

The Fall line Air Quality Study (FAQS) Summary of Accomplishments since Inception

The Fall line Air Quality Study (FAQS) was kicked off at a Stakeholders Meeting on March 2, 2000. At this meeting and two subsequent meetings of the Coordinating Council¹ on May 9 and June 1, the science team presented its plan for implementing Phase I of the study. The primary goal of Phase I was to plan and implement a pilot air quality monitoring study for the FAQS cities of Macon, Augusta, and Columbus. The purpose of the pilot study is to gain understanding about the fundamental characteristics of air pollution in each metropolitan area that will enable researchers to design an effective comprehensive study (to be implemented in Phases II and III). A secondary purpose of the pilot study is to provide state and local officials with a preliminary air quality assessment that will enable them immediately to begin planning and implementing measures to mitigate the occurrences of poor air quality.

The pilot study was centered around the deployment of the Southern Center for the Integrated Study of Secondary Air Pollutants (SCISSAP) Mobile Air Quality Research Station - a 41' long semi-trailer housing ~\$1.5 million worth of state-of-the-art air quality and meteorological monitoring instrumentation. The science team began monitoring for ozone, precursors to ozone, particulate matter, and meteorology in the Macon area (Sandy Beach Park) on June 11 and concluded monitoring there on June 21. Similar deployments were made to Augusta (Fort Gordon, June 26 - July 9) and Columbus (North Water Works Resources, July 16 - July 26). Preliminary data from the pilot study were presented at the August 31 meeting of the Coordinating Council, and a preliminary assessment of these data was presented at the FAQS Science and Policy workshops held on October 19-20, 2000. A complete report on these activities and findings will be delivered to the stakeholders in December 2000.

The key findings from the pilot study were: 1) local areas may simultaneously contribute to and be affected by high concentrations of ozone across the southeastern region -- this is most evident in Augusta and Columbus; 2) in Macon, like Atlanta, the underlying regional effects sometimes may be dwarfed by local effects; 3) high ozone concentrations in each of the three Fall Line cities appear to be associated most frequently with light or stagnant winds; 4) total hydrocarbon concentrations and isoprene fractions observed in the three cities were similar in relative magnitude to those observed in previous studies of Atlanta suggesting controls on NOx emissions may be needed to reduce ozone concentrations; and 5) fine particulate matter was observed to be composed largely of organic carbon and sulfates.

During the pilot study, the science team also set up one additional permanent monitoring station in each metropolitan area that complements the existing EPD monitoring network. Each monitoring station (Sandy Beach Park in the Macon area, Lakeside High School in the Augusta area, and Oxbow Meadows Environmental Learning Center in the Columbus area) is equipped with EPA approved ozone and fine particulate matter monitors. Local personnel in each community were trained to operate and maintain the equipment. These monitors will continue to operate indefinitely providing additional information about the long-term characteristics of ozone

¹ The Coordinating Council has oversight authority for the study and consists of representatives from EPD, GRTA, DoD, and two representatives from each of the Macon, Augusta, and Columbus metropolitan areas.

and particulate pollution in each metropolitan area, and the spatial distribution of pollutants (relative to the EPD monitors) across the region.

Working with EPD and Georgia Tech's Economic Development Institute (EDI), FAQs researchers have started developing a year 2000 statewide emission inventory. On October 9, 2000, an emission survey was sent to 700 owner/operators of businesses and industries to collect information on the release of precursors of ozone and particulate matter. Facilities needing assistance in completing the questionnaire can attend one of three workshops co-hosted by the FAQs, the EPD, and the EDI: Columbus, October 30 9:00-11:30 AM; Macon, October 30 2:30-5:00 PM; and Augusta, October 31 1:00-4:00PM.

Finally, all members of the FAQs community were actively involved in the process of education and outreach. In addition to the stakeholder and Coordinating Council meetings, and science and policy workshops, three open house tours were held at the site of the Mobile Air Quality Research Station: June 15 in Macon, July 6 in Augusta, and July 20 in Columbus. State and local government officials, representatives from many industries, military and other DoD personnel, the media, and the general public attended these open house tours. The media in particular have focused on the FAQs throughout its campaign and have provided significant coverage of each event. To foster communication, an email listserv (tricity@list.gatech.edu) and website (<http://www.cure.gatech.edu/faqs.asp>) have also been created.

The full scope of the FAQs is shown in the following table with activities initiated or completed as of October 24, 2000 denoted by a checkmark. Also shown in the table are the anticipated Clean Air Regulations that are likely to affect the FAQs cities over the next seven years. It should be noted that the FAQs is on schedule to be completed prior to the first anticipated Federal requirement.

FAQS and Federal Clean Air Implementation Schedule of Activities

<u>The Fall line Air Quality Study (FAQS) Year to Date Accomplishments</u>	<u>Anticipated Clean Air Regulations affecting Augusta, Macon, and Columbus</u>
<p>Phase I (May 1 - December 31, 2000)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Develop Preliminary Assessment <input checked="" type="checkbox"/> Prepare Pilot Field Study Design <input checked="" type="checkbox"/> Initiate, Conduct and Complete Pilot Field Study <input checked="" type="checkbox"/> Begin Development of Base Year Emission Inventories <input checked="" type="checkbox"/> Commence Training and Other Technology Transfer <input checked="" type="checkbox"/> Perform Outreach and Education <input type="checkbox"/> Perform Post-Field Study Analysis <input type="checkbox"/> Submit First Six-month Progress Report <p>Phase II (January 1 - June 30, 2001)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Design Inceptive Field Study <input type="checkbox"/> Initiate and Conduct Inceptive Field Study <input type="checkbox"/> Commence Meteorological Modeling <input type="checkbox"/> Complete Development of Baseline Emission Inventories <input type="checkbox"/> Submit Second Six-month Progress Report <p>Phase III (July 1, 2001 - June 30, 2002)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete Inceptive Field Study <input type="checkbox"/> Perform Post-Field Study Analysis <input type="checkbox"/> Develop and Evaluate Different Future Year Scenarios <input type="checkbox"/> Design, Initiate, Conduct, and Complete a Corroborative Field Study <input type="checkbox"/> Establish Permanent Stations for Monitoring Long-Term Trends <input type="checkbox"/> Submit Third and Fourth Six-month Progress Reports 	<p>June 21, 2000</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> US H.R. passes Collins rider to HR 4635 <p>June 30, 2000</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Governor Barnes recommends non-attainment areas in EPA letter <p>July 5, 2000</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> EPA reinstates 1-hour O₃ standard <p>November 7, 2000</p> <ul style="list-style-type: none"> <input type="checkbox"/> Supreme Court to hear arguments on new EPA O₃ and PM standards (<i>Browner vs. American Trucking Assns</i>) <p>December 2000</p> <ul style="list-style-type: none"> <input type="checkbox"/> Earliest date EPA would designate 8-hour O₃ non-attainment areas (pending Collins rule; also enforcement not likely to begin until after Supreme Court ruling) <p>February 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> Earliest date Supreme Court would rule on new EPA O₃ and PM standards (<i>Browner vs. American Trucking Assns</i>) <p>** Remainder of schedule assumes Court upholds standards and EPA moves forward with previously proposed implementation schedule **</p> <p>Spring / Summer / Fall 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> EPA issues Guidance and Implementation Schedule for O₃ attainment demonstrations (PM2.5 guidance and schedule not likely until after first 3-year data collection period is complete) <p>December 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> EPD completes first 3-year PM2.5 data collection period necessary for making nonattainment designations

Phase IV (July 1 - December 31, 2002)

- Complete Corroborative Field Study
- Develop Final Recommendations
- Technology Transfer of All Emission Inventories and Models

May 1, 2003

- All Regional NOx SIP controls implemented (mostly to affect motor fuels (gas and diesel) and electric power generation). Note: Transportation Conformity and New Source Review also apply.

July 2003

- State Implementation Plan (SIP) submitted to EPA for areas where Regional NOx SIP controls are not determined to be sufficient (can include local and regional controls and must include Transportation Conformity and New Source Review)

May 1, 2005

- All SIP controls implemented (can include local and regional controls)

December 31, 2005

- Attainment Date (if Regional NOx SIP controls are sufficient)

December 31, 2007

- Attainment Date (if Regional NOx SIP controls were not sufficient)