



Missouri
Department of
Natural Resources

Cape Girardeau-Perryville Ozone Designation Process Meeting Two
Southeast Missouri Regional Planning Corporation
10 a.m. – 12 p.m.
Aug, 5, 2008

Staff Members Present

Jeff Bennett
Leanne Tippett Mosby
Rebecca Birke

Others Present by Attendance Record

Albert Fults, Ste. Genevieve County
Chauncy Bucheit, SEMO RPC
Debbie Gahan, Mayor of Perryville
Ken Hagg, URS Corporation
Jack Hutchinson, Gilster-Mary Lee
Kimberly Lagomarsino, Mississippi Lime
Carl Leuckel, Perry County
Wayne Johnson, Bollinger County
Jim Lunan, Holcim Inc.
Kim Moore, Perryville Development Corporation
Cindy Rollett, TGMO
Francis Toohey, Jr., City of Frohna
Larry Tucker, Perry County
Russell Rice, Associated Electric
Brent Ross, Associated Electric
Steve Cook, City of Cape Girardeau
Christy Ferrell, Senator McCaskill's Office
Paul Schell, Buzzi Unicem
Dan Overbey, SEMO Port
Cheryl Ball, MoDOT
Kathy Waltz, Hon. Russ Carnahan's Office
Ron Steele, SEMO RPC
David Grimes, SEMO RPC

Opening Remarks

Leanne Tippett Mosby welcomed everyone to the meeting. She thanked everyone for attending and welcomed them to ask questions throughout the meeting. She then introduced Jeff Bennett who would be going over the technical presentation.

Jeff discussed the presentation summary – see slide. Today we are going to talk about who most likely contributes to ozone in this area. We plan to be as transparent as possible throughout this process. So, again, ask questions as we go.

Jeff the discussed the revised ozone standard set at 75 ppb. The area meets the new standard if the design value at each monitor is less than or equal to 75 ppb.

Jeff then discussed the ozone monitoring sites in the area. There are two things that need to be evaluated: Does a monitor in the area violate the standard? Do VOC and NOx emission sources in each county contribute to a violating monitor?

The designation process is not optional, if a monitor violates the standard, then that county is designated nonattainment and other surrounding counties are also considered based on contribution.

VOC and NOx combine to form ozone in their chemical reaction with sunlight. Controls on combustion sources help to prevent the pollutants that contribute to ozone formation.

Question: If there is a violating monitor, does EPA require the boundary of the county to be the nonattainment area? **Answer:** EPA does strongly suggest that designation boundaries are based on county boundaries.

Question: Why was the ozone standard lowered? **Answer:** EPA is required to do an evaluation of criteria pollutants every five years. They proposed a range and ultimately chose 75 ppb as the health-based standard. Ozone reacts with everything and that is why it is unhealthy.

Leanne – the Clean Air Act only allows EPA to look at the health data and not the economic data when setting these standards. In this particular case, they chose the middle-ground. There are 14 states suing EPA with the position that they should have gone with a lower standard. We are suing because we are in a position where all monitors in the state are violating the standard. With this lowered standard, the same type of controls that we usually use will not fit our needs when rural monitors are violating. EPA needs to step up and look at this on a national basis.

Question: Why is the monitor placed where it is? **Answer:** This gives us a look at incoming ozone for the St. Louis area. But it also tells us that we are getting impacts from the south and those levels are already over the standard. This is problematic. Monitoring siting is not an exact science and it is not cheap. We do the best we can with what we have. The Perry site is representative of southern Missouri. It monitors total ozone concentrations, not ozone sources.

Rural transport comes into the question for this area because if the data shows that a county does not contribute to its violations, it can receive a special designation. We would have to prove that the area does not contribute to its own ozone problem. We still have to go through this process to make this determination.

Contribution to Monitored Violations

EPA has 11 criteria that we use to make this designation – see slide.

Our process needs to be finalized in the September/October timeframe.

Evaluation Data

Emission Totals – VOC/NO_x percentages in the MSA – see slide. This is a projected inventory for 2009. This tells me which of the counties we are interested in looking at based on total emissions. This gives us an idea of where each county falls. These are anthropogenic sources solely, not biogenic emissions. Most likely, NO_x controls would be most effective in this local area, even in the surrounding areas that may be contributing.

Emission Density Plots – This gives us a look at one ozone day. This allows us to see where the emissions are the densest. This is a snapshot of where our focus needs to be in regard to NO_x and VOC emissions. This is a geographic projection of emissions monitored in this area.

Question: What affect do Nitrogen based fertilizers have on NO_x emissions. **Answer:** Not much, almost none.

VOC slide – this is not total VOC emissions. The green area and the red areas show more of the biogenic emissions.

Population/Urbanization – 2000 urbanization- what does it look like from an urbanization standpoint? It follows that people are living where there is urbanization. The focus that we had was evaluating counties directly adjacent to the Perry County monitor.

Connectivity – People living in one county and working in another and vice versa. This is where we could use some more specific data. This tells me that most of the people that live in Cape Girardeau county, work in that county. This is an idea of how connected the surrounding counties are to one another. This is information that we got from the University of Cornell based on transportation patterns. There are surveys from the census bureau and from employers that drive this. This sort of evaluation tells us whether you get grouped with your area or the St. Louis area.

Growth – It looks like Cape Girardeau County is growing. This is good from an economic standpoint, not as good from an air quality standpoint. More people mean more emissions.

Meteorological – This is based on ground data at the airport. It tells you that about 11% of the time winds are from the south – see slide. The trajectory plots show us where pollution/particles originated and where they ended up after 24 hours. There is not much coming from St. Louis that is getting to the Farrar monitor. It looks like southern Missouri, Illinois and Tennessee have some impact. This is not meant to be an open and shut case. This just gives us an idea. As the standard gets lower, the met data that forms high ozone is going to be more varied with winds from a variety of directions causing violations.

At the Bonne Terre monitor, there is more of an impact from the St. Louis area. You see it is more predominant. Ozone concentrations can be high when the winds are coming from the north, too. This is a representation that the National Weather Service provides us with average wind

patterns. This is not going to be 100% accurate in the sense of where it originated, but it does show us the direction that this pollution is coming from when we see monitor violations.

Question: Is there any value of adding more monitors in the rural areas? **Answer:** Yes, there would be value. It is hard to say how much. However, EPA is coming out with a new monitoring rule that recommends the state place monitors in areas with populations over 50,000. We want them to cover the most area to determine what kind of air people are out there breathing.

Jeff then went over the timeline slide. We have until March 2009 to make a recommendation to EPA. Between June 2010 and June 2013 if an area is designated as a nonattainment area a State Implementation Plan with controls that will be necessary to bring the area into attainment must be submitted.

Question: Can you tell us anything that Perry County can do to bring their monitor into attainment? **Answer:** Emission controls, wherever they are, are going to help control ozone. We will be looking at controls that make sense and are most effective. We are not going to come in and shut down industry. We have yet to determine how much Perry County contributes to its problem.

Opportunity for Input

Provide comments on any data, if necessary, especially on population growth, economic growth/business development. See the Web page – see slide.

<http://www.dnr.mo.gov/env/apcp/ozone/8hourdesignationprocess.htm>