



Missouri
Department of
Natural Resources

St. Louis Area Ozone Designation Process Meeting Two
Powder Valley Conservation Center
July 29, 2008
10 a.m. to 12 p.m.
Kirkwood, MO

Staff Members Present

Aaron Basham
Jeff Bennett
John Rustige
Joe Winkelmann
Patrick Dwyer, SLRO
Rebecca Birke

Others Present By Attendance Record

Mike Coulson, East-West Gateway Council of Governments
Steve Etcher, Boonslick Regional Planning Organization
Tyler Harris, City of St. Louis Air Pollution Control
Mike Henderson, MoDOT
Vicki Huesmann, St. Charles County
Kimberly Lagamarsino, Mississippi Lime
Scott Lemmons, ENVIRON CORP
Jeff Dewald, Mallinckrodt
Ken Anderson, Ameren UE
Terry Wilson, Franklin County
Rich Wilson, Franklin County
David Grimes, SEMO RPC
Jim Lunan, Holcim
Albert Fults, Ste. Genevieve County Commission
Steven Curreri, Chemical Lime
Vic Parmentier, Franklin County Board of Realtors
Larry Quick, Anheuser-Busch
Chad Fisher, Anheuser-Busch
Kirk Krause, Anheuser-Busch
Richard Cavender, Meramec Regional Planning Commission
David Shanks, Boeing
Mike Zlatic, St. Louis County Health Department
Dean Pusch, Anheuser-Busch

Opening Remarks

John Rustige welcomed everyone to the second meeting for the 8-hour ozone designation process. He asked everyone to make introductions. He explained that this is the second of a

series of three meetings. At this meeting we hope to roll out all of the information that we have collected and assembled. We hope that by the next meeting will we have a draft proposal for review.

He then turned it over to Jeff Bennett to begin discussing data contribution and the designation process. He explained the bulk of the presentation will look at the region as a whole. Toward the end we are going to look at groups of counties where we have area specific contribution data. We have a lot of information to go over. All of this data will be placed on the Web site for everyone's review.

He covered the revised standard of 75 ppb. Explained that based on this number that St. Louis will continue to be a nonattainment area. At this level all but one monitor in the state is showing violations of this standard.

He then discussed the 11 criteria used to determine nonattainment boundaries. See Eleven Boundary Criteria slides.

Question: If you are in an area that has a violating monitor, are you automatically in nonattainment? **Answer:** You have to look at not only violating monitors, but that area may also be contributing to a downwind monitor. Either of these can pull someone into nonattainment. Ozone transports from one area to another. Upwind and downwind contribution can change daily based on weather conditions.

Question: What meteorological data are you using? **Answer:** On the ground airport data. When ozone conducive conditions exist and the winds are from the south, we generally see more exceedances. Jeff explained that this data will also be available on the Web.

He then covered the counties with violating monitors. The next question is how you determine contribution. Do VOC and NOx emissions from each county contribute to monitored violations in an area?

Evaluation Data – see slide. These components come together in the data evaluation. Each county is looked at individually.

Vehicle Miles Traveled also come into play in the evaluation. We have 2004 data from the census bureau.

Population and economic growth is also reviewed on a local level if available.

Meteorological data evaluation is the most complex part of the evaluation.

Percentage of VOC and NOx emissions in the nonattainment area – see slide.

Question: Does this data reflect the Chrysler shutdown? **Answer:** No, it does not, but it wouldn't make a great deal of difference here because there are many other sources.

Question: Is this data from existing facilities? **Answer:** It includes what we expected to happen in 2009. If your facility was targeted to be operating in 2009 their emissions were included. These inventories are a best cut of what we know to be permitted. For example: The state of Illinois permitted 6 ethanol plants in the nonattainment area. At this point, only one of those facilities is known to be constructed or operating now. We have to make revisions to the data based on this.

Question: If a county is listed, does that mean they are being looked at more closely? **Answer:** Counties that are in or adjacent to the nonattainment area are always looked at first based on EPA guidance.

Question: Are those emissions representative of average emissions or the maximum emissions that could be emitted by a facility? **Answer:** If we have the average data, we use that, but if we don't have an accurate look at that we look at permitted emissions. This is where the emissions inventory questionnaire comes in as well. It is an estimate of what we could expect for 2009.

He then covered the NO_x Emission Density patterns. The major highways show the mobile source emissions signature. Most of the emissions are happening in St. Louis City and St. Louis County. Industrial sources and barge traffic are also shown.

Next VOC Emission Density charts were discussed – see slide. This is an anthropogenic snapshot. It is important to understand that this chart is looking at the “hotspots” We aren't looking for emissions totals here, but density of emissions in a specific area.

Urbanization – this identifies urban areas from a GIS perspective. It shows you where St. Louis proper stops and where rural areas begin. This is a spatial evaluation that shows areas with urban classifications.

Population Density – This is pretty straightforward. This shows where the majority of people live. The emissions are happening where people live and where industry exists. This will all also be posted on the Web.

Connectivity – How do you evaluate whether an area is tied into the metropolitan complex? Living in one county and working in another and vice versa. This is perceived as an indication of what is really going on. In theory we are talking about people who are getting in their cars and driving to work in one of these counties on a daily basis. This is from the Commuting Patterns Database from the University of Cornell.

Population Growth – see slide. The column on the left is the actual and as you move across the chart it is projection of growth from the Census Bureau. If counties have more specific and current data, please be sure to send it our way. We have to look at projections along with actual numbers.

When you roll all this information together collectively, it starts to paint a picture.

Meteorological Data – see slide. It shows that winds are primarily from the south. Ozone conducive days happen more often when there are southerly winds.

Trajectory Plots – see slides. The red lines were days where we were showing exceedances at a monitor. As the standard drops, there is a wider window of weather patterns that can cause exceedances. This is based on a meteorological model. This interpolates what the local wind speed and direction would be at this particular time. There are days that monitors are being affected from ozone outside the St. Louis Metropolitan Complex.

The concept here is that a lot of the red lines originate in the St. Louis area.

County by County Observations

Current nonattainment area – see slide. They all have emissions. They all have current populations over 100,000. All have over 85% connectivity within the nonattainment area. These are observations for these areas. This is nothing new to us.

Lincoln – has a violating monitor – see slide. The southerly winds from St. Louis do have an affect on this, the met analysis illustrates this. They have also had a significant population growth. 90% of working population is employed in the MSA.

Ste. Genevieve – also has a violating monitor – see slide. The emissions that cause their ozone contributions do come from St. Louis, but there are other days when they come from other areas. It is upwind of the nonattainment area under predominant wind conditions. They also have a higher percentage of folks who live in this county who also live in the county – limited connectivity.

Montgomery, Gasconade, and Washington – pretty small emission totals from these counties – see slide for summary observation.

The final decision is EPA's. They review these evaluations with the same methodology so that all across the country it is consistent. We make the best technical demonstration we can base on the data we have for our evaluation.

EPA has a tendency to look at how an area is connected to possible nonattainment areas to determine where they should be included.

Need further evaluation – these counties have more questions that need to be answered – see slide for summary of each situation:

St. Francois

Pike

Warren

Crawford

Question: What does it mean for local leaders when an area gets pulled into a nonattainment classification? **Answer:** It broadens our evaluation of control strategies to those counties. Some

controls that are used in the nonattainment area would be used, and the permitting requirements would be a little more stringent.

Possible Controls: vapor recovery, Inspection/Maintenance, architectural coatings regulations, solvent metal cleaning regulations, etc. If these make sense for an area, they would be considered for areas that need more controls. We want to use options that are most cost-effective and most efficient. A demonstration has to be made to EPA on what you choose to use to control emissions and why.

Question: What's the chance of getting more monitors in the state? **Answer:** EPA is promising a new monitoring rule that would expand our monitoring network. This is also a resource issue.

Question: Can a county outside of the nonattainment area put in a monitor that would validate that they're not a contributor? **Answer:** Yes, they could theoretically, but that only answers one part of the evaluation. It would not give us the whole picture.

Ozone Lawsuit – we support that the standard is protective of public health and the environment. This question is important. We take some issue with the implementation timeframe. What happens when an area has sources and also has background monitors that show that air coming into the area is already over the standard. Controlling the sources then does not help. We want to be at the table for the discussion of what we do about this issue.

CAIR -Everybody does their own thing, but each state must show that they don't contribute to another area's problem. The Clean Air Interstate Rule vacatur will be a hit for all here.

Question: Are there funds to help these counties comply with these new requirements and do this evaluation? **Answer:** We share your concerns about funding. The State Implementation Plan is our responsibility, but we hold more meetings with stakeholders to get their input about what could be implemented to help reduce emissions.

Homework: Go over this information. If you have more to add, send it to us. If you have comments send them to us. We'll be considering all of this information.

Opportunity for Input - see the Web site:

www.dnr.mo.gov/env/apcp/ozone/8hourozonedesignationprocess.htm

Question from us: Is this process satisfactory? Does anyone need anything else from us at this point? **Answer:** So far so good.