These activities will present opportunities to raise awareness of air quality issues in the Upstate of South Carolina and reduce emissions of air pollution. The funds ($6500.00) will be used for but not limited to: advertising and promotion, creating brochures and other written materials, providing promotional items and subsidizing the cost of the electric lawn equipment. This project will be completed by December 31, 2008.	November 2007		
j. Grant Assistance	Grant Workshop sponsored by South Carolina and Georgia, in cooperation with staff from the EPA Region 4. January 16 - Augusta/Aiken area January 17 - Central Midlands area January 18 - Greenville/Spartanburg areas	In advance of upcoming funding opportunities for various types of projects to address air quality issues through the EPA, a workshop was held for each of three areas of SC to provide information that may help local entities to improve their proposals for applying for these funding grants.	January 2007		
k. U.S. Walk to School Day	At 141 plus, South Carolina had more schools participating in this anti-obesity, enviro-friendly campaign than any other state except California.		October 2007		

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A. Control Measure/Activity	B. Control Measure/Activity Description	C. Current Status	D. Date Occurred	G. Pollutants	H. Additional Information
2. Commuting Reduction Programs		(			
a. Take A Break From The Exhaust (TABFTE)	Computer based Commuter program that encourages reductions by using a point system 2005 Ozone Season Reductions: 286,889 miles reduced 1,076 pounds of VOC's reduced 684 pounds of Nox reduced 2006 Ozone Season Reductions: 162,000 miles reduced 609 pounds of VOC's reduced 387 pounds of NOx reduced 2007 Ozone Season Reductions: 146, 991 miles reduced 592 pounds of VOCs reduced 411 pounds of NOX reduced	2006 Participants Bureau of Air Quality (BAQ) Bureau of Water Bureau of Land and Waste Management (BLWM) South Carolina Energy Office (SCEO) Wisconsin Department of Natural Resources Lexington County Government Central Midlands Council of Governments (CMCOG) Winthrop University - York County York Technical College Bowater - York County Citi Group - York County Springs Industries - York County The four major participants for the TABFTE program in SC for 2007 were: BAQ, BLWM, CMCOG, and the SCEO.	Yearly April - September		www.scdhec.gov/takeabreak/login.asp Total of 286,889 miles reduced
	TABFTE update	Florence County has expressed an interest in participating and has been set up on the program. Columbia: The Central Midlands Council of Governments (CMCOG) has also been signed up and is participating in the program. Staff has presented this program to two other groups of stakeholders and the SC DOT to encourage implementation at other agencies. The Mid-America Regional Council (Kansas City, MO) has implemented this program with their staff.	2007		

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A. Control Measure/Activity	B. Control Measure/Activity Description	C. Current Status	D. Date Occurred	G. Pollutants	H. Additional Information
b. SmartRide Program	SC DOT sponsored program giving commuters mass transit service to/from Columbia area. During the 2005 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides were offered for those days designated as Ozone Action Days. The BAQ helped promote this effort by providing posters and public service announcements. In addition, the BAQ provided $500.00 to help off-set the cost. During the 2006 Ozone Season, free rides on Ozone Action Days will again be offered.	Passenger Boardings: Total Camden – Columbia: November 2005 – May 2006 7,514 boardings Emissions Reductions (Kershaw, and Richland): 684 pounds NOx 943 pounds VOC During the 2006 Ozone Season, free rides on Ozone Action Days will again be offered. December 2006: Passenger Boardings: Total Camden – Columbia (1): November 2005 – November 2006 14,301 boardings Passenger Boardings: Total Newberry – Columbia (2): November 2005 – October 2006 6,408 boardings	2004		
	SmartRide update	During the 2007 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides will be again be offered for those days designated as Ozone Action Days. BAQ staff met on June 12, 2007, with the new SCDOT project coordinator. Discussions included issuing a press release; updating the SmartRide website; increasing ridership; and, possible expansions. The BAQ has committed to provide $500.00 during the 2007 Ozone Season, along with a matching amount from the SC Energy Office, to provide free rides on Ozone Action Days. SmartRide Statistics for December 2007: Passenger Boardings: Total Camden – Columbia: November 2006 – October 2007 12,332 boardings Passenger Boardings: Total Newberry – Columbia: November 2006 – October 2007 11,709 boardings	2007	2007 Reductions (Kershaw and Richland): 1,642 pounds NOx 2,269 pounds VOC 2007 Reductions (Newberry and Richland): 1,584 pounds NOx 995 pounds VOC	

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c. SIGIS carpool matching	The Department initiated a web-based, map based carpooling program in December 2005. The program facilitates ridesharing opportunities throughout the state by allowing interested employees to map their commute trip information and view the trips entered by other employees.	The program has undergone some recent refinements and a second agency-wide email notification about the program was sent on June 27, 2006. December 2006 total number of participants - 54 total of 34 employees added their names to the list June 2007 total number of participants - 64	December 19, 2005		The program is available to 4,987 Department employees in eight environmental quality control offices, eight regional public heath offices, four Ocean and Coastal Resurces Management Offices, and eight office locations in Columbia. At this time there are approximately forty-five participants.
d. Best Workplace for Commuters	Bureau of Air Quality designated as a "Best Workplace for Commuters" Febuary 3, 2005. SCDHEC - Bureau of Air Quality currently holds the only designation in South Carolina	Completed Bureau continues to promote this program to EAC areas and within the Department. December 2006 -BAQ continues to maintain the "Best Workplaces for Commuters" (BWC) status June 2007 – EPA will no longer fund the BWC program. October 2007 - EPA has since announced that the Center for Urban Transportation Research (CUTR) at the University of South Florida assumed responsibility for management of the program when the EPA relinquished it on October 1st. The Department continues to meet the minimum requirements.	February 3, 2005 December 2007 - The Department continues to meet the basic program requirements.		The Department will continue to promote best workplace practices to other programs within the Department as well as other organizations seeking voluntary measures proven to benefit employees and air quality.
e. Audioconferencing	Opportunity to hold meetings through audioconferencing or teleconferencingy. SCDHEC offers employees 3 choices based on the number of participants (up to 6, up to 30, or up to 144 lines)	SCDHEC employees as well as other state agency employees were faced with travel restrictions in the late summer months of 2005. Employees were notified via e-mail of the audioconferencing capability.	employees notified in 2005		
f. Bike to Work Events (2007)	May is National Bike Month, and Friday May 18, 2007 was "Bike-to-Work Day."	The Department's State Nutrition and Physical Activity Consultants, Division of Injury and Violence Prevention, and Bureau of Air Quality encouraged Department staff in Columbia to participate in a "Bike-to-Work Day" ride coordinated by Central Midlands Council of Governments and the City of Columbia, and/or to bike to lunch together.	May 1, 2007		

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g. Safe Routes to School Program	The South Carolina Department of Transportation (SCDOT) approved funding to develop comprehensive bicycle and pedestrian programs as part of the "Safe Routes to School Program."	Partnering with SCDOT, local governments, parents, local law enforcement and educators, each school and community will develop a plan that encompasses both infrastructure and non-infrastructure components. One of the purposes outlined in the funding legislation for this program includes facilitating the planning, development, and implementation of projects and activities that will reduce traffic congestions, fuel consumption and air pollution in the vicinity of primary and middle schools.	2007 funding cycle		The schools for the 2007 funding cycle are: College Park Elementary School, Berkeley County; Alston Middle School, Dorchester County; Willow Drive Elementary School, Sumter County; North Vista Elementary School, Florence County; Wren Elementary/Middle School, Anderson County; Lone Oak Elementary School and Pine Street Elementary School, both of Spartanburg County; Rosewood Elementary School, Richland County; College Park Middle School, Berkeley County; Fairfield Middle School, Fairfield County; Stono Park Elementary School and Hunley Park Elementary School, both of Charleston County. Each of the selected schools will receive up to $200,000.00.
h. Bull Street Partners Carpool Group	Bull Street Partners Carpool Group provides employees of the Bull Street area offices of three State agencies (Department of Health and Environmental Control, Department of Mental Health and Department of Social Services) an opportunity to form carpools, thereby saving money and fuel, reducing pollution and reducing the stress of commuting.	The Department's Bureau of Air Quality sent an electronic mail message to contacts in the three state agencies located at the corener of Bull and Harden Streets. The e-mail encourages people interested in regular carpooling, occasional carpooling, or people who are willing to provide a ride home to sign up. The emails have very gone out to two of the three agencies, the third agency emial will be shent out shortly. Seven people have signed up to date, and feedback from the agencies about the program has been very positive. 'Goody Bags" of air quality promotional materials are being provided to people from the Department's sister agencies who sign up.	Began late summer 2007, and is on-going	All Pollutants*	Richland and Lexington as well as other counties within South Carolina
i. Bike Commuting for Air Quality	Spartanburg has received a bronze level Bicycle Friendly Community designation in September 2007. Charleston, Greenville, Rock Hill and Columbia are also working towards designation. Columbia is holding twice-a-month meetings and a monthly lunchtime ride.		September 2007		

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3. Ground Level Ozone Awareness Week Proclaimed	To increase awareness of ozone pollution on the lifestyle changes needed to see more reductions in ozone pollution levels	For the eighth year in a row, the governor of South Carolina has signed a proclamation regarding ground-level ozone awareness week. In 2007, Governor Sanford signed a proclamation declaring April 1-7, as "Ozone Awareness Week." A news release was developed to help announce this proclamation and was distributed electronically to all EAC contacts for their use locally.	2000 and continues yearly		
4. Regulatory Initiatives					
a. Open Burning-ban household trash burning	Reduce pollution from unnecessary burning	April 14, 2005, DHEC issued a news release reminding citizens in SC of the revised regulations. The revision to the regulation was made in 2004 as a part of the EAC process to improve air quality. Additional news releases were sent out during the Fall to encourage citizens to use alternatives for disposing of yard trash. October 9, 2006, DHEC issued a news release encouraging citizens to reduce open burning of yard debris. Subsequent releases were included in Anderson and Greenville county local papers. 2007 - The BAQ has committed funding of ~$600.00 to the Anderson County partners to support a billboard campaign to encourage citizens to call prior to burning materials outdoors.	2005		See the December 2005 EAC Progress Report Document for detailed information.
b. SC NOx Control Reg - new sources	Reduce new sources of Oxides of Nitrogen, a precursor to Ozone pollution	on-going	2005		See the December 2005 EAC Progress Report Document for detailed information.

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5. Assist local areas in determining emission reductions	The Department supports local solutions to local problems. December 2006 - Effort continues and has been expanded as a result of the 2006 SC Early Action Compact Summit. BAQ staff will work with local government officials based on the SC COGs. Staff will assess the local planning activities and offer assistance as needed. 2007 - Department staff continue working with counties and COGs to develop partnerships implementing emission reduction strategies.	SC 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 maintaining the 8-hour ozone standard within their respective area. Dec. 2006 - Examples of this type of work has been the "Motor Vehicle Maintenance Project," expansion of the "Take a Break for the Exhaust Project," and the potential expansion for the "Breathe Better Air at School Project."	2003		
6. Clean Air Initiatives for Gov Entities	Provide forum for Government Entities to meet and seek reductions in air pollution.	The utilization of the TABFTE continued to grow in 2006, with Winthrop University (York County), Central Midlands Council of Governments and York Technical College, Lexington County, Bowater, CitiGroup and Springs Industries. The SCDHEC/BAQ continues the partnership with the SCDOT and the Energy Office to promote ridership on the SmartRide Alternative Transportation project during Ground-level Ozone Season. The BAQ has committed to provide $500.00 during the 2007 Ozone Season, along with a matching amount from the SC Energy Office, to provide free rides on Ozone Action Days.	2003		
7. Smart Highways and Transportation Issues	Provide improvement in air quality by means of transportation planning	A checklist was developed to be used in transportation planning. The checklist will serves as an informational guideline to be used in reviewing Long Range Transportation Plans and Transportation Improvement Programs for adequacy of their documentation and will be used during long range transportation plan updates as required by 23 CFR 450.322.	2005		Reductions reflect difference between 2007 and 2002 for deferred nonattainment areas. A copy of the Smart Highways Checklist is attached in Appendix 12 of the December 2004 EAC SIP.
	Partnership with SC Department of Transportation	BAQ staff met with SCDOT to discuss air quality issues and concerns including PM and ground-level ozone. Discussion included partnerships with both agencies especially due to the potential impact on transportation and air quality from the PM standard and the upcoming release of the proposed ozone standard.	March 6, 2007		

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	Partnership with SC Metropolitan Planning Organizations and Council of Governments	Statewide MPO/COG meeting held in Clemson. Panel discussion with BAQ, FHWA and RFATS representatives discussed Transportation Conformity triggers, requirements, status, experiences in RFATS. Also discussed were the new PM standards as well as the expected release of the proposed ozone standard.	May 20-22, 2007		
	Transportation Conformity SIP revision including Memorandum of Agreement (MOA)	A meeting is planned for November 2, 2007 in Columbia of the transportation conformity interagency partners, including EPA Region 4, US DOT (FHWA and FTA) , SC DOT, DHEC, MPO's. Transportation conformity ensures transportation planning considers air quality goals.	Began late summer 2007; a schedule for completion is being developed.		
	Transportation Conformity SIP revision including MOA **UPDATE**	Stakeholders met on November 2, 2007 to discuss proposed changes to South Carolina's current MOA for Transportation conformity. Stakeholders participating included SCDOT, FHWA Divison Office, EPA Region 4, Central Midlands COG/MPO, Rock Hill-Fort Mill MPO, Aiken-Augusta MPO, Greenville-Pickens MPO and the Department. Stakeholders will provide additional comments to the Department for incorporation into the revised MOA.	November 2, 2007		
	Southern Transportation and Air Quality Summit	SCDHEC - BAQ participated in a three day planning meeting to discuss the regional effects of transportation planning on air quality in the southeast.	August 28-30, 2007		
8. Land Use Planning and Smart Growth Initiatives	The EPA and the BCDCOG are providing a series of training workshops on how each of us can work with our elected officials and communities to coordinate on Smart Growth Strategies such as promoting better land use and transportation including improved bicycle and pedestrian facilities. EPA supports this strategic training as a way of reducing energy costs and protecting air and water quality. We will be happy to meet with any group but have meetings set up in Charleston and Dorchester Counties as noted on the attached flyer. Meeting dates in Berkeley County are pending.	SCDHEC - BAQ provided this information to EAC contacts including other contacts from county and municipal governments in South Carolina.	October 2007 workshops began in Berkeley and Charleston counties		
9. Other Point Source Reductions					

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a. NOx reduction-large facilities	Reduce Oxides of Nitrogen As a part of their commitment to the EAC process, four facilities are voluntarily revising their permits to incorporate the following requirements as federally enforceable permit limits. These actions are permanent and quantifiable and would not have occurred had it not been for the EAC process. (See Executive Summary, Section D.4. and Appendix 10 of the December 2004 EAC SIP.)	1. Transco Pipeline - (Spartanburg County) - IC Engine Facility will begin early implementation, fully implemented by December 2005, of NOx emission reductions required by the Phase II of NOx SIP Call.	April 2005		
		2. International Paper - Eastover (Richland County) agreed to take a 1,000-tpy reduction in its permit limit.	April 2005		
		3. Duke Power - Lee Steam Station (Anderson County) – will install and operate advanced low NOx combustion controls on the smaller two coal-fired boilers (Units 1 and 2). The NOx limits on these units will be incorporated in the Title V permits and incorporated into the SIP. This is a $7 million investment that will limit NOx emissions to a rate of 0.27lbs/MMBtu.	April 2005		
		4. SCE&G Wateree - (Richland County) agreed to take Title V permit limits on coil fired boilers subject to the NOx Call Requirements.	April 2005		
10. Palmetto State Clean Fuels Coalition Initiatives					
a. Biofuels Showcase	The Palmetto State Clean Fuels Coalition hosted a Biofuels Showcase on Friday, November 18, 2005. This event showcased ethanol and biodiesel. Invited speakers were from the National Ethanol Vehicle Coalition, National Biodiesel Board, and Georgia Power. The event also featured a Ride and Drive Event where participants had a chance to drive the alternative fuel vehicles (AFV's) on display.	Biofuels Showcase was held on November 18, 2005.	Nov. 18, 2005		www.palmettocleanfuels.org/
b. Billion Gallon Celebration	Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvements, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges.	On October 14, 2005, the Palmetto State Clean Fuels Coalition hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.	Oct. 14, 2005		www.palmettocleanfuels.org/

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c. Ethanol Refueling Infrastructure	There are currently 20 publicly accessible E85 refueling infrastructure stations in the Columbia, Greenville, and Aiken areas	· Currently 33 public E85 refueling sites in SC · In addition to E85, There are currently 14 biodiesel public sites in SC. December 2006 - 40 public E85 and 42 public B20 refueling sites in SC. Two sites, one York Co. will be opening soon. Recent funding for 2 additional E85 sites and a B20 site in the Rock Hill area. June 2007 - 42 public E85 and 45 public biodiesel refueling sites in SC. December 2007 - 49 public E85 and 49 public B20 refueling sites in SC. PSCFC is in the process of funding 7 more sites. An additional 12 E85 sites will be installed over the next 6-8 months.	October 1, 2001		www.palmettocleanfuels.org/
National AFV Day Odyssey: Showcasing Cleaner More Energy-Efficient Choices in Transportation	Public event enables Americans to learn about the benefits of alternative fuel and hybrid electric cars, vans, trucks, and buses.	October 10, 2006 - hosted by York Technical College.	October 10, 2006		
Southeastern Alternative Fuels Task Force-Workshop	BAQ and Wendy Bell/Chantal Fryer participated in and helped to support the planning and implementation of this workshop held in Tennessee, June 6-7, 2005.	Website for the SEAFTF is: http://www.sealtfuels.org/. Evaluation results for this workshop is available.	June 6-7, 2005		
11. Tree City USA	Tree City USA encourages municipalities and areas to have strong urban forestry programs. BAQ sent an email to all 45 EAC areas in SC asking the counties to encourage municipalities within their county to help participate in this program that can benefit air quality.	June 2006 - Currently there are 39 designated areas in SC - this is an increase of 2 from the December 2005 Progress Report December 2006 - 40 designated areas in SC June 2007 - 40 designated areas November 2007 - 39 designated areas	2005		www.arborday.org/programs/treecity/map.cfm

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12. Homegrown Products campaign	The state Department of Agriculture has launched a new campaign to promote homegrown products. The program will start with fruits, vegetables and ornamental plants, then phase in manufactured foods, then row crops like corn and soy beans, and finally livestock. Growers will use a "Certified SC Grown" logo on their packaging and stickers will identify fruits and other products.	The state's retail grocers, as well as roadside markets and farmers markets, have agreed to participate. The "Certified SC Grown" logo on packaging should be in supermarkets soon.	2007		http://www.certifiedscgrown.com/
13. Energy Efficiency					
a. Energy Star's Computer Power Management Software	SCDHEC BAQ experienced an estimated 28% energy savings in 2005 using the computer monitor power management software.	Completed. BAQ Information Technology staff have completed the necessary installation on the respective servers, and the Bureau of Water and Bureau of Land & Waste Management will be participating. This will increase the number of monitors from 150 to over 500.	January 2005 - September 2005		2005-During the reporting period, SCDHEC/BAQ staff met with other state agencies to provide information about Energy Star. These agencies include the SC Energy Office, SC Department of Transportation, and the SC Department of Education. Staff also provided flyers and PowerPoint presentations to EAC counties to demonstrate the benefits of Energy Star to local governments. Future plans include installing Energy Star in other areas of SCDHEC and encourage other state agencies to install Energy Star. Outreach materials and presentations will continue to be made available.

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b. Energy Star's Change a Light Bulb, Change the World Campaign	SCDHEC BAQ promoted the Energy Star change a Light Bulb, Change the World campaign in the community. SCDHEC made a commitment to energy efficiency and air quality by joining the national ENERGY STAR Change a Light, Change the World Campaign as a pledge driver.	Oct 2006 - BAQ promoted Change a Light and Change the World with Energy Star to DHEC staff via email. Staff promoted the campaign to the external community as well. Nov. 2006 - DHEC staff created and distributed Energy Star pledge postcards at the SC Science Council Conference. 54 pledge cards were returned to replace over 200 incandescent bulbs with compact fluorescents; cards were also distributed to 5th graders at Rosewood Elementary School Feb. 2007 - The BAQ hopes to involve other state agencies and local governments through outreach efforts to get them to utilize Energy Star. To assist with these efforts, BAQ registered as an Energy Star Driver October 2007 - SC DHEC has made a commitment to do our part to save energy, improve air quality and reduce greenhouse gas emissions. We have joined the national ENERGY STAR Change a Light, Change the World Campaign as a pledge driver and have set a goal to encourage 500 of our employees to commit online to replace at least one inefficient incandescent light bulb at home with a highly efficient ENERGY STAR labeled option such as a compact fluorescent light bulb (CFL). By reachi	2006 November 2006 February 2007 October 2007		
	Update Continued:	November 2007 – SC DHEC is proud to report that they have exceeded their goal of 500 pledges in EPA's ENERGY STAR Change a Light, Change the World Campaign. At the time of this reporting, SC DHEC employees have made 751 pledges to replace incandescent light bulbs with a more energy efficient option such as a CFL. This is over 150% of our goal. The 751 participants pledged to replace 6,396 incandescent light bulbs which will save more than 1,803,672 kWh of energy and 2,615,964 pounds of greenhouse gas emissions.	November 2007		

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c. SCDHEC implements energy efficiency programs	SCDHEC BAQ implemented an energy efficiency program at its own office building.	October of 2006 - BAQ began tracking energy consumption for the Bull Street office building. This information will be used as a baseline to show progress in reducing energy consumption. Research has been done into energy conserving upgrades already completed. BAQ is developing a comprehensive energy efficiency program for the Bull Street building that will include identifying best practices for staff and tracking of energy use. June of 2007 - BAQ consulted with the SC Energy Office to identify building updates and best practices for the Bull Street Building. The consultation included an energy use audit to review consumption history. Also, a building walk-through was performed by an energy auditor to identify potential energy savings.	October 2006 - Present		
	SCDHEC performed computer Energy Use Audit	In an effort to improve energy efficiency in its own facilities, SC DHEC performed an internal computer energy use audit. The study tracked computer energy use over a number of computer use test cases. It was determined that there was significant opportunity to decrease energy use, reduce emissions and save money through better computer power management. As a result, employee education is taking place and new policy is being considered.	August 2007		
d. SC Energy Office	The SC Energy Office released an Annual Report for 2005. Four items addressed in the report include: 1. The SC Energy Office promotes energy efficiency in government agencies and public schools 2. The SC Energy Office promotes the use of renewable energies and sustainable development practices throughout the state 3. Transportation – This section discusses the SC Energy Office role in Palmetto State Clean Fuels Coalition; Alternative Fuel Refueling Infrastructure; Alternative Fuel Vehicles; Take a Break from the Exhaust; and Truckstop Electrification. 4. Public Information – This section discusses the ways in which the SC Energy Office reaches a variety of audiences in the state.		2005		For additional information….www.state.sc.us/energy/

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e. Energy Wise	Pilot program sponsored by the Office of Economic Opportunity (OEO) on behalf of the South Carolina Governor's Office. Energy Wise is an adult energy education initiative coupled with low-cost energy efficiency measures and agency staff training. All program participants received energy education from a local community action agency as well as a kit of energy efficiency measures to install in their homes. Data was collected and analyzed to determine energy and cost savings generated by participants and the program as a whole. www.state.sc.us/energy/PDFs/AR_V_3.doc		2005		For additional information….www.state.sc.us/energy/
f. Michelin Energy Reductions in Spartanburg, SC	Michelin Spartanburg Manufacturing in Spartanburg, SC plans to reduce water usage by four million gallons and its energy use by more than 40,000MM Btu's.		2005		
g. Energy Efficiency Summit	South Carolina Summit on Energy Efficiency	The South Carolina Summit on Energy Efficiency (EE Summit) was held on April 30, 2007 in Columbia, South Carolina.	2007		
h. Training Opportunities	Web training sponsored by EPA Energy Star Challenge for local governments	Notification was provided to all EAC contacts regarding the web training opportunity. BAQ training staff are offering this training to BAQ staff as well.	July 12, 2007		
i. Local Meetings	Town Hall Meeting - Conservation on Energy	Hosted by Conoco Phillips and the University of SC. Invited panelists represented organizations active in renewable energy and energy efficiency, business and industry, the environment and conservation. John Litton with the BAQ was a panelist.	June 27, 2007		
j. S.C. Hydrogen Infrastructure Development Act	The act to establish a $15 million fund to promote the development of a hydrogen economy was passed by the South Carolina Legislature.	While funding for the Hydrogen Infrastructure Development Act was not included in the state budget, legislators did include other critical funds. Through the University of South Carolina budget, EngenuitySC will get $100,000 to help with preparations for the National Hydrogen Association meeting to be held in Columbia in the spring of 2009. A National Hydrogen Association forum, "Hydrogen Uses in the Military," was held in Columbia this October. USC also got $1 million for continued funding for hydrogen and fuel research. The S.C. Hydrogen and Fuel Cell Alliance got $367,640 in recurring funding. The Hydrogen Infrastructure Development Act is recognition by the Legislature that nurturing a hydrogen and fuel cell cluster in South Carolina can have tremendous economic impact.	July 2007		

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k. Bi-Lo to promote green grocery bags -	Bi-Lo is piloting its green bag effort in about 80 of its more than 220 stores here and in Georgia and Tennessee.	The Super Bi-Lo at the Village at Sandhill (Richland County) is participating in the pilot. Bi-Lo sells two versions of the green bags: a woven recycled plastic for 99 cents and a canvas one, priced at $2.99. Store management at the Columbia Super Bi-Lo said each time shoppers use any reusable bag, they receive a 5-cent per bag credit when they check out each shopping trip. It doesn't seem like much at first - but after 20 uses, a woven plastic bag pays for itself.	August 2007		
l. Santee Cooper efforts	Santee Cooper announced they will quadruple to 40 percent by 2020 the amount of electricity made from non-greenhouse gas sources and created a new department to oversee the effort.	The state-owned utility serves most of Horry and Georgetown counties either directly or indirectly, with about 2 million residents statewide receiving power from it. The company also began purchasing excess power from customers who make electricity with solar panels and other generators.	October 2007		
m. Aiken Electric Cooperative and Santee Cooper announce Green Power Solar Schools program New Ellenton Middle School selected	Aiken Electric Cooperative and Santee Cooper announced the formation of the Green Power Solar Schools program in the cooperative territory, and that New Ellenton Middle School has been selected as the Green Power Solar Schools program participant. The initiative is designed to encourage interest in the environment and demonstrate the feasibility and limitations of renewable power generation. Each school will receive a 2 kilowatt solar power system, which will provide a teaching, research and hands-on demonstration opportunity for students. A focus of the project is the use of a new renewable energy curriculum endorsed by the South Carolina Department of Education. The program continues the Electric Cooperatives of South Carolina's and Santee Cooper's efforts to promote renewable energy, and fulfill Santee Cooper's commitment to reinvest Green Power funds back into renewable resources across South Carolina.	Four additional schools, served by Palmetto Electric Cooperative, Berkeley Electric Cooperative, Blue Ridge Electric Cooperative and Laurens Electric Cooperative will also begin the solar schools program the next calendar year.	August 1, 2007	All Pollutants*	

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n. Want Discounts on Energy Efficient Light Bulbs?	Progress Energy is offering discounts on compact fluorescent light bulbs at 11 Home Depot stores in North and South Carolina. The energy efficient bulbs will be available with the 1 dollar discount from October first to December 30th. The companies say they plan to sell up to 200,000 of the 40, 60 and 100-watt bulbs. Progress Energy is trying to guage consumer acceptance and awareness of the flourescent bulbs. If the program is successful at the North and South Carolina stores, it could expand. The North Carolina Utilities Commission approved the program this week. It will cost about $350,000	This information was provided to all EAC contacts requesting they forward/share the information to all stakeholders.	September 20, 2007		
o. Palmetto Clean Energy	SCANA Corp., Duke Energy Corp. and Progress Energy Inc. will start selling "green power" to their South Carolina customers early next year through a nonprofit group established by the state.	The three utilities will market the renewable energy to the 1.3 million homes and businesses that they serve in the state, while the newly formed organization, dubbed Palmetto Clean Energy, or PaCE, will buy the power from small Southeastern companies that generate electricity with wind turbines, solar panels and landfill gas.	September 2007		
p. Waste Management - Landfill Gas to Energy	Waste Management, Inc. announced a major national initiative to expand the number of landfill gas to energy (LFGTE) facilities. The program will result in the creation of an additional 60 renewable energy facilities across the country -- including the potential of two additional facilities in South Carolina -- over the next five years.		September 2007		Waste Management currently operates LFTGE facilities at Elgin and Wellford. The two LFGTE plants generate nearly 16 MW of electricity -- enough to power 15,000 homes per year. The company also has two other landfills in St. George and Ridgeland, which could host a LFGTE facility. As part of the national initiative, WM will generate more than 700 megawatts of clean renewable energy -- enough to power 700,000 homes or replace over eight million barrels of oil per year.
q. South Carolina Electric Cooperatives Invest in Conservation and Renewable Energy	South Carolina's 20 electric cooperatives plan to invest up to $10 million per year towards renewable energy and energy efficiency measures.	The investment includes a three-pronged approach to improving the environment and saving energy. The following three measures represent the beginning of this process. -Encouraging homegrown renewable energy (a pilot program for net metering.) -Producing efficiencies to save energy and money (a program to place energy efficient compact fluorescent lights (CFLs) in the home of every cooperative member in the state, approximately seven million bulbs within 10 years). -Investing resources in clean energy research (a partnership with the University of South Carolina to develop technology that reduces carbon dioxide and other emissions from coal-fired power plants).	October 2007		

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r. Alternative Energy Tax Credits	South Carolina began offering a number of new tax credits for people and businesses investing in alternative energy.	A state tax credit that took effect in 2007 covers 25 percent of the cost of solar equipment for hot water, heating, cooling, or generating electricity, as an income tax credit worth up to $3,500 or half an individual's tax liability. The credit can be carried over for up to 10 years. For new homes, according to the U.S. Department of Energy, solar water heating systems can save money immediately, when the monthly energy savings are compared to the amount a system adds to the cost of a 30-year mortgage.	November 2007		
14. School Buses					
a. Santee Cooper SEP	Provide installation and maintenance for approximately 157 diesel particulate filters for school buses in the non-attainment and deferred counties	Requests for proposals have been submitted but uncertainty of availability of ULSD will delay the project until June 2007. The funding allowed for 105 installations that have been completed to date.	2006 October 2007		
b. Weyerheuseur and Duke Energy Project	Provide installation and maintenance for approximately 10 diesel oxidation catalysts and crankcase filtration systems for school buses in Marlboro and Oconee counties.	Application and implementation is delayed until January 2006 pending announcements of the CSBUSA grant recipients.	2006		
c. Clean School Bus USA Grant 2006	The Department of Education has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles. The benefits from these funding sources will be distributed throughout the state.		June 2006		
d. State Owned School Buses	Legislation	A school bus replacement law June 2007 requires the state to provide funding to replace one fifteenth of the school bus fleet each year. The law also requires the state to use biodiesel in the buses.	June 2007		

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e. South Carolina Department of Education - School Bus Initiative	Two plug-in hybrid electric buses with a 2007 emission compliant diesel engine fueled with ultra-low sulfur diesel (soon to be ultra low sulfur 20% biodiesel) were purchased. One bus will be placed in Richland County and another in York County	Draft press release September 27, 2007 Press conference held on October 11, 2007	October 11, 2007 Dated to be placed into service	All Pollutants*	
f. Clean School Bus USA Grant 2007	The South Carolina Department of Education submitted a grant proposal for the 2007 U.S. Environmental Protection Agency Clean School Bus USA grant, in conjunction with the Southeast Diesel Collaborative. Initial review indicates with some minor modifications, the proposal will be accepted and the Department of Education will be awarded the grant.	The grant will provide 500 school buses with crankcase ventilation filters and anti-idling hardwear. The grant will also allow the Department of Education to create a computer program that will use GPS data to identify areas of excessive idling. The Department of Education has also requested additional funding for anti-idling awareness education.	2007		
g. Ridership Grant Proposal 2007	Staff in the BAQ's DAPDO (SCDHEC) submitted a proposal to EPA's Mobile Source Outreach Competition Grant for 2007.	This proposal is intended to work with an elementary and middle school in local areas (up to 3 areas) of the State to determine mechanisms to increase the utilization of school buses and carpooling to and from school by students. This project will include working with parents, students, faculty and school administration to encourage better use of school buses for transportation.	Proposal submitted		
15. Southeast Diesel Collaborative (SEDC)					
Southeast Diesel Collaborative (SEDC)	Partnership between US EPA Region 4, State and local air quality programs, and other public and private entities intended to promote opportunities to reduce diesel emissions.	SCDHEC - BAQ signed a MOU in support of the Southeast Diesel Collaborative (April 26, 2006) *Created partnerships and disseminated information for reductions of diesel emissions. *South Carolina stakeholders meeting in August 2006 in Columbia. *Emerging fuels conference was held in Atlanta in December 2006.	2006		

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		March 2007 - workshop for identifying available funding sources to implement clean diesel programs. Two DHEC employees attended the workshop and received the training materials and contacts to pursue funding for diesel emission reduction programs. June 2007 - second annual partners meeting in Atlanta, Georgia. The meeting provided an opportunity for the eight Region 4 state environmental commissioners, including South Carolina's, to establish a vision for future diesel emission reduction projects. December 2007 - BAQ staff continue to participate in routine conference calls with the SEDC partners.	2007		
16. Climate Change Discussions					
Climate, Energy and Commerce Advisory Committee (CECAC)	Governor Sanford issued an Executive Order creating the CECAC.	Department staff compiled background materials to include studies, current actions, and a draft list of potential participants that will comprise five technical work groups and the decision-making body, the CECAC. The process will follow the Center for Climate Strategies-facilitated study and adoption of carbon reduction policies. It is anticipated to take a year or more to complete. The first CECAC meeting took place May 3, 2007. Staff is working with stakeholders across the state in shaping GHG-reduction policies as part of the Governor's Climate Environmetnt & Commerce Advisory Committee.	February 16, 2007		

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	The Climate Registry (TCR)	South Carolina joined with 31 other states as a founding member of The Climate Registry (TCR). BAQ staff is setting out a strategy for recruiting participation by regulated and non-regulated entities. On August 3, 2007, BAQ will give a presentation on TCR to the state Chamber of Commerce Technical Committee. BAQ is collecting data from the City of Columbia to determine base year emissions inventory. BAQ is also assisting the cities of Greenville and Rock Hill to implement their US Mayors Climate Protection Agreement. Staff is beginning an outreach campaign to enlist regulated and non-regulated entities for participation in The Climate Registry. Eight business nationally have signed Statements of Intent to join the registry as of November 15, 2007, none are in South Carolina. South Carolina has set a goal of having three businesses sign up before January 15, 2008.	2007		
Founding member and supporter of the Climate Registry	The Climate Registry, established by states, tribes and provinces in North America as a mechanism to measure greenhouse gas (GHG) emissions consistently across industry sectors and borders. The Climate Registry encourages voluntary early actions to increase energy efficiency and decrease GHG emissions. The Climate Reigstry accountying infrastructure supports a wide variety of programs that reduce GHG emissions including voluntary, regulatory and market-based programs.	A meeting was held on October 4, 2007. Joel Levin provided an overview of the The Climate Registry. Mr. Levin is the California Climate Action Registry's Vice President for Business Development. He is responsible for educating participants from all economic sections and regions to register and certify their greenhouse gas emissions. Representatives from state and local governments, including Lexington County, as well as business and industry attended the discussion.	October 4, 2007		
17. Open Burning Activities					

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Established workgroup	A workgroup was established in 2005 that includes staff representation from the Department's Bureau of Land and Waste Management (BLWM) and the Bureau of Air Quality (BAQ) to develop a tool for staff, especially regional inspectors, to more clearly outline the regulations the two Bureaus have related to Open Burning regulations.	On April, 26, 2007, the Waste Disposal Matrix Document tool described above was approved for use internally with staff in the BLWM and BAQ. A meeting of the inter-bureau workgroup is scheduled for June 28, 2007 to discuss the development of a training plan to use this tool with the appropriate staff. On September 28, 2007, the managers of the education and outreach sections for the BLWM and for the BAQ, met with staff from the Agency Media Services to discuss the development of a statewide Open Burning information campaign. This campaign is tentatively set to begin in the Spring of 2008 and will include TV and radio PSAs, and print materials targeting various key audiences with messages on options to open burning materials.	2005 on-going activities		
18. Railroads - Diesel Emissions					
Education/Outreach Conferences	Reduction in Diesel Emissions from Railroads	Railroads – Diesel emissions - The Department has initiated programs to address diesel emissions from railroads in South Carolina. During October and November 2007, the Department participated in a national and a regional conference to seek reductions in diesel emissions. The Department is working with CSX Railroad to implement some of those strategies in Charleston.	October and November 2007		
SC Department of Commerce Division of Public Railways	Ultra Low Sulfur Diesel (ULSD)	In November 2007, the Division of Public Railways (South Carolina Department of Commerce) announced that all locomotives will be using ultra low sulfur diesel (ULSD) fuel five years earlier than the EPA mandate (2012). The Division of Public Railways uses an estimated 26,000 gallons of diesel fuel annually.	November 2007		
19. State Ports Authority					

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South Carolina State Ports Authority	Ultra Low Sulfur Diesel (ULSD)	In March 2007, the SPA signed a memorandum of agreement with the Department to partner in reducing port-related diesel emissions. The Department is working with the State Ports Authority (SPA) to reduce diesel emissions. In September 2007, the SPA switched its off-road diesel equipment to ULSD three years prior to the EPA mandate (2010).	March 2007 'Fall 2007		
20. Mass Transit					
"Carolina Swamp Rabbit Tram Trail."	The plan is to convert an abandoned 10-mile-long rail line, from Greenville to Travelers Rest, into a multi-use trail for recreational and motorized transit.	A 7-foot-wide microbus would travel a 10-foot wide asphalt strip constructed over the railroad bed, carrying passengers between downtown Greenville and downtown Travelers Rest. The plan is an intermediate step in response to U.S. Department of Transportation statistics showing that Georgia and South Carolina lead all states in the number of rural residents dependent on passenger rail as their only public transportation. The long-term goal of the plan is to preserve the integrity of the rail corridor for eventual conversion to a commuter rail line, while attempting to have the area's transportation infrastructure keep pace with expanding growth.	December 2007		
21. Alternative Fuels					
South Carolina Biodiesel Fuel Quality Symposium	The South Carolina Biodiesel Fuel Quality Symposium took an in-depth look at the latest regulatory, environmental, and technical developments impacting the fastest-growing renewable fuel industry in South Carolina.	The event's technical program provided participants with a basic understanding of how biodiesel is produced, fuel management, fuel quality, component compatibility, regulatory issues, and incentives. Speakers include recognized experts in their respective fields including industry professionals, regulators, local and state officials, fleet managers, retailers, distributors, and producers.	September 19, 2007		

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Hydrogen-fueled truck	Washington Savannah River Co. gave $175,000 to the Center for Hydrogen Research in Aiken for a hydrogen-fueled truck	The hydrogen-fueled truck will demonstrate the viability of the alternative fuel. The center also announced plans for a refueling station to provide hydrogen for the truck and other hydrogen-powered vehicles. The Hydrogen Internal Combustion Engine vehicle, or HICE, is based on a full-size 2007 Chevrolet Silverado 1500 pickup. The truck will be powered solely by hydrogen. Options for the refueling location include either the Savannah River Research Campus or at a site along I-20.	October 2007		