

Regulation 5.30 Program Status Report August 2007

Monitoring Activity

Ongoing investigation into different monitoring instruments that are suitable for Louisville's complex air continues. A document comparing instruments available for various analytical components of Louisville's air was prepared and distributed to the STAR 5.30 Stakeholder Group. The Stakeholder Group members were asked to provide opinions on (1) the kind of information they would like monitoring activities to produce and (2) the kind of action would they like to see taken or goals met as a result of future monitoring. The recommendations will be incorporated into the RAPA.

On July 11, 2007, Tua McDermott visited the Opsis site in rural Echols, Kentucky, to view the Opsis monitoring systems that are set up. Rodney James and Leonard Clarkson from the Kentucky Division of Air Quality described the equipment and explained the various components.

Opsis is an open-path air monitoring instrument that detects gases by their light absorption. Opsis measures gases by DOAS (Differential Optical Absorption Spectroscopy), using Beer-Lambert's Law. This principle relates the quantity of light absorbed to the number of gas molecules in the light path.

The sources in the Echols area are the Tennessee Valley Authority (TVA) Paradise Fossil Plant in Drakesboro and D. B. Wilson Power plant north of Echols. There are also chicken houses in the area. Depending on the wind direction, the system shows different levels of concentrations of SO₂ and NH₃. Each is indicative of the two power plants. A trailer and fenced in enclosure contains the analyzers, receivers, calibration bench, computers, gas cylinders, and ozone generator used for calibration. The two path lengths measure 250 meters and 126 meters.

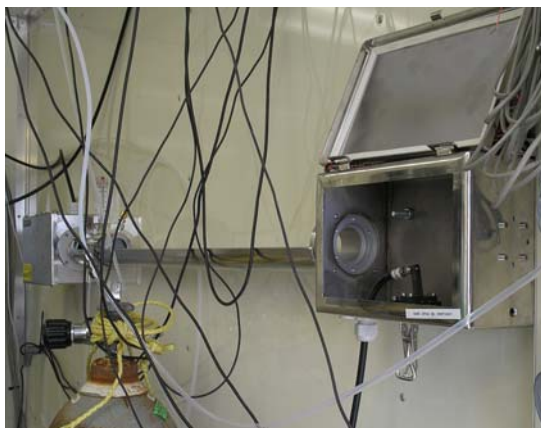


Picture 1.
Opsis analyzer, ozone generator



Picture 3.
Opsis receiver

Picture 2.
Opsis emitter



Picture 4.
Opsis calibration bench

Emissions Inventory

Lilibeth Lanceta and Bo Fawbush completed the 2005 minor source emissions inventories. The District's engineering staff continues to review the completed inventories. Lilibeth continues reviewing emissions inventories for gas stations.

Mobile and Non-Road Mobile Sources

Cynthia Lee presented a report on the District's stakeholder processes for ozone, toxics and fine particulate matter on an Air Quality conference call. Participants included regional, state and local air quality officials and representatives from EPA Region 4, the Federal Highways Administration (FHWA), and the transportation sector. Several metropolitan planning organizations (MPOs) and area development districts (ADDs) also participated on the call.

Craig Butler attended training on air quality analysis of FHWA projects and quantitative mobile source air toxics analysis.

Report and Plan of Action

District staff members involved with the Regulation 5.30 effort finalized the Report and Plan of Action to be presented at the August 9, 2007, Stakeholder Group meeting. The goal of this meeting is to reach consensus on the final document. District staff will continue to edit and format the document, however the substantive content of the report will not change after consensus is reached. The report will be ready to present to the Air Pollution Control Board at its September 19, 2007, meeting.

Stakeholder Group

The STAR 5.30 Stakeholder Group will hold its fourteenth and final meeting on Thursday, August 9, 2007. Reaching consensus on the final Report and Plan of Action is the focus of this meeting.