

US EPA ARCHIVE DOCUMENT

December 30, 2003 Early Action Compact Progress Report
Memphis Metropolitan Statistical Area
MEMPHIS & SHELBY COUNTY and CRITTENDEN COUNTY COMPONENTS
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[Separate Reports May Be Submitted by Fayette County and Tipton County,
Tennessee; and by DeSoto County, Mississippi]

Progress in Stakeholder Development Process

Roles and Responsibilities: Representatives of the Memphis & Shelby County Health Department met with representatives of the West Memphis Metropolitan Planning Organization, the Arkansas Department of Environmental Quality, the DeSoto County Planning Division and the Mississippi Department of Environmental Quality at the DeSoto Civic Center on July 24th to further discuss roles and steps. An employee of each representative was designated to standardize emissions reductions calculation methods. Elliott Bickerstaff, Tony Davis, and Bob Rogers will participate along with other employees through conference calls.

Lists of Stakeholders Lists were sent as attachments to the First Progress Report. In addition, a list of Airport stakeholders is attached to this report.

Stakeholder Meetings and Conference Calls Held To Date:

7/8/03	Early Action Compact Presentation to Academy of Certified Hazardous Materials Managers by Bob Rogers
7/9/03	Afternoon meeting of MPO Committee meeting to rank Congestion Mitigation and Air Quality (CMAQ) projects with some ranking points related to Early Action Compact; Memphis and Shelby County Health Department Pollution Control Section participated
7/15/03	Afternoon meeting at Memphis International Airport of Airport Authority stakeholders
7/16/03	Afternoon follow up meeting on ranking of CMAQ projects; Memphis and Shelby County Health Department Pollution Control Section participated
7/23/03	Afternoon meeting with Cummins Manufacturing on Early Action Compact options; Cummins to report back on fleet options related to "NOx Flash" and diesel retrofit
7/31/03	Morning meeting with Commissioner Betsy Child, Tennessee Department of Environment and Conservation (TDEC); representatives of Premcor Refining, Inc.; Jim Chaney, TDEC Memphis Environmental Assistance Center Manager; and Memphis and Shelby County Health Department representatives on Early Action Compact control strategies

7/31/03	Afternoon meeting with Tennessee Valley Authority representatives to follow up earlier meetings; discussion of cost effectiveness and feasibility of three control strategies
8/8/03	Meeting with Federal Express Corporation Environmental Compliance staff to explore emission reduction strategies
8/14-15/03	Arkansas-Tennessee-Mississippi Ozone Study Technical Committee meeting in Nashville to review the second episode and determine sensitivity runs that best suit the Early Action Compact process
8/29/03	Teleconference with Tennessee Valley Authority on Early Action Compact Modeling issues
9/9/03	Afternoon meeting at DeSoto Civic Center of Memphis Metropolitan Statistical Area representatives of Crittenden, DeSoto, and Shelby Counties, and States of Arkansas, Mississippi and Tennessee
9/12/03	Conference call with U.S. EPA Region IV on ozone air quality planning area boundaries
9/16-17	Meeting at Paris Landing, Tennessee of Tennessee Director with the four local program directors on a variety of issues, including Early Action Compact issues
10/2/03	Ozone 101 for Mayors Luncheon Powerpoint Presentation, followed by afternoon ATMOS Technical Committee Meeting, Shelby Farms, Memphis, Tennessee
10/3/03	ATMOS Policy Committee morning meeting, Shelby Farms, Memphis, Tennessee
10/16/03	Meeting with Premcor Refining to discuss Early Action Compact low-volatility gasoline feasibility throughout Metropolitan Statistical Area
10/20/03	Lydia Wegman, U.S. EPA, presentation to STAPPA/ALAPCO in San Francisco, California concerning Interstate Transport Rule development, 8-hour ozone implementation strategy, and Early Action Compacts attended by Dwight Wylie and Diane Arnst
10/28-30/03	Fall State/Local Directors Meeting with EPA Region IV, Gulfport, Mississippi discussion of Early Action Compacts
11/4/03	Luncheon meeting with Meteorologists on ozone and PM forecasting, current designation status
11/14/03	ATMOS Technical Committee Meeting, Shelby Farms, Memphis, Tennessee
11/18/03	ACHMM conference on ambient air quality with presentations by Health Department, Arkansas DEQ, EPA Region VI, and Mississippi DEQ in West Memphis, Arkansas
12/4/03	Meeting with TVA representatives concerning NOx SIP Call permit conditions in Draft Title V Permit to claim creditability for Early Action Compact; preceded by conference call with Steven Stout, Esquire, concerning permit conditions in State's TVA Title V permits; and preceded by conference call with U.S. EPA's Karen Borel

	and others on NOx SIP Call permit conditions creditability issue
12/10/03	Updated Memphis and Shelby County Air Pollution Control Board on Early Action Compact modeling efforts and South Coast ordinance requiring Low NOx water heaters
12/10/03	Bob Rogers updated the Tennessee Air Pollution Control Board on Memphis EAC status
12/15/03	Conference call with Kay Prince, Dick Schutt, and Brenda Johnson at EPA Region IV concerning creditability of TVA NOx SIP Call emission reductions for purposes of attainment demonstration

The Health Department has also sent a representative to numerous Metropolitan Planning Organization meetings.

Dwight Wylie has expressed his intent to submit a separate discussion of Stakeholder Meetings in DeSoto County.

Progress in Emission Reduction Measure Selection

Idling Emission Reductions: Petro Stopping Center completed installation of IdleAire equipment on 41 parking truckspaces by June 30, 2003.

Estimated emission reductions: 16 TPY NOx [.04 Tons Per Day].

DRAFT TITLE V Permit condition negotiations continue with **TVA**. DRAFT **Ozone Action Day condition** to require TVA to turn on the Selective Catalytic Reduction controls when ozone exceedances are predicted for a given day during April or October appear to be acceptable to TVA representatives. CEMs would provide real data should the Ozone Action Day operation of SCR occur, which would be well within the 3% voluntary stationary source measures cap.

Negotiations continue with TVA on language to make the NOx SIP Call emission reductions during the control period May 1 through September 30 enforceable and creditable for an Attainment Demonstration. EPA Region IV representatives stated on December 15, 2003, that a SIP-enforceable limit on the TVA Allen Steam Plant must be included in its Title V Operating Permit in order to match the SAI, Inc. computer modeling used for the Attainment Demonstration. A Draft Permit Condition will be shared with Karen Borel of EPA Region IV on December 18th at the ATMOS/EAC meeting in Nashville.

ExxonMobil representatives informed the Memphis & Shelby County Health Department that its gasoline is barged in from its Baton Rouge refinery, and **beginning January 1, 2004, the gasoline it supplies will meet Tier II sulfur reduction requirements.** ExxonMobil is to provide the Health Department with information about the Reid Vapor Pressure and the number of gallons it supplies, by county, by month during ozone season, to the Memphis MSA. The Health Department will quantify expected emissions reductions and explore what mechanism is needed to demonstrate these emission reductions for the EAC process.

On July 31st, Gerald Bram, Plant Manager for **Premcor Refining, Inc.** committed orally to supplying Tier II low sulfur gasoline by the end of the first calendar quarter of 2004, but subsequently Jim Fedena of Premcor has stated that this fuel will not be supplied in the Memphis MSA until the first quarter of 2005. Premcor has submitted a construction permit modification application to the Health Department related to this project. Mr. Bram and Mr. Fedena have stated that it is technically feasible for Premcor to supply **7.8 psi (low-volatility) gasoline throughout the Memphis MSA (Crittenden, DeSoto, Fayette, and Tipton Counties)** at an added cost of about one cent per gallon. Mississippi and Arkansas are working with their legislatures to obtain legal authority to be "more stringent than" Federal requirements. Premcor would need the counties requiring low-volatility gasoline to make it a requirement that only 7.8 psi gasoline be sold during the specified months; otherwise competitors could perhaps sell 9.0 psi gasoline for slightly less per gallon and consumers may not choose to purchase the Premcor product. Quantification efforts estimate that **80 to 100 Tons of VOC reductions per ozone season, or 0.18 Tons Per Day VOCs.**

Lion Oil representatives told the Health Department it cannot supply low volatility gasoline to the Memphis MSA and will not supply Tier II Low sulfur gasoline to the Memphis MSA prior to the Federal deadline.

Stage I Vapor Controls throughout the Memphis MSA (Crittenden, DeSoto, Fayette, and Tipton Counties) would achieve an estimated 2.11 Tons Per Day VOCs reductions per ozone season.

The **Airport Authority has electrified all gates with a 400 hertz electrical system that provides power for heating, cooling and other electrical needs of the planes while parked at the gates** (similar to truckstop electrification). This was done in the mid-1980s.

The **Airport Authority has just completed construction of an Automated Vehicle Identification System (AVI)** at a cost of \$1 million funded by the Authority. It is undergoing testing and a baseline will be developed by the end of 2003. The AVI measures "dwell time" (**idling time**) at the curb by shuttles and taxis. In 2004, the Airport Authority will offer financial incentives for reduced dwell time. Bob Rogers is working to quantify **these emission reductions for 2004, 2005, 2006 and 2007.**

The **Airport Authority** has planned a **Consolidated Ground Transport Facility**, but the project is on hold due to depressed passenger use of the airport in 2002-2003. A parcel of land is already owned by the Airport Authority for this project. It would eliminate 80% of the shuttles from rental car agencies that would be relocated to this parcel. Rental car agencies would contract with the AA and pay a fee. Construction of the facility would be costly. **If the construction timeframe coincides with the EAC timeframe, these emission reductions could be quantified for 2005, 2006, and 2007.**

Hybrid vehicles are used to fuel planes at the **Airport** instead of diesel heavy duty trucks. **Associated emissions reductions may be quantifiable for 2005, 2006 and 2007 and Bob Rogers is exploring this.**

FedEx uses a **Conveyor System** at Airport Gates instead of tugs. The Health Department will quantify expected emissions reductions and explore what mechanism is needed to demonstrate these emission reductions for the EAC process.

Northwest and FedEx paid for installation of a **new underground fuel pipeline** from Arkansas under the Mississippi River to the Airport to increase the capacity and throughput of aviation fuel. **This has eliminated truck deliveries of aviation fuel to FedEx.** The Health Department will quantify expected emissions reductions and explore what mechanism is needed to demonstrate these emission reductions for the EAC process.

Global settlement negotiations between **Cargill** and **Solae** and a host of parties are occurring that are expected to result in **hundreds of tons of** reductions of emissions of VOCs and NOx in the Memphis MSA. The final implementation date for operation of control equipment by these facilities in Shelby County, TN is not yet established and may not be predictable for the purposes of modeling an Attainment Demonstration.

Public Outreach Activities

The *Commercial Appeal* has published the following articles and editorials:

Memphis Business Journal article 11/28/03 entitled "Air Quality at Memphis TVA Plant Helping Local Economy"

Article in Commercial Appeal 12/3/03 entitled "Air Pollution Imperiling Quality of Life In Smokies, Experts Warn"

Article in Commercial Appeal 12/5/03 entitled "EPA Warns 5-County Metro Area"

Article in Commercial Appeal 12/8/03 entitled "Solutions Often Foggy On How To Clean Up That Smog"

Editorial 12/13/03 entitled "Memphis Smog: Not Just Local Concern"

Information about the Early Action Compact is on two websites:

www.state.tn.us/environment/apc/eac and

www.co.shelby.tn.us/county_gov/divisions/health_serv/enviro/health/air_pollution/index.htm

Modeling and Technical Activities

SAI, Inc. the contractor for the Arkansas-Tennessee-Mississippi Ozone Study has selected a second 8-hour ozone exceedance episode for modeling (June 16-22, 2001) using EPA-approved models. Brenda Johnson, EPA Region IV, has participated in ATMOS meetings and served as a resource as modeling issues have been discussed by the ATMOS Technical Committee. Both a 12-day episode in 1999

and a second 7-day episode in 2001 have been modeled by SAI, Inc. At the August 14-15 meeting in Nashville, SAI, Inc. presented its modeling results. Further refinements to the model were made and the option of "tagging" was explained on October 3. Four "tags" were selected to determine the contribution of mobile sources on exceedance days, and to determine how DeSoto, Crittenden, and Shelby Counties were contributing to each others' exceedances. SAI, Inc. presented the "tagging" modeling results to the ATMOS Technical Committee on November 14.

The natural gas pipeline industry group also met with the Tennessee Technical Secretary with corrected emissions figures for emissions from these sources. This industry group pointed out that the modeled emissions were significantly higher than the information they possess (by a factor of approximately 3). SAI, Inc. was provided with corrected information. The corrected modeling results are to be presented December 18th.

Discussion of Attainment Demonstrations versus "weight of evidence" demonstrations occurred at the November 14th meeting.

Airport Stakeholders

Alton Lanier, Memphis-Shelby County Airport Authority
Larry Cox, MSC Airport Authority
Bob Martin, MSC Airport Authority
Scott Brockman, MSC Airport Authority
Robert Beesley, MSC Airport Authority—Development
Randy Womack, Esquire, MSC Airport Authority
Russ Noble, Millington Municipal Airport
John Baxter, FedEx
Allison Bird, FedEx
Robert Hartwein, Wilson Air Center
Scott David, Signature Flight Support
Jim Pearson, Signature Flight Support
Tennessee Air National Guard
Swift Courier Service