



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY: 40

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

DEC 11 2008

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AIR POLLUTION  
CONTROL PGM

Dave Lamb, Chief  
Operations Section  
Missouri Department of Natural Resources  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, Missouri 65102-0716

Dear Mr. Lamb:

We appreciate the opportunity to provide written comments on rules 10 C.S.R. 10-5.290, More Restrictive Emission Limitations for Particulate Matter in the South St. Louis Area; 10 C.S.R. 10-6.400, Restriction of Emission of Particulate Matter from Industrial Processes; 10 C.S.R. 10-5.381, On-Board Diagnostics Motor Vehicle Emissions Inspection; and 10 C.S.R. 10-6.061, Construction Permit Exemptions, the Eight-Hour Ozone Standard Boundary Recommendations, and the Request for Variance for Doe Run's Buick Recycling Facility.

**10 C.S.R. 10-5.290, More Restrictive Emission Limitations for Particulate Matter in the South St. Louis**

The Missouri Department of Natural Resources (MDNR) proposes to remove through rescission an obsolete regulation that applies to a specific area in South St. Louis. We have no comments in relation to this rule change.

**10 C.S.R. 10-6.400, Restriction of Emission of Particulate Matter from Industrial Processes**

MDNR proposes to amend this rule to add new exemptions to the rule for coating operations. We have one comment in relation to this rule change.

1. The Environmental Protection Agency (EPA) is requesting MDNR to provide a demonstration that this rule change will not adversely impact ambient air. We are available to discuss the demonstration in more detail if you would find that useful.

**10 C.S.R. 10-5.381 On-Board Diagnostics Motor Vehicle Emissions Inspection**

MDNR proposes to amend this rule to clarify the exemption, inspection station, vehicle inspection, and waiver provisions of the inspection/maintenance program rule in the St. Louis Area. We have one comment in relation to this rule change.

1. The EPA is requesting MDNR to provide a narrative describing the effect of the changes on emissions and a determination by MDNR regarding whether the program continues to meet the I/M performance standard.

### **10 C.S.R. 10-6.061, Construction Permit Exemptions**

MDNR is proposing changes to exempt “temporary” storage facilities from construction permitting requirements at 10 C.S.R. 10-6.06(3)2.E.(c). This proposed rule amendment will add an exemption from construction permits for the construction of temporary storage structures throughout the state of Missouri that occur as a result of “exceptional events” (e.g., natural disasters or abundant harvests exceeding available storage capacity). We have six comments in relation to this rule change.

1. Lacking further demonstration, the scale of the exemption is one which may not protect air quality and as a consequence these installations should either be subject to case-by-case review or a well-justified permit by rule. Also, since the exemption lacks most elements of “practical enforceability,” we are concerned about approval as part of the SIP. If MDNR anticipates a large number of these types of facilities, it might consider developing a “permit by rule” that would address enforceability (e.g., notification, recordkeeping, best management practices) and air quality concerns.
2. It appears, based on the criteria in 10 C.S.R. 10-6.061(1), that this exemption is intended only for temporary storage at minor sources not otherwise subject to the prevention of significant deterioration (PSD), Part D (nonattainment) and 112(g) major source permitting programs. However, given the uncertainty in how Missouri interprets “potential to emit” to grant preconstruction waivers, “no permit required” decisions and potentially misclassifying Title V permits, we view any permit exemption with extreme caution. Either way, MDNR has an obligation to ensure that minor sources are not jeopardizing the national ambient air quality standards (NAAQS) and should have adequate procedures in place to review ambient impacts.
3. In reference to the proposed rule changes for Section E.(II)(c), the EPA is concerned that with no definition for “abundant” or other threshold to know when the exemption applies, the provision is unenforceable as a practical matter. If Missouri intends to not require permitting for such storage facilities, subject to the further recommendations below, then it should not limit the exemption to “exceptional events” or “emergencies.”
4. In reference to the proposed rule changes for Section E.(II)(c)III., annual mass caps, without appropriate methods for calculation and retention of records to demonstrate the source is eligible, are unenforceable as a practical matter and cannot be used to limit potential to emit for purposes of avoiding major source review. This principle would also apply to a rule which would have the same effect. As written, we could not approve this exemption in the SIP. For more details, see <http://www.epa.gov/region07/programs/artd/air/nsr/nsrmemos/opinion.pdf>.

5. If a temporary storage facility were constructed at an existing major stationary source, which is not prohibited by the rule, the source could be in violation of the PSD requirements because PM and PM<sub>10</sub> emissions would exceed 25 and 15 tpy, respectively. The rule should either limit the allowable emissions increase to below the PSD significance thresholds (and include appropriate methods for calculation and retention of records as discussed in comment 4), or otherwise limit the increase to existing minor sources.
6. In reference to the proposed rule changes for Section E.(II)(c)IV., without a case-by-case demonstration, or a NAAQS demonstration on a "typical" model installation, there is no assurance these installations can demonstrate compliance with the NAAQS for PM, PM<sub>10</sub> or PM<sub>2.5</sub>; in particular at the proposed 100 tpy exemption threshold. At a minimum, the exemption should specify a suite of best management practices -- directly in the rule -- that a source must use to minimize dust during all periods of operation.

### **2008 Eight-Hour Ozone Standard Boundary Recommendations**

We appreciate the work that MDNR has done to take this process to the public. Missouri has one of the best programs in the country when it comes to listening to public concerns about air quality. The EPA appreciates Missouri's due diligence on this important issue, particularly for ensuring the public's input is respected, and ensuring that further public health protection is afforded to the citizens of Missouri by timely implementing this revised ozone standard.

### **Request for Variance for Doe Run's Buick Recycling Facility**

We understand the circumstances leading up to the most recent request for variance for Doe Run's Buick Recycling Facility. However, we continue to emphasize that variances are not recognized by the EPA unless they are approved as a SIP revision.

If you or your staff have any questions or would like to discuss these comments, please feel free to contact me at (913) 551-7147.

Sincerely,



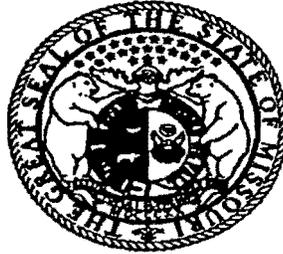
Amy Bhesania  
Missouri State Coordinator  
Air Planning and Development Branch

Randall Relford  
Presiding Commissioner

James T. Crenshaw  
1st District Commissioner

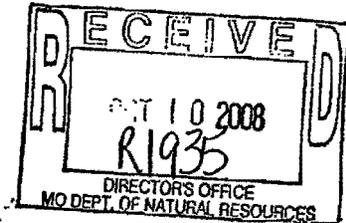
Larry C. King  
2nd District Commissioner

Office of the  
Clinton County Commission



State of Missouri

Clinton County Courthouse  
207 North Main  
Plattsburg, Missouri 64477  
(816) 539-2536



October 7, 2008

Missouri Department  
Of Natural Resources  
P. O. Box 176  
Jefferson City, MO 65102

Attn: Mr. Doyle Childers, Director

Re: Eight-hour Ozone Nonattainment Designation

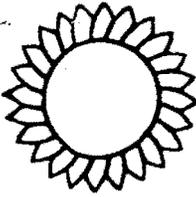
Dear Mr. Childers:

In as much as it has been determined that Clinton County has been designated as a nonattainment area, we feel that we can do nothing to change this determination due to the fact that we can not take charge of our own environment. The primary cause of our designation is coming from counties other than our own.

Please advise the Clinton County Commission and the citizens of Clinton County what we might be able to do to improve the quality of life in our county.

Respectfully,

Three handwritten signatures in black ink, each written over a horizontal line. The signatures are for Randall Relford, Jim Crenshaw, and Larry King.  
Randall Relford  
Presiding Commissioner  
Jim Crenshaw  
1st District Commissioner  
Larry King  
2nd District Commissioner



Johnson County  
Kansas

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2008 DEC -8 PM 12:24



December 5, 2008  
AIR POLLUTION  
CONTROL PGM

Jim Kavanaugh, Director  
Air Pollution Control Program  
MO Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65109

Dear Mr. Kavanaugh:

The purpose of this letter is to submit comments in strong support of the proposed MO Department of Natural Resources (MDNR) ozone nonattainment boundary recommendation for the Kansas City region.

As you know, the bi-state Kansas City air quality planning area, which includes Johnson and Wyandotte counties in KS and Jackson, Clay and Platte counties in MO, has violated the new federal ozone standard. As a result, the U.S. Environmental Protection Agency (EPA) requires the states of MO and KS to consider whether the boundaries of the current air quality planning area should be expanded to include contiguous counties that may also be experiencing unhealthy ozone levels or contributing to unhealthy air in downwind counties. Under federal law, counties that either experience unhealthy ozone levels or contribute to those levels in nearby counties are to be designated as "nonattainment" counties. KS and MO must submit their recommendations for counties to include in the new Kansas City ozone nonattainment area to EPA by March, 2009. After reviewing state recommendations, EPA must make final nonattainment boundary decisions by March, 2010.

The Johnson County Environmental Department participated in MDNR's public meetings held to share information and consider input from parties potentially affected by the Kansas City ozone nonattainment boundary decision. After consultation with those parties, technical analysis and consideration of EPA's guidance, MDNR has proposed to expand the MO nonattainment area to include Cass and Clinton counties, recognizing that those counties are either experiencing unhealthy air quality and/or contributing emissions that cause ozone violations in downwind areas.

Johnson County strongly supports MDNR's recommendation to include Cass and Clinton counties in an expanded ozone nonattainment area for several reasons.

First, in response to monitored violations of the new ozone standard, counties in the Kansas City nonattainment area are likely to face additional and potentially costly requirements to reduce emissions. The five counties in the current air quality planning area have been subject to increasingly stringent emission reduction requirements for decades. Despite significant economic costs to our residents and businesses, Johnson County has accepted these requirements because our emissions contribute to the region's ozone problems and we understand the greater public health benefits of achieving the ozone standard. However, the Kansas City region has grown significantly over the last few decades, and it is no longer fair or equitable to rely exclusively on the residents and businesses of the original five counties to further reduce their emissions.



December 5, 2008  
Jim Kavanaugh, MO Department of Natural Resources  
Page 2

Second, it may not be possible to achieve the ozone standard in the Kansas City region unless contiguous counties are included in the ozone nonattainment area and are contributing to emission reductions.

Third, any delay in expanding the area to include additional counties may also delay the benefits to public health associated with attaining the ozone standard.

Thank you for the opportunity to comment of this matter. Should you have questions or desire further information, please contact me at 913-715-6901.

Sincerely,

A handwritten signature in black ink that reads "Cindy Kemper". The signature is written in a cursive, flowing style.

Cindy Kemper  
Director

G:\Director\K.misc\Pollution\OzoneNonattainmentBoundaryLetterMDNR12-05-08.docx

C: Rick Brunetti, Director, KS Bureau of Air and Radiation  
Tom Jacobs, Environmental Program Director, Mid-America Regional Council

600 Broadway, Suite 200  
Kansas City, Missouri 64105-1659

816/474-4240  
816/421-7758 FAX  
www.marc.org

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*d. Jim  
David  
Jeff*

Jim Kavanaugh, Director  
Air Pollution Control Program  
Missouri Department of Natural Resources  
PO Box 176  
Jefferson City, MO 65109

Dear Mr. Kavanaugh,

The Mid-America Regional Council (MARC) Air Quality Forum, created in accordance with Section 174 of the Clean Air Act to coordinate the development and implementation of air quality policy in the bi-state Kansas City region, offers the following comments in support of the proposed MDNR ozone nonattainment boundary recommendation for the Kansas City region.

After consultation with the appropriate stakeholders as well as technical analysis and consideration of EPA's guidance, MDNR has proposed to expand the Missouri nonattainment area to include Cass and Clinton counties. The addition of these two counties to the existing boundary of Jackson, Clay and Platte counties shows that MDNR has recognized that these additional counties are also experiencing unhealthy air quality or may be contributing emissions that cause ozone violations in downwind counties.

In response to monitored violations of the new ozone standard, the counties included in the Kansas City nonattainment area are likely to experience additional requirements to reduce emissions. These additional requirements can also be costly to industry or the public. MARC's Air Quality Forum recognizes the importance of working with MDNR to develop emissions inventory and other data to support the air quality planning process necessary with the nonattainment designation and the addition of two counties.

We look forward to working with these additional counties as well as the existing three counties to identify ways to expand emissions reductions to help the region come into attainment more quickly, thereby increasing the health benefits of the lower standard for the entire Kansas City region.

Thank you for the opportunity to comment on this matter. If you have questions or need further information, please contact me at (816) 474 - 4240 or at [agraor@marc.org](mailto:agraor@marc.org).

Sincerely,

A handwritten signature in cursive script that reads "Amanda Graor".

Amanda Graor  
Air Quality Planner

Chair  
Gary Mallory  
Presiding Commissioner  
Cass County, Mo.

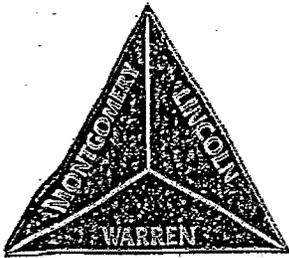
1st Vice Chair  
Tom Cooley  
Commissioner  
Unified Government  
of Wyandotte County/  
Kansas City, Kan.

2nd Vice Chair  
Jim Schultz  
Councilmember  
Independence, Mo.

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Councilmember  
Olathe, Kan.

Executive Director  
David A. Warm



**BOONSLICK REGIONAL  
PLANNING COMMISSION**

**LINCOLN COUNTY**

- Chain of Rocks
- Elsbery
- Foley
- Fountain N Lakes
- Hawk Point
- Moscow Mills
- Old Monroe
- Silex
- Troy
- Truxton
- Whiteside
- Winfield

**MONTGOMERY COUNTY**

- Bellflower
- High Hill
- Jonesburg
- McKittrick
- Middletown
- Montgomery City
- New Florence
- Rhineland
- Wellsville

**WARREN COUNTY**

- Innsbrook
- Marthasville
- Pendleton
- Truesdale
- Warrenton
- Wright City

**CHAIRMAN**

Charles H. Kemper  
City of Troy

**VICE-CHAIRMAN**

Charles Korman  
Montgomery County

**SECRETARY**

Floyd Weeks  
City of High Hill

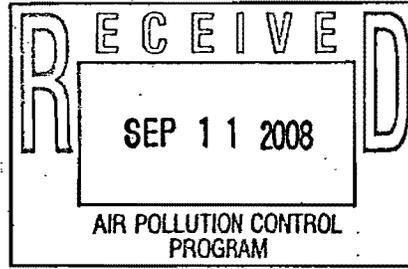
**TREASURER**

Randy Lewis  
Warren County

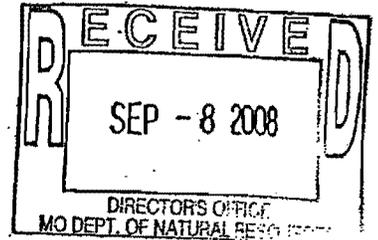
**EXECUTIVE DIRECTOR**

Steve W. Etcher

Established: May 27, 1968



September 3, 2008



Mr. Doyle Childers, Director  
Missouri Department of Natural Resources  
PO Box 176  
Jefferson City, MO 65102

Mr. Jeffrey D. Bennett, PE  
Air Quality Modeling Unit Chief  
Missouri Department of Natural Resources  
PO Box 176  
Jefferson City, MO 65102

Mr. John Rustige, PE  
Missouri Department of Natural Resources  
PO Box 176  
Jefferson City, MO 65102

Mr. Michael Alesandrini, Ombudsman  
Missouri Department of Natural Resources  
7545 S. Lindbergh  
St. Louis, MO 63125

Mr. Bruce Holt, Policy Advisor  
Missouri Department of Natural Resources  
97 North Outer Road, Suite 4  
Eureka, MO 63025

**RE: Air Quality Non-Attainment Area Designation Justification for Lincoln and Warren counties**

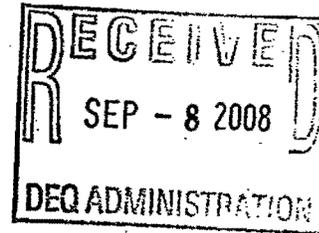
Dear Director Childers & DNR Officials:

The Boonslick Regional Planning Commission (BRPC) has reviewed EPA's criteria for developing a recommendation for the designation of the air quality non-attainment area for St. Louis. BRPC has prepared the enclosed report which examines each of the criteria as it relates to Lincoln and Warren counties.

EPA has presumed the boundaries for air quality to be the St. Louis Metropolitan Statistical Area; however, I encourage you to closely examine the data contained in this report. I think you will find that there is an overwhelming lack of justification for the inclusion of Lincoln or Warren County in the St. Louis non-attainment area.

According to the schedule outlined in the St. Louis Area Ozone Designation meeting, DNR will be presenting a draft recommendation on the boundary designation in September, 2008. The Boonslick Regional Planning Commission understands there will be a public comment period following the release of this recommendation;

*Cop to: Floyd  
John  
Dane*  
*Let's visit  
2008*



PO Box 429  
111 Steinhagen  
Warrenton, MO 63383  
Ph: (636)456-3473

however, we believe the data contained in the attached report should be considered in making the initial draft recommendation.

In summary, each of the eleven criteria to be evaluated by EPA in determining the non-attainment area failed to provide sufficient justification for inclusion of Lincoln or Warren County in the St. Louis non-attainment area.

Evaluation Criteria		Conclusion
1.	Emissions and air quality in adjacent areas (including adjacent C/MSAs)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
2.	Population density and degree of urbanization including commercial development (significant difference from surrounding areas)	While some degree of development and urbanization is occurring within the Boonslick Region, there is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
3.	Monitoring data representing ozone concentrations in local areas and larger areas (urban or regional scale)	The violating monitor located in Foley is heavily influenced by transport emissions. Therefore, we conclude that there is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
4.	Location of emission sources (emission sources and nearby receptors should generally be included in the same non-attainment area)	There have been no recent major sources permitted or EGUs constructed in the region. Therefore there is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
5.	Traffic and commuting patterns	There is a certain amount of connectivity between Lincoln and Warren counties and the current non-attainment boundary. However the degree of connectivity and the influence of this connectivity is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
6.	Expected growth (including extent, pattern and rate of growth)	The population of Lincoln and Warren counties is expected to continue to increase. The percentage of population growth in the region is significant, however, the total number of people residing in, or projected to reside in Lincoln and Warren counties is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
7.	Meteorology (weather/transport patterns)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.

Evaluation Criteria		Conclusion
8.	Geography/topography (mountain ranges or other air basin boundaries)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
9.	Jurisdictional boundaries (e.g., counties, air districts, existing 1-hour non-attainment areas, Reservations, etc.)	The current non-attainment boundaries were adopted in 2003 and did not include Lincoln or Warren counties. There is still insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
10.	Level of control of emission sources	There is insufficient justification to support inclusion of Lincoln or Warren County in the non-attainment boundary.
11.	Regional emission reductions (e.g., NOx SIP call or other enforceable regional strategies)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.

If you have any questions or need any additional information regarding this report please contact me at (636) 456-3473, or e-mail me at [etcher@boonslick.org](mailto:etcher@boonslick.org).

Sincerely,

Steve W. Etcher  
Executive Director

Cc:

Senator John Griesheimer  
Senator Scott Rupp  
State Representative Bob Onder  
State Representative Ed Schieffer  
State Representative Mike Sutherland  
State Representative Terry Witte  
Sean O'Brien, Presiding Commissioner-Lincoln County Commission  
Arden Engelage, Presiding Commissioner-Warren County Commission  
Charles H. Kemper, Mayor-City of Troy  
Mike Clynch, Mayor-City of Moscow Mills  
Greg Costello, Mayor-City of Warrenton  
Roy White, Mayor-City of Wright City

# Non-Attainment Area Designation Recommendation and Justification Report for the Boonslick Region

Prepared by: Boonslick Regional Planning Commission  
September 2008

## Introduction

The Boonslick Region is located immediately west and north of the St. Louis area. This region has seen steady growth over the past two decades due to out-migration from the St. Louis area. The region consists of Lincoln, Montgomery and Warren counties. For the purpose of evaluating the merits of expanding the boundary for the St. Louis non-attainment area this report will focus on the impact and influence of only Lincoln and Warren counties on the St. Louis non-attainment boundary.

In 2003, EPA promulgated a presumptive boundary for the non-attainment area to be consistent with the boundary of the Metropolitan Statistical Area (MSA), which would incorporate Lincoln and Warren counties. The data did not sufficiently justify including counties from the Boonslick region in the non-attainment boundary designation.

In 2008, EPA is once again suggesting a presumptive boundary to include the MSA boundary or the MSA boundary plus adjacent counties that have violating monitors. This report will illustrate that there is insufficient justification to include Lincoln or Warren counties in the non-attainment boundary recommendation.

## Eleven Evaluation Criteria

### Emissions and Air Quality in Adjacent Areas

The tables below show the VOC and NOx levels for the current non-attainment area and the Boonslick Region counties of Lincoln and Warren. The data below illustrates the small percent of ozone precursors that would be contributed if Lincoln and/or Warren County were added to the non-attainment boundary. Lincoln and Warren counties' emissions are a mere fraction of those counties that are presently included in the 2003 non-attainment boundary designation. Lincoln County would contribute roughly 2% of VOC and NOx, Warren County would contribute less than 2% of VOC and NOx.

### VOC

COUNTY	AREA TPD	NONROAD TPD	MOBILE TPD	EGU TPD	NONEGU TPD	TOTAL TPD	VOC %MSA	VOC %NAA
ST. LOUIS	39.223	19.575	32.659	0.329	13.433	105.220	35.00%	38.85%
ST. LOUIS CITY	14.063	3.819	9.533	0.000	10.776	38.190	12.70%	17.10%
ST. CHARLES	10.059	7.010	7.669	0.626	3.067	28.432	9.46%	10.50%
JEFFERSON	8.989	7.354	5.578	0.476	1.677	24.075	8.01%	8.39%
FRANKLIN	4.227	3.253	4.350	0.850	1.928	14.607	4.86%	5.39%
LINCOLN	2.458	1.839	1.320	0.000	0.499	6.136	2.04%	2.27%
WARREN	1.734	0.999	1.813	0.000	0.619	4.664	1.55%	1.72%

## NOX

COUNTY	AREA TPD	NONROAD TPD	MOBILE TPD	EGU TPD	NONEGU TPD	TOTAL TPD	NOx %MSA	NOx %NAA
ST. LOUIS	10.222	30.714	73.863	17.893	2.315	135.006	30.67%	32.80%
ST. LOUIS CITY	4.394	10.245	19.556	0.000	5.140	39.335	8.94%	9.56%
JEFFERSON	1.464	2.109	13.134	15.202	18.331	50.240	11.41%	12.21%
ST. CHARLES	2.496	7.011	17.608	21.897	1.226	50.238	11.41%	12.21%
FRANKLIN	1.822	3.364	10.601	28.146	0.098	44.032	10.00%	10.70%
LINCOLN	0.869	3.068	2.695	0.000	0.528	7.160	1.63%	1.74%
WARREN	0.501	1.333	2.961	0.000	0.160	5.054	1.15%	1.23%

Summary: The emissions data for Lincoln and Warren counties does not justify inclusion in the non-attainment area and would support keeping the non-attainment area consistent with the 2003 designation.

### Population Density and Degree of Urbanization

In general, the population density and degree of urbanization within the Boonslick Region pales in comparison to the population density and urbanization in the current non-attainment boundary area. Specifically, Lincoln and Warren counties, which are being considered due to their inclusion in the Metropolitan Statistical Area, have population densities that are mere fractions of other counties represented. The table below shows the population density variation between the Boonslick Region and the current non-attainment area.

Population Density and Urbanization		
County	2000 Population	Population per Square Mile
Lincoln	38,924	61.8
Warren	24,525	56.9
St. Louis City	348,189	5,622.9
St. Louis County	1,016,315	2,001.4
St. Charles County	283,883	506.6
Jefferson County	198,099	301.6
Franklin County	93,807	101.7

Table 1: Source-Missouri Census Data Center, 2000 Census

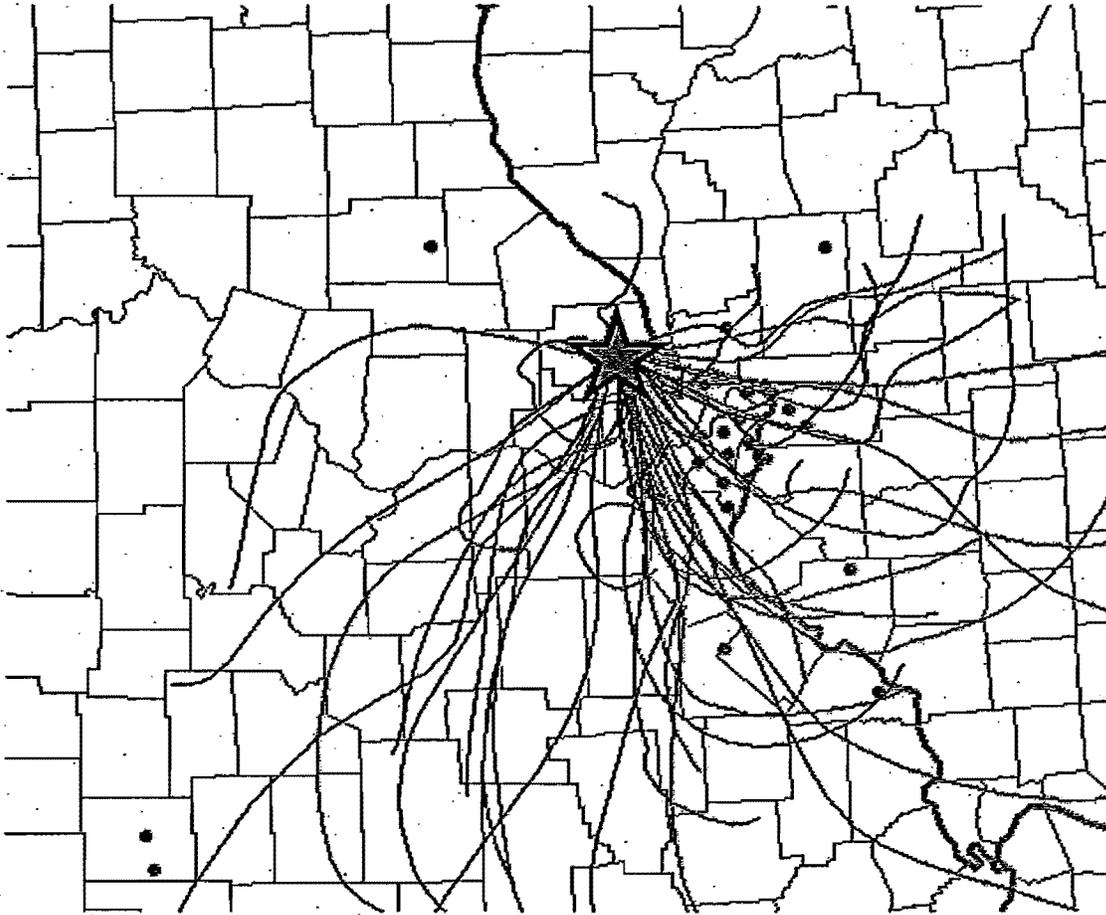
The largest municipality in Lincoln County is the City of Troy. Troy has a population of 6,737 according to the 2000 Census.

Summary: Including Lincoln and Warren counties in the non-attainment area, due to the fact they are included in the St. Louis MSA, is not justifiable based on the degree of urbanization and population density in comparison to the current non-attainment area.

### Ozone Monitoring Data in Surrounding Area

Lincoln and Warren counties are located adjacent to the current non-attainment area. The only monitor located within these two counties is located in Foley, Missouri. The Foley monitor, like

virtually every other monitor in the State of Missouri, failed to meet the new attainment requirements. However, as can be clearly seen in the map below, the influence causing the Foley monitor to exceed the new limits is predominantly from the current non-attainment area. **The transport of emissions to this monitor from the non-attainment boundary is elevating the monitor readings and is not likely related to emission sources in Lincoln or Warren County.** The monitor was placed online in Foley in April 2005. The vast majority of monitoring days shows the monitor in compliance with the new standard. During the period of 2005-2007, only 45 days out of 177 failed to meet the standard. 75% of the monitoring days were in attainment. The monitoring data shows a daily average during the testing period of only 68 ppb, far below the attainment threshold.



**Figure 1: Foley Monitor Site—Years of Operation 2005-2007**

**Summary:** The transport of emissions to the Foley monitor is insufficient justification to include Lincoln or Warren County in the non-attainment boundary designation.

#### **Location of Emission Sources**

There have been no significant changes to emission sources in Lincoln or Warren County since the 2003 designation process.

## Traffic and Commuting Patterns

DNR has made the claim, in introductory meetings, that 95% of all the commuting originating in Lincoln and Warren counties is to destinations within the current MSA boundary area. While this claim is factual it misrepresents the impact to the current non-attainment area resulting from the connectivity of Lincoln and Warren counties. These two counties are included in the MSA boundary, so trips remaining in the county of origin are included in the calculation. Less than 10,000 trips actually leave Lincoln County, and less than 7,000 trips leave Warren County; an insignificant amount considering the total trips in the area are near 1 million. **It would seem more reasonable to assess the impact of Lincoln and Warren counties on the current non-attainment boundary, rather than the MSA boundary. The impact by Lincoln and Warren counties on the current non-attainment area is minimal at best.** As can be seen in the table below, less than 1% (.95%) of the total trips within the current non-attainment area originate within Lincoln County, and even fewer trips originate within Warren County (.64%)

County of Destination	County of Origin							
	Lincoln	Warren	St. Charles	St. Louis City	St. Louis County	Franklin	Jefferson	
Lincoln*	8,314	185	729	12	116	15	35	
Warren*	465	5,176	722	45	180	343	24	
St. Charles	5,529	2,967	70,058	1,439	12,859	766	1,291	
St. Louis City	702	311	10,930	82,480	105,207	2,253	15,947	
St. Louis County	2,738	1,972	62,353	50,997	358,742	11,842	42,181	
Franklin	40	879	555	291	1,752	27,161	1,013	
Jefferson	23	18	380	1,181	5,463	780	64,381	
Other destinations	491	402	2,048	4,039	9,418	2,025	2,831	
Total Number of Trips	18,302	11,910	147,775	140,484	493,737	45,185	97,653	
Grand Total of all Trips							955,046	
% of total trips originating in Lincoln County destined for non-attainment area							0.95%	
% of total trips originating in Warren County destined for non-attainment area							0.64%	
* not included in the 2003 non-attainment area designation								
Table 2: Source 2000 Census Work Flow Data								

**Summary:** While there is recognition of the connectivity resulting from a regional economy between the current non-attainment area and Lincoln and Warren counties the connectivity and commuting data is insufficient to justify inclusion of either county in the proposed non-attainment boundary area.

## Expected Growth

Lincoln and Warren counties have experienced significant population growth during the past decade. These two counties are among the fastest growing in the State of Missouri when viewed on a percentage of population basis. However, the actual number of new residents within these counties is relatively minor in comparison to the population of the entire

metropolitan statistical area. As can be seen in the table below, Lincoln County accounts for only 1.9% of the MSA population and Warren County accounts for only 1.2% of the MSA.

County	2000 Population	2007 Estimate	% of MSA Population
St. Louis County	1,016,300	995,118	50.7%
St. Louis City	348,189	350,759	17.4%
St. Charles County	283,893	343,952	14.2%
Jefferson County	198,099	216,076	9.9%
Franklin County	93,807	100,045	4.7%
Lincoln County	38,944	51,528	1.9%
Warren County	24,525	30,467	1.2%
Total 2000 Population	2,003,757		

Lincoln and Warren counties experienced rapid growth during the past decade due to a strong economy, low housing prices, affordable energy, and abundance of residential lending institutions. Over the past 24 months this growth has dramatically slowed. Many areas of these counties have seen stagnated growth and, in some cases, reverse migration is reducing the population.

According to a 2006-2007 County Migration profile for Lincoln County<sup>1</sup>, which is based on tax returns for 2006-2007, more than 1,000 families migrated out of Lincoln County during 2006-2007. During this same period the County realized only 1,600 families moving into the region. This trend has continued through 2007 and into the first 2 quarters of 2008. If this trend persists, the County will fall short of the population projections prepared by the Missouri Office of Administration as illustrated below.

County	2020 Population Estimate	% of MSA Population
St. Louis County	967,196	48.3%
St. Louis City	350,385	17.5%
St. Charles County	439,068	21.9%
Jefferson County	244,003	12.2%
Franklin County	110,704	5.5%
Lincoln County	74,529	3.7%
Warren County	40,174	2.0%
Total 2020 Pop. Estimate	2,226,059	

As can be seen by the population projections released by the Missouri State Census Data Center, the population in the MSA will exceed 2.2 million people by the year 2020. While growth is recognized in most counties, the percent of total population in Lincoln County remains a small percentage of the MSA at 3.7%, and Warren County at 2.0%.

Summary: The population growth in Lincoln and Warren counties is dynamic and subject to influence by the changes in fuel prices, home financing, and the state of the economy. While most analysis projects the population growth to continue in Lincoln and Warren counties, the percentage of the MSA that resides in these two counties is relatively small. Combined, they

<sup>1</sup> County Migration Profile for Lincoln County 29113, Missouri Census Data Center  
Source: IRS Migration Files

make up only 3% of the population of the presumptive non-attainment boundary. The current population base and potential for growth is not adequate justification for inclusion of Lincoln and Warren counties in the non-attainment area.

### Meteorology

The analysis of meteorological conditions does not demonstrate the necessity of including Lincoln or Warren counties in the non-attainment area.

### Geography/Topography

Geographical features are not a major influence on ozone levels in the St. Louis region.

### Jurisdictional Boundaries

Lincoln and Warren counties are not included in the current non-attainment boundary designation. While these counties are included in the MSA for statistical purposes, that alone is insufficient justification for inclusion in the non-attainment area. Influence from these areas is very minimal when compared to the current non-attainment area.

### Level of Control of Emission Sources

In Lincoln and Warren counties, major new sources of emissions or major modifications to emission sources permitted since 1975 have been subject to the best available control technology (BACT). Future major new sources construction and all modifications to existing sources in Lincoln and Warren counties will be subject to BACT limits. Therefore, the existing and future levels of control for ozone precursors support the exclusion of Lincoln and Warren counties from the St. Louis non-attainment area.

### Regional Emission Reductions

The ability of DNR to adopt regional emission reductions, if necessary, is consistent with not including Lincoln and Warren counties in the St. Louis non-attainment boundary.

## Summary

Below is a summary of the eleven evaluation criteria established by EPA to be used in developing a recommendation for the St. Louis non-attainment boundary: The table clearly illustrates there is insufficient justification for including Lincoln or Warren counties in the non-attainment area.

	<u>Evaluation Criteria</u>	<u>Conclusion</u>
1.	Emissions and air quality in adjacent areas (including adjacent C/MSAs)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
2.	Population density and degree of urbanization including commercial development (significant difference from surrounding areas)	While some degree of development and urbanization is occurring within the Boonslick Region, there is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.

Evaluation Criteria		Conclusion
3.	Monitoring data representing ozone concentrations in local areas and larger areas (urban or regional scale)	The violating monitor located in Foley is heavily influenced by transport emissions. Therefore, we conclude that there is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
4.	Location of emission sources (emission sources and nearby receptors should generally be included in the same non-attainment area)	There have been no recent major sources permitted or EGUs constructed in the region. Therefore there is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
5.	Traffic and commuting patterns	There is a certain amount of connectivity between Lincoln and Warren counties and the current non-attainment boundary. However the degree of connectivity and the influence of this connectivity is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
6.	Expected growth (including extent, pattern and rate of growth)	The population of Lincoln and Warren counties is expected to continue to increase. The percentage of population growth in the region is significant, however, the total number of people residing in, or projected to reside in Lincoln and Warren counties is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
7.	Meteorology (weather/transport patterns)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
8.	Geography/topography (mountain ranges or other air basin boundaries)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
9.	Jurisdictional boundaries (e.g., counties, air districts, existing 1-hour non-attainment areas, Reservations, etc.)	The current non-attainment boundaries were adopted in 2003 and did not include Lincoln or Warren counties. There is still insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.
10.	Level of control of emission sources	There is insufficient justification to support inclusion of Lincoln or Warren County in the non-attainment boundary.
11.	Regional emission reductions (e.g., NOx SIP call or other enforceable regional strategies)	There is insufficient justification to support the inclusion of Lincoln or Warren County in the non-attainment boundary.



# Farmington Chamber of Commerce

302 N. Washington, P. O. Box 191

Farmington, MO 63640

Phone 573-756-3615

Fax 573-756-1003

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2008 NOV 26 AM 11:15  
AIR POLLUTION  
CONTROL PGM

November 20, 2008

Missouri Air Conservation Commission  
PO Box 176  
Jefferson City, MO 65102

Dear Members of the Commission:

The Farmington Chamber of Commerce and its' 360 + members have recently been made aware of a proposal to include St. Francois County in the St. Louis nonattainment area. There are a number of concerns that the St. Francois County business community would like to express regarding this proposal.

We are very disappointed that no public information meetings or hearings have been held in St. Francois County regarding the nonattainment designation, and the public is largely completely oblivious to the proceedings. We have been given no information, whatsoever, regarding what rules and regulations may or may not be imposed on businesses and individuals in our area, what the potential financial impact could be, or how it might benefit our area, for that matter. In fact, we have been told nothing.

On October 21, 2008 a position paper prepared by Southeast Missouri Regional Planning and Economic Development Commission in consultation with URS Corporation was submitted to the Missouri Department of Natural Resources. The paper clearly argues that no monitor measuring nonattainment is located in St. Francois County. The paper further argues that data prepared by URS and by DNR staff both appear to show the opposite of the contention that St. Francois County is a "contributor" to the St. Louis Nonattainment Area ozone problem. In fact the highest readings for the Bonne Terre monitor are association with pollution coming from the St. Louis Nonattainment Area.

In short, the Farmington Chamber of Commerce fully supports the position paper as presented by Southeast Missouri Regional Planning. We ask that you reconsider the proposal to place St. Francois County in the St. Louis Nonattainment Area. We ask that if St. Francois County must be designated in a Nonattainment Area, in spite of the available data, we should, in fact, be placed in a separate Southeast Missouri Nonattainment Area, which would include counties with more ozone commonality, as well as geographic location to us.

"In Business For Business"

We appreciate your consideration, and look forward to your favorable reply.

Respectfully,



David Buerck, President



Kevin Thurman, 2<sup>nd</sup> Vice President



Ursula J. Kthiri, Executive Director



Kraig Sutherland, Director



Gil Kemmon, Director



Lisa Sumpter, Director



Mary McEntire, Director



Doug Smith, Director



Jerry Weems, Director

Andrea Wohlschlaeger, Director



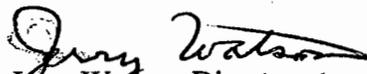
Laura Raymer, 1<sup>st</sup> Vice President



Greg Redfield, Treasurer



Keven Harrington, Im. Past President



Jerry Watson, Director



Michele King, Director



Mark Toti, Director



Shawn Merritt, Director



Marco vanRaalten, Director



Tim Barton, Director



Greg Beavers, Ex-Officio Director

Jim  
David  
Jeff  
Dme 12/2  
MS

# City of Farmington

110 West Columbia • Farmington, Missouri 63640-0110 • Ph. 573-756-1701  
City Hall Fax 573-756-0611 • Public Works Fax 573-756-5161

December 2, 2008

Missouri Department of Natural Resources  
Clean Air Conservation Commission  
1659 East Elm Street  
Jefferson City, Missouri 65101

RECEIVED  
2008 DEC -8 PM 12:19  
AIR POLLUTION  
CONTROL PGM

Subject: Ground Level Ozone Non-Attainment Area

Enclosed herewith is a copy of a resolution adopted by the City of Farmington regarding the designation of St. Francois County as a Ground Level Ozone Non-Attainment Area. The position supported by City Council is consistent with the position represented by the Southeast Missouri Regional Planning Commission position paper on the issue.



At the request of the Farmington Chamber of Commerce, Jeffrey D. Bennett addressed the membership of the Chamber of Commerce at its general membership meeting on November 20<sup>th</sup>, 2008. During his presentation, Mr. Bennett stated that the pollutant levels in St. Francois County originate in the St. Louis MSA. Based on this statement, it seems that the regulatory intent can best be achieved by placing more stringent regulations on the generating sources in the St. Louis MSA, and not imposing regulations on an otherwise compliant region.

During the process to develop the proposed regulations, the Missouri Department of Natural Resources did not conduct any public hearings in St. Francois County. Adopting regulations that have such significant impact on economic development and the daily lives of residents of an area without the opportunity for public input seems unjust and unreasonable. If further consideration regarding this matter is given, we respectfully request an opportunity for a public hearing process to be given in the affected county.

If additional information is required, please call.

Sincerely,

Jeannie Roberts, Mayor  
City of Farmington



**Farmington Industrial Development Authority**  
110 West Columbia Street Farmington, MO 63640  
Phone (573) 756-1701

Jim ✓ Done 12/1  
David MS  
Jeff

**President**

Harry "Chip" Peterson

**Vice-President**

Larry Pratte

**Treasurer**

Matt Sebastian

**Secretary**

Dennis McIntosh

**Board of Directors**

Ross Gordon  
Cecil Hulsey  
Rick Conklin  
Gay Wilkinson  
Dick Womack  
Michele McBride  
Bruce Williams

December 1, 2008

Missouri Department of Natural Resources  
Clean Air Conservation Commission  
1659 East Elm Street  
Jefferson City, Missouri 65101

(Via Facsimile: 573.751.2706)

Attention: Mark A. Foley, Chair

Subject: Ground Level Ozone Non-Attainment Area

Dear Mr. Foley:

Enclosed herewith is a copy of a resolution adopted by the Farmington Industrial Development Authority regarding the designation of St. Francois County as a Ground Level Ozone Non-Attainment Area.

The draft recommendation by the staff of MDNR includes recommendations for the inclusion of St. Francois County in the proposed non-attainment area. Inclusion of St. Francois County is not warranted based on the monitoring of air quality in the region. Moreover, MDNR staff has been unable to determine the regulations that will be imposed on the businesses and residents of St. Francois County if included in the non-attainment area. It is unconscionable to support inclusion of an area without prior determination of the specific regulations to be imposed, and will result in a significant negative impact on industrial growth and development in the region. Stagnation of economic growth will result in a declining quality of life for the residents of the area.

Prior to making the proposed determination to include St. Francois County, there were no public hearings conducted to allow the business community and local residents the opportunity to voice concerns about this onerous regulatory revision.

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2008 DEC - 8 AM 11:45  
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CONTROL PGM

In summary, based on the potential negative impacts and lack of opportunities to be included in the policy making process, the Farmington IDA requests your support of our position that St. Francois County should remain attainment or unclassified. If further consideration regarding this matter is given, we respectfully request an opportunity for a public hearing process to be given in the affected county.

Sincerely,

A handwritten signature in black ink, appearing to read "Harry Peterson", written in a cursive style.

Harry "Chip" Peterson  
President

Copy: Kevin P. Engler, Senator 3<sup>rd</sup> District  
Steven Tilley, Representative 106<sup>th</sup> District

**A RESOLUTION OF THE FARMINGTON INDUSTRIAL DEVELOPMENT  
AUTHORITY REGARDING THE DESIGNATION OF CERTAIN COUNTIES IN  
SOUTHEAST MISSOURI AS GROUND LEVEL OZONE NON-ATTAINMENT AREAS.**

**WHEREAS**, the United States Environmental Protection Agency released new standards in March 2008 regarding ground level ozone standards; and,

**WHEREAS**, these standards required a review of areas and jurisdictions designated as Nonattainment Areas at present; and,

**WHEREAS**, the Missouri Department of Natural Resources is the agency designated to undertake these reviews at the State level; and,

**WHEREAS**, the Southeast Missouri Regional Planning and Economic Development Commission, in cooperation with Perry County, Ste. Genevieve County, the City of Perryville, the City of Ste. Genevieve, and local private businesses has been engaged in a project to evaluate the process by which such reviews are being accomplished; and,

**WHEREAS**, under contract with the Southeast Missouri Regional Planning and Economic Development Commission, URS, Incorporated was retained to undertake an independent study and review of this issue; and,

**WHEREAS**, the report prepared by URS, Incorporated under this contract concluded that the designation of a Nonattainment Area to include Perry County and Ste. Genevieve Counties was the proper course to meet the guidelines of the United States Environmental Protection Agency; and,

**WHEREAS**, this report further concluded that there was no scientific basis for designating either Cape Girardeau County or St. Francois County as Nonattainment Areas; and,

**WHEREAS**, the draft Recommendation prepared by staff of the Missouri Department of Natural Resources includes recommendations for St. Francois County and Ste. Genevieve County to be included within an expanded St. Louis Nonattainment Area; and,

**WHEREAS**, the draft Recommendation prepared by staff of the Missouri Department of Natural Resources further includes recommendations that Cape Girardeau County be included with Perry County in a newly designated Southeast Missouri Nonattainment Area;

**WHEREAS**, staff of the Southeast Missouri Regional Planning and Economic Development Commission, in cooperation with staff from URS, Incorporated and after soliciting comments from a wide range of local government and private sector persons, has prepared a Position Paper responding to the Missouri Department of Natural Resources draft Recommendation; and,

**WHEREAS**, the Position Paper specifically recommends that St. Francois County and Cape Girardeau County be designated as Attainment or Unclassifiable areas; and,

**WHEREAS**, the Position Paper further recommends that Perry County and Ste. Genevieve County be included into a newly designated Southeast Missouri Nonattainment Area; and,

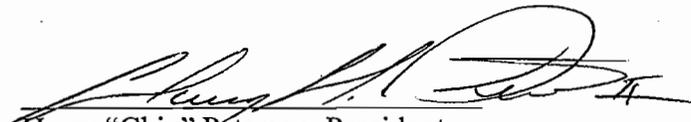
**WHEREAS**, this body is in full agreement with the Position;

**NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF DIRECTORS OF THE FARMINGTON INDUSTRIAL DEVELOPMENT AUTHORITY**, fully supports the Position Paper; and,

**BE IT FURTHER RESOLVED THAT THE FARMINGTON INDUSTRIAL DEVELOPMENT AUTHORITY**, urges the Missouri Department of Natural Resources to review the Position Paper from the Southeast Missouri Regional Planning and Economic Development Commission, the supporting documentation, and the jurisdiction realities and to adjust their draft Recommendations to agree with the recommendations contained in the Position Paper prior to submitting these recommendations contained in the Position Paper prior to submitting these recommendations to the Missouri Air Conversation Commission on December 4, 2008.

**BE IT ALSO RESOLVED** that the Farmington Industrial Development Authority, through this Resolution, their firm belief that the recommendations in the Position Paper would enhance efforts to achieve the mutually agreed upon goals of cleaner air.

**DULY READ AND PASSED THIS 24TH DAY OF NOVEMBER, 2008**

  
Harry "Chip" Peterson, President

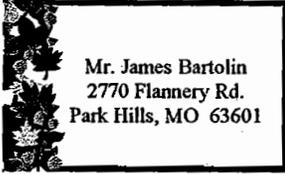
11/15/08

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2008 NOV 19 AM 11:44

Dear Sirs,  
I am against ~~bringing~~ St. Francois  
County into St. Francois Non-attainment  
designations. We are not contributing to  
their pollution. It's not fair.  
If anything, they are polluting us.

Sincerely,  
James Bartolin



December 3, 2008

Missouri Air Conservation Commission  
PO Box 176  
Jefferson City, MO 65102

Greg Redfield  
114 Walker Drive  
Farmington, MO 63640  
(573) 701-0700

To Whom It May Concern:

I am very much opposed to the proposal to include St. Francois County in the St. Louis  
Nonattainment Area.

Sincerely,



Greg Redfield

cc:

Mark A. Fohey  
Jack C. Baker  
Kevin Rosenbohm  
Richard Rocha  
Gary J. Pendergrass  
Mark Garnett  
Ronald Boyer

JO ANN EMERSON

MEMBER OF CONGRESS  
8TH DISTRICT, MISSOURI

COMMITTEE:  
APPROPRIATIONS

SUBCOMMITTEES:  
AGRICULTURE, RURAL DEVELOPMENT,  
FOOD AND DRUG ADMINISTRATION  
AND RELATED AGENCIES

ENERGY AND WATER  
HOMELAND SECURITY

E-Mail and Web Page:  
<http://www.house.gov/emerson>

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-2508**

OFFICES:  
SUITE 2440  
RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515  
(202) 225-4404

THE FEDERAL BUILDING  
339 BROADWAY  
CAPE GIRARDEAU, MO 63701  
(573) 335-0101

612 PINE  
ROLLA, MO 65401  
(573) 364-2455

22 EAST COLUMBIA  
FARMINGTON, MO 63640  
(573) 756-9755

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2008 DEC -3 AM 11:51  
AIR POLLUTION  
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December 1, 2008

Mr. James L. Kavanaugh, Director  
Air Pollution Control Program  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102

Dear Director Kavanaugh:

I am writing to express my strong objection for the designation of St. Francois, Perry, and Cape Girardeau counties as non-attainment counties.

You have received a position paper from the Southeast Missouri Regional Planning Commission (SEMO RPC) which highlights why St. Francois and Cape Girardeau counties need not be designated as non-attainment counties. Specifically, St. Francois County's designation as a non-attainment county is incorrect because Hwy 67 is in fact a major "through traffic" artery and Cape Girardeau County's designation is questionable because there is no monitor in Cape Girardeau County. These points are well articulated and defended in the SEMO RPC position paper and I will not reiterate them here. I would also include Perry County's pending status as disputable given the fact that there is ongoing litigation that could ultimately render any decision null and void.

We have an ever-expanding list of economic challenges facing southern Missouri. My constituents can ill afford at this time another inhibitor towards economic stability.

Sincerely,

  
JO ANN EMERSON  
Member of Congress

cc: Honorable Matt Blunt, Governor, State of Missouri  
Mr. Doyle Childers, Director, MDNR  
Mr. Chauncey Buchheit, Executive Director, SEMO RPC

**Russ Carnahan**  
3RD DISTRICT, MISSOURI

SENIOR WHIP

FOREIGN AFFAIRS COMMITTEE

VICE CHAIRMAN

INTERNATIONAL ORGANIZATIONS, HUMAN RIGHTS AND OVERSIGHT SUBCOMMITTEE

MIDDLE EAST &

SOUTH ASIA SUBCOMMITTEE

TRANSPORTATION AND INFRASTRUCTURE COMMITTEE

AVIATION SUBCOMMITTEE

WATER RESOURCES & ENVIRONMENT SUBCOMMITTEE

SCIENCE AND TECHNOLOGY COMMITTEE

RESEARCH AND SCIENCE EDUCATION SUBCOMMITTEE



**Congress of the United States**  
**House of Representatives**

Washington, DC

December 12, 2008

WASHINGTON OFFICE:  
1710 LONGWORTH HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515  
PHONE: (202) 225-2671  
FAX: (202) 225-7452

ST. LOUIS OFFICE:  
8764 MANCHESTER ROAD, SUITE 203  
ST. LOUIS, MO 63144  
PHONE: (314) 962-1523  
FAX: (314) 962-7169

JEFFERSON COUNTY OFFICE:  
517 BAILEY ROAD  
CRYSTAL CITY, MO 63019  
PHONE: (636) 937-8039  
FAX: (636) 937-7138

ONLINE OFFICE:  
<http://www.house.gov/carnahan>

*d: Jim  
Dawson  
Jaff*

Mr. James L. Kavanaugh, Director  
Air Pollution Control Program  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102

Dear Mr. Kavanaugh,

I am writing to voice my concern and disagreement with the designation of Ste. Genevieve County as part of the Metropolitan Statistical Area (MSA) of St. Louis for the 8 Hour Ozone Non-Attainment Designation for the 2008 National Ambient Air Quality Designation as made by the Missouri Department of Natural Resources (MDNR). The inclusion of Ste. Genevieve in this designation violates both common sense and MDNR's own guidelines. However, I acknowledge that according to the monitoring data, St. Genevieve County is in non-compliance with the 8 hour ozone standards. Yet, it should not be included in the metropolitan area, but should have its own designation or be designated with the Southeast region.

First, as a common sense approach, Ste. Genevieve is both miles away from the physical metropolitan area and is culturally miles away in terms of industrial and population capacity. What industrial emission sources located in the county are already controlled through applicable permitting processes. By including them in the St. Louis MSA appears on its face to be applying two standards (the permitted emission and the non-attainment designation) to the county. Moreover, emission data indicate VOC emissions and NOx emissions are substantially less than Franklin County, the county with the lowest such emissions in the existing St. Louis non-attainment area and as such, should not be included in the designation.

Second, Ste. Genevieve County should not be included in the designation because it does not fit much of the criteria set forth by the Environmental Protection Agency (EPA) as interpreted by MDNR. I note that Ste. Genevieve County was not included in the 2003 designation by MDNR which was approved by EPA after it had requested more information on Ste. Genevieve. I do not believe the county has changed much since that 2003 designation. Indeed, MDNR's report, Summary For Proposed Missouri Recommendation 8-hour Ozone Nonattainment Designations 2008 National Ambient Air Quality Standard states, "Ste. Genevieve County is much more rural in nature (population density and urbanization) and has a 2007 population of 17,841. . . . Ste. Genevieve County has no projected population growth between 2000 and 2020." The rural aspect of Ste. Genevieve should, in and of itself, be a determining factor to NOT include it in the St. Louis MSA.

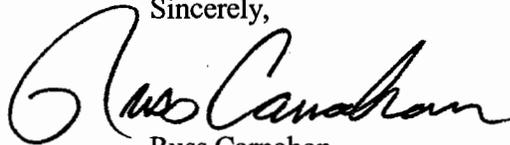
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Further, the report also confusingly states that Ste. Genevieve's NOx emissions contribute to St. Louis' *downwind* monitors while Ste. Genevieve's monitor is, in fact, upwind from St. Louis. Finally, the report also acknowledges that polluted wind from St. Louis contributed to the monitor readings in Ste. Genevieve, and for that, Ste. Genevieve was included in the non-attainment area. It seems to be a reverse reading of the monitor in St. Genevieve.

I recognize that Ste. Genevieve is out of compliance with the 8 hour ozone regulations. Yet, it should be designated as a single non-compliant county and be able to do deal with this issue on a county-wide basis rather than be included in the area-wide St. Louis designation. I urge your reconsideration of this matter.

Thank you for your time and consideration of this issue.

Sincerely,

A handwritten signature in black ink, appearing to read "Russ Carnahan". The signature is fluid and cursive, with a large initial "R" and "C".

Russ Carnahan  
Member of Congress

ROOM #1

HOURS  
8:30 A.M. - 12:00 NOON  
MONDAYS & THURSDAYS

PHONE #  
1-573-883-7202 • 1-800-894-8125  
Fax: 573-883-5312

GARRY L. NELSON  
District #1 Commissioner

# County Commission

OF  
STE. GENEVIEVE COUNTY  
55 S. Third Street  
Ste. Genevieve, Missouri 63670

ALBERT J. FULTS  
Presiding Commissioner



RAY H. GETTINGER  
District #2 Commissioner

September 2, 2008

Missouri Department of Natural Resources  
Attn: Doyle Childers  
1101 Riverside Dr.  
PO Box 176  
Jefferson City, MO 65102

*c: Floyd  
Dan  
Jim*

Dear Doyle,

Ste Genevieve County and Perry Counties are rural communities with about 18,000 populations in each, and many of the families are involved with farming.

Both counties are involved in several organizations that work for the betterment of our communities. Both are active in the Southeast Solid Waste District, the Southeast Regional Planning Commission and the Southeast Missouri Workforce Investment Board. We are also active on the Transportation Advisory Committee, which works to plan highway construction in District 10 which is headquartered in Sikeston. We are working now with a newly formed air quality advisory committee of the SEMO RPC to find reasonable ways to address ozone issues. We feel we should NOT be non-attainment, but if that designation proves necessary, we certainly do not belong in an area with the St. Louis Region.

All of these organizations are an important part of planning for our area, which is mostly rural. We have worked hard to make improvements in the lives of the people in our area and we need to keep working with these groups to continue these improvements.

To be thrown in with the St. Louis non-attainment area would be a disaster as far as the planning and cooperation between the counties that we now have.

The Bonne Terre monitor is really not representative of Ste. Genevieve County. Located in the far western part of the county, it would monitor transport air and not the air of Ste. Genevieve County.

Regards,

Albert J. Fults

**CAPITOL OFFICE**  
State Capitol  
201 West Capitol Avenue  
Jefferson City, MO 65101-6806  
Tele: (573) 751-7735  
Fax: (573) 522-2466  
E-Mail: joe.fallertjr@house.mo.gov



c. David  
Jim  
Jeff

**COMMITTEES**  
Member:  
Administration and Accounts Committee  
Fiscal Review Committee  
Transportation Committee

**DISTRICT ADDRESS**  
19840 Lakeview Drive  
Ste. Genevieve, MO 63670  
Tele: (573) 883-3963

**MISSOURI HOUSE OF REPRESENTATIVES**  
**JOSEPH FALLERT, JR.**

State Representative  
District 104

December 8, 2008

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Mr. James L. Kavanaugh, Director  
Air Pollution Control Program  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102

**RE: Statement to Missouri Air Conversation Commission**  
**8-Hour Ozone Standard Boundary Recommendation**

Dear Mr. Kavanaugh;

As I stated before the Missouri Air Conversation Commission, I'm submitting the following written statement for consideration. My comments are intended to fully support the position of the Southeast Missouri Regional Planning & Economic Development Commission.

As Mr. Bennett pointed out during his presentation, we are talking about two very different regions. One very heavily populated urban area, St. Louis Metro; and Ste. Genevieve County, a very rural, low population growth area which has low connectivity to the I-55 corridor. Ste. Genevieve County has no involvement with the St. Louis Metro area, which is governed by the East-West Gateway Council, but has a long history with Southeast Missouri Regional Planning Commission.

I ask that you seriously consider Mr. Buchheit and the Southeast Missouri Regional Planning Commission's recommendations for all the counties included in the Southeast region. They provide logical and reasonable solutions to address the non-attainment situation for a rural region. As DNR Director Childers recently stated in an article in the DNR monthly publication, "*Protecting Missouri's Natural Resources*", "No one questions that ozone is a problem that must be addressed to protect the health of Missouri citizens. However, a one-size-fits-all solution won't work for the East Coast, West Coast and Midwest." The same applies to the comparisons of the St. Louis Metro area and the four counties of Southeast Missouri.

Page 2

December 8, 2008

Mr. James L. Kavanaugh, Director

I again thank you for your time and consideration of the recommendations of the Southeast Missouri Regional Planning Commission..

Sincerely,

A handwritten signature in cursive script that reads "Joseph Fallert, Jr.".

JOSEPH FALLERT, JR.  
State Representative

cc: Mr. Doyle Childers, Director, MO Department of Natural Resources  
Ms. Leanne Tippett Mosby, MO Department of Natural Resources  
Mr. Chauncy Buchheit, Executive Director, SEMO Regional Planning Commission  
Ste. Genevieve County Commission  
Air Conservation Commissioners, MO Department of Natural Resources



# *Southeast Missouri*

## REGIONAL PLANNING & ECONOMIC DEVELOPMENT COMMISSION

1 WEST ST. JOSEPH ST. • P.O. BOX 366 • PERRYVILLE, MO 63775  
(573) 547-8357 • FAX (573) 547-7283  
E-MAIL [semorpc@semorpc.org](mailto:semorpc@semorpc.org) • WEBSITE [www.semorpc.org](http://www.semorpc.org)

H. Weldon Macke  
Chairman

October 27, 2008

John Singleton  
Vice Chairman

Albert Fufts  
Treasurer

Larry Kannon  
Secretary

Chauncy Buchheit  
Executive Director

Mr. James L. Kavanaugh, Director  
Air Pollution Control Program  
Missouri Department of Natural Resources  
P. O. Box 176  
Jefferson City, Missouri 65102

Dear Mr. Kavanaugh:

Enclosed is a Position Paper prepared by staff of the Southeast Missouri Regional Planning and Economic Development Commission in consultation with staff from URS, Inc. I trust that this is self-explanatory, and so I will not belabor it here. I did, however, want to take a couple of minutes of your time to emphasize two points.

First, we are concerned that implementation of the recommendations in the DNR draft entitled *Summary for Proposed St. Louis/Southeast Missouri Recommendation* published at <http://www.dnr.mo.gov/env/apcp/ozone/8hourdesignationprocess.htm> as written would be counterproductive in our efforts to provide cleaner air for our citizens. Efforts needed by rural areas would certainly be lost in urban requirements. This is reality, and it is an issue with which I deal on a daily basis.

Second, it is our firm belief that the DNR draft recommendations are in error based on the science in the case of St. Francois County and Cape Girardeau County. We accept the requirement to designate Ste. Genevieve and Perry Counties as Nonattainment Areas based on EPA guidelines, although we continue to dispute this designation on the basis of common sense. We are strongly opposed to including Ste. Genevieve County into the St. Louis Nonattainment Area for the reasons specified in the Position Paper.

Thank you for your time and attention.

Sincerely,

Chauncy D. Buchheit  
Executive Director

cc: Mr. Doyle Childers, Director, MDNR  
Ms. Leanne Tippet Mosby, MDNR  
U. S. Senator Christopher S. Bond  
U. S. Senator Claire McCaskill  
Congresswoman JoAnn Emerson  
Congressman Russ Carnahan  
State Senator Kevin Engler, District 3  
State Senator Jason Crowell, District 27  
State Representative Joseph Fallert, Jr., District 104  
State Representative Steven Tilley, District 106  
State Representative Brad Robinson, District 107  
State Representative Belinda Harris, District 110  
State Representative Scott Lipke, District 157  
State Representative Mary Kasten, District 158  
State Representative Billy Pat Wright, District 159  
State Representative Ellen Brandom, District 160

# **Position Paper**

in response to

**Missouri Department of Natural Resources**

**Draft Recommendations**  
**Regarding Designation of Nonattainment Areas**  
**Under new Ground-Level Ozone Standards**

Prepared by:

**Southeast Missouri Regional Planning and  
Economic Development Commission**

In consultation with:

URS Corporation

October 21, 2008

## Introduction

Elected officials, private sector representatives, and staff from the Southeast Missouri Regional Planning Commission have been involved in the Nonattainment Area designation process since it was initiated in April, 2008 after new standards were published by the U.S. Environmental Protection Agency (EPA). This involvement has included attending all informational meetings hosted by the Missouri Department of Natural Resources (DNR) regarding the St. Louis Nonattainment Area since officials from Ste. Genevieve County were invited to attend those meetings. Additionally, the Regional Planning Commission hosted the first two meetings regarding Ste. Genevieve and Perry Counties and what ultimately became the potential Perry/Cape Girardeau County Nonattainment Area.

Concern about this issue was strong enough that a Working Group was established. This Working Group included representatives from county and city governments in Perry and Ste. Genevieve Counties, representatives from the private sector, staff from the Southeast Missouri Regional Planning Commission, and representatives of U.S. Senators and Representatives. The Working Group agreed to contract with URS Corporation, a well respected engineering firm, to study the question of Perry County and Ste. Genevieve County monitors and to prepare recommendations regarding this process. That report was submitted to DNR prior to the publication of the DNR Staff Draft Recommendations.

With the publication of Draft Recommendations prepared by DNR staff, it is apparent that the recommendations and input from this group have been effectively ignored. To address this, one more meeting of the Nonattainment Working Group was held, with attendance from a broad cross-section of the public and private sectors within the affected counties. This meeting included representation from Cape Girardeau and St. Francois Counties, both of which had previously been relatively silent on the issue. The preparation of this Position Paper was the result of that meeting. This paper represents what is, in effect, the last effort to convince DNR staff to amend their recommendations before submitting them to the Missouri Air Conservation Commission.

## Purpose and Scope

The purpose of this Position Paper is to present a case which will convince DNR staff to amend their recommendations regarding the designations of Cape Girardeau, Perry, St. Francois, and Ste. Genevieve Counties in regard to Nonattainment Areas. In scope it deals with only those four counties. The technical issues are presented only in terms of areas where there are questions or disagreements with conclusions drawn from data presented. In these cases, where there is more than one possible interpretation, the case is made for an alternative interpretation.

The issue of jurisdictions and political associations is addressed more fully than previously. The Working Group and the staff of the Southeast Missouri Regional Planning Commission believe that these are important considerations. It appears, from answers received in open meetings, that these issues were given a cursory review at best during the DNR staff review.

The following sections present a county-by-county assessment. Where there are areas of agreement with the DNR staff recommendations, they are noted. Where there are questions or plain disagreements, those are noted with explanations for the basis of the questions or disagreements.

## Areas of Agreement

### Ste. Genevieve County:

It is accepted that the designation of Ste. Genevieve County as a Nonattainment Area is necessary given EPA guidance.

### Perry County:

It is accepted that the designation of Perry County as a Nonattainment Area is necessary given EPA guidance.

## Areas in Question and Disagreement

### Cape Girardeau County:

1. It is not at all clear that the case for designating Cape Girardeau County is made convincingly. Cape Girardeau County is included because it has been described as an "MSA" that borders a county with a noncompliant monitor and the MSA is by definition the presumptive boundary for 8-hour NAAQS Nonattainment Areas. However, EPA's recommendation is for inclusion of Metropolitan Statistical Areas (MSAs) or the Consolidated Metropolitan Statistical Area (C/MSA). No area within Cape Girardeau County meets the definition of a Metropolitan Statistical Area, which is an urban area containing over 50,000 people. Therefore, Cape Girardeau is not listed by OMB as a Metropolitan Statistical Area.

It is believed that EPA presumes that metropolitan areas need to be considered because of their high population density, traffic congestion and concentrated industrial areas. It is further believed that EPA set the Metropolitan Statistical Area as the presumptive source of pollution, due to historic bad air in major metropolitan areas and a concentration of large emission sources. Cape Girardeau is not a major metropolitan area, is not a source of heavy industrial pollution and not a source of heavy traffic congestion. While OMB lists Cape Girardeau and surrounding counties as a Micropolitan Statistical Area, no EPA requirements to include Micropolitan areas have been cited. No compelling case for inclusion of Cape Girardeau County has been made.

In addition, the following also relates to Cape Girardeau County:

- A. No monitor measuring nonattainment is present in the County.

- B. The identifiable point sources are already controlled and the amounts of emissions inventoried are relatively low.
  - C. The meteorological data is arguable.
    - i. The supporting documentation provided by DNR staff (DNR Exhibit 1) presents a picture that suggests a primary inflow to the Farrar site from the east rather than from the South.
    - ii. Back trajectories analyses prepared by URS (URS Exhibit 1) similarly suggest importation of ozone from areas much more remote than Cape Girardeau County, primarily from the East.
2. Based on these factors, Cape Girardeau County should not be designated as a Nonattainment Area.

## **Additional Areas of Disagreement**

### **St. Francois County:**

- 1. No monitor measuring nonattainment is located in St. Francois County.
  - A. The Bonne Terre monitor cited in staff reports is located in Ste. Genevieve County.
  - B. While a monitor is near to St. Francois County, the assertion made that St. Francois County is identified as a Nonattainment Area based on a monitor located within the county is simply incorrect.
- 2. The conclusion drawn by DNR staff that St. Francois County "contributes" to ozone in the St. Louis Nonattainment Area is, at best, arguable, if not outright incorrect.
  - A. The inventory of emissions sources clearly shows relatively small amounts being produced in St. Francois County.
  - B. The contention by DNR staff that there is "no Interstate Highway through traffic" is technically correct, but arguable.
    - i. Major improvements have been made to U.S. Highway 67, including completion of a divided four lane highway through St. Francois County, with additional projects now underway to construct interchanges and to limit access to the highway.
    - ii. With this improvement providing four-lane limited access connections to I-55 at Festus, U.S. 67 has become a primary arterial

in the area and will be more and more so as additional improvements are completed, resulting in rapid traffic movement through the County.

- iii. These improvements are underway to Poplar Bluff, and future plans call for this arterial to be extended to the Arkansas State Line and beyond.
  - iv. At present, then, it is clear that a significant portion of traffic on this arterial is "through" traffic generated from the south and west of St. Francois County.
- C. While there is some "connectivity" between St. Francois County and the St. Louis Nonattainment Area, the total number of vehicles commuting from St. Francois County into the metropolitan area is miniscule when compared to the overall metropolitan traffic. Similarly, while the numbers of persons commuting to the St. Louis MSA from St. Francois County is significant for St. Francois County it is insignificant in terms of overall employment within the St. Louis MSA.
- D. The data prepared by URS and by DNR staff both appear to show precisely the opposite of the contention that St. Francois County is a "contributor" to the St. Louis Nonattainment Area ozone problem.
- i. DNR data presented as DNR Exhibit 2 demonstrates that the highest readings for the Bonne Terre monitor are associated with pollution coming from the St. Louis Nonattainment Area or other points to the east, and clearly not from St. Francois County.
  - ii. URS data presented as URS Exhibit 2 shows a very similar pattern in spite of using different methodology. Again, high reading days for the Bonne Terre monitor are clearly associated with inflow from the north and east. Essentially no local pollution is linked to these high reading days.
- E. Based on these considerations, St. Francois County should not be designated a Nonattainment Area.

**Ste. Genevieve County:**

1. Regarding Ste. Genevieve County, EPA guidance requires that the county be designated nonattainment, but the Regional Planning Commission seriously disagrees with placing Ste. Genevieve County into the St. Louis Nonattainment Area.

- A. A noncomplying monitor is located in Ste. Genevieve County. Therefore EPA guidelines require that the county be designated as a Nonattainment Area.
- B. While there is connectivity between Ste. Genevieve County and the St. Louis Nonattainment Area, the absolute numbers of commuters is low.
- C. The county is very rural.
- D. The high point source emissions levels are clearly identifiable to a limited number of industries and these are already controlled through the permitting process.
- E. Total VOC emissions are less than half of those in Franklin County, the county with the lowest total VOC emissions in the existing St. Louis nonattainment area.
- F. Total NO<sub>x</sub> emissions are less than 70% of those in Franklin County, the county with the lowest total NO<sub>x</sub> emissions in the existing St. Louis nonattainment area.
- G. According to DNR's information supporting the draft designation recommendation, approximately one third of the total NO<sub>x</sub> emissions from Ste. Genevieve County are accounted for by a new source that is not yet fully built. When that source goes into operation, it will employ control equipment that represents Innovative Control Technology (ICT) a level of control that is higher than Best Available Control Technology (BACT), the level of control normally required of a new source. This is a significantly higher level of control than would be required on existing sources in a nonattainment area.
- H. It is likely that the St. Louis area will be designated as a moderate nonattainment area under the new ozone standard. Section 182 of the Clean Air Act requires that attainment plans for moderate nonattainment areas include automobile emission inspection and maintenance and stage 2 vapor recovery at gas stations that sell more than 10,000 gallons of gasoline a month. DNR staff has acknowledged that these controls do not make sense for Ste. Genevieve County; yet, under the current recommendation, the Clean Air Act would require these controls. At best, considerable resources would have to be spent to develop a rationale as to why these controls would not be required in Ste. Genevieve County and at worst, these controls that would have a negligible effect on ozone levels would be required in a rural county that has a growth projection of 0% over the next several years.
- I. There would have to be considerable resources invested to determine how transportation conformity analyses would be conducted since the East-West

Gateway Council of Governments (EWGCOG) is presently responsible for conformity analyses in the St. Louis nonattainment area. An easier and more beneficial transportation / air quality planning process could be carried out if EWGCOG continues this function in the St. Louis nonattainment area and the Southeast Missouri Regional Planning Commission carries out this function in the area that it serves. It is for reasons such as this that EPA guidance calls for consideration of jurisdictional boundaries.

- J. EPA devised a mechanism called Early Action Compacts as part of their guidance for attainment planning for the previous ozone standard. This mechanism that could lead to emissions reductions sooner than would otherwise be the case would likely not be available if Ste. Genevieve County were part of the St. Louis nonattainment area.
2. Based on these considerations, while EPA guidelines require the designation of Ste. Genevieve County as a Nonattainment Area, the interests of cleaner air will be better served by simply designating the County as a Nonattainment Area but not including it in the metropolitan St. Louis Nonattainment Area.
- A. During the presentation on September 30<sup>th</sup>, the question of "political jurisdictions" was raised. DNR staff response was that this had been "considered," but the clear impression was that it was a very minor consideration. Political jurisdictions are a significant consideration. The DNR should re-evaluate the importance of long-standing political jurisdictions.
    - i. Ste. Genevieve County, as is the case with virtually all small rural counties, has a suspicion of larger metropolitan areas, making cooperation and coordination difficult.
    - ii. Existing institutions, including the Southeast Missouri Regional Planning Commission, have a long history of providing a forum for cooperative approaches to problems. Other examples of this type of cooperation include the Southeast Missouri Solid Waste Management District and the Southeast Missouri Transportation Advisory Committee just to mention two.
    - iii. The Southeast Missouri Regional Planning Commission recently approved the creation of an Air Quality Committee, which will be available to serve as a vehicle for addressing Nonattainment Area issues.
    - iv. The Missouri Department of Transportation District 10 oversees State and Federal highway and transportation projects in Cape Girardeau, Perry, St. Francois and Ste. Genevieve Counties.

- v. The Southeast Missouri Economic Development District, under the auspices of the U.S. Economic Development Administration was one of the earliest such Districts formed. It reflects a long standing commitment to a regional approach and cooperation. Documents such as the Comprehensive Economic Development Strategy (which replaced the Overall Economic Development Program) have a long history of formalizing this mutual support and cooperation.
  - vi. The Delta Regional Authority was created specifically to promote transportation and economic development within the "delta" region. The northern boundary of the Delta Regional Authority service area is the northern border of Ste. Genevieve County. This provides yet another example of an organization that has recognized the clear differences between the rural areas and the metropolitan St. Louis area.
- B. As a rural area, there is virtually no area of overlap between Ste. Genevieve County solutions and implementation strategies and those appropriate for the metropolitan St. Louis Nonattainment Area.

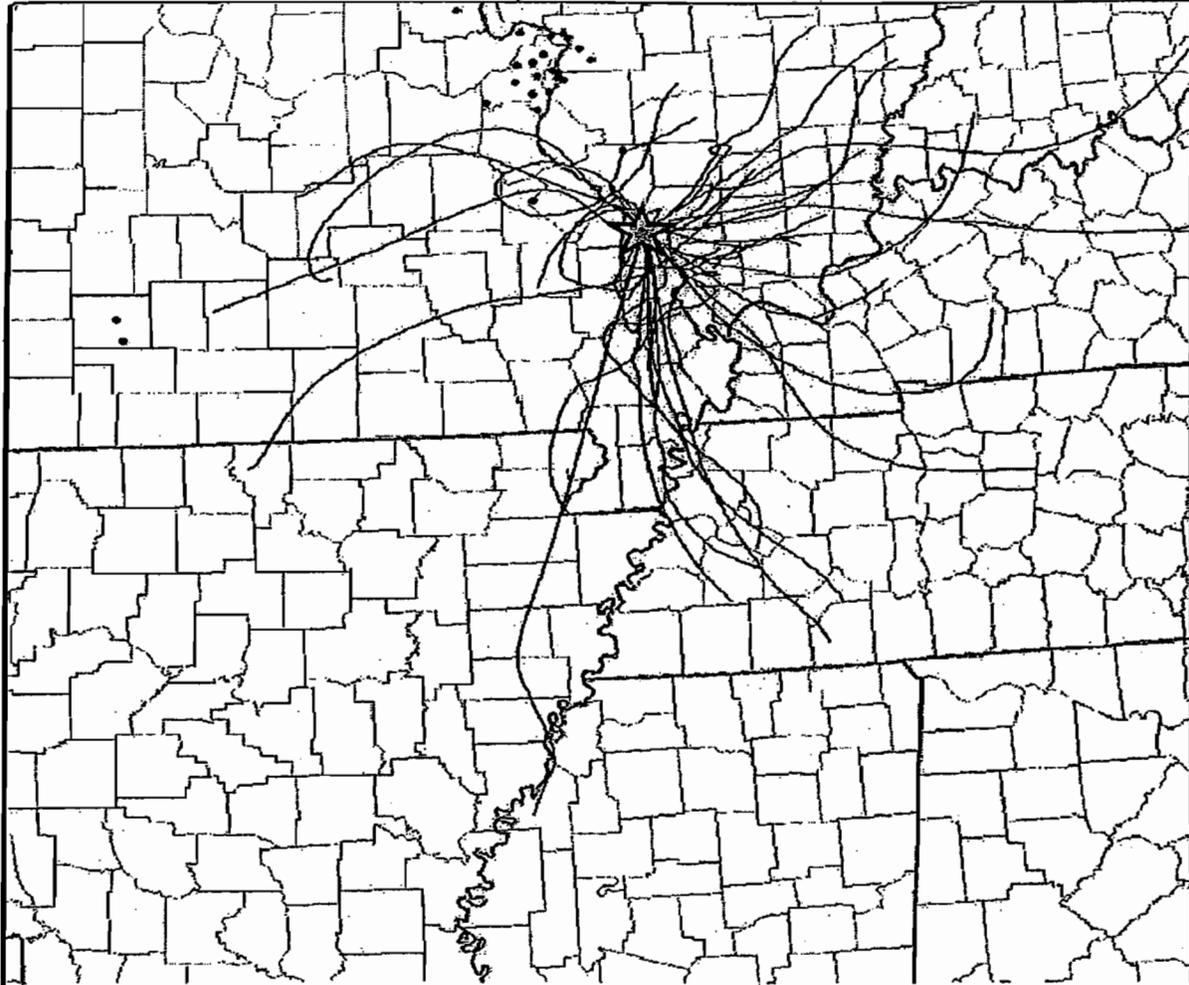
## Summary and Conclusions

1. EPA Guidelines require the designation of Perry and Ste. Genevieve Counties as Nonattainment Areas.
2. The designation of Cape Girardeau County as a Nonattainment Area is wrong. The County should be designated as Attainment or, at worst, Unclassified.
3. The designation of St. Francois County as a Nonattainment Area is in error. The County should be designated as Attainment.
4. The inclusion of Ste. Genevieve County in the St. Louis Nonattainment Area does little to promote cleaner air and the alignment with St. Louis should be reconsidered.
5. The structure of Missouri Department of Transportation Districts also supports the aligning of counties on either metropolitan or urban boundaries. District 10 includes Perry, St. Francois, Ste. Genevieve and Cape Girardeau Counties. The Southeast Missouri Transportation Advisory Committee recommends highway construction projects in these four counties. Under the structure presented by DNR staff, St. Francois and Ste. Genevieve Counties could be shifted into MoDOT District 6 and find themselves included in the East-West Gateway Metropolitan Planning Organization service area. Since these two counties are not part of the East-West Gateway Council of Governments, very little attention would be given to the two county's transportation needs, nor to assisting these two counties with projects to support cleaner air.

6. A Southeast Missouri Nonattainment Area, to include Perry and Ste. Genevieve Counties should be formed. The potential for achieving consensus and implementing policies or programs will be greatly enhanced when these rural counties are allowed to work together rather than simply be thrown into an unfamiliar and even actively hostile urban-oriented structure.

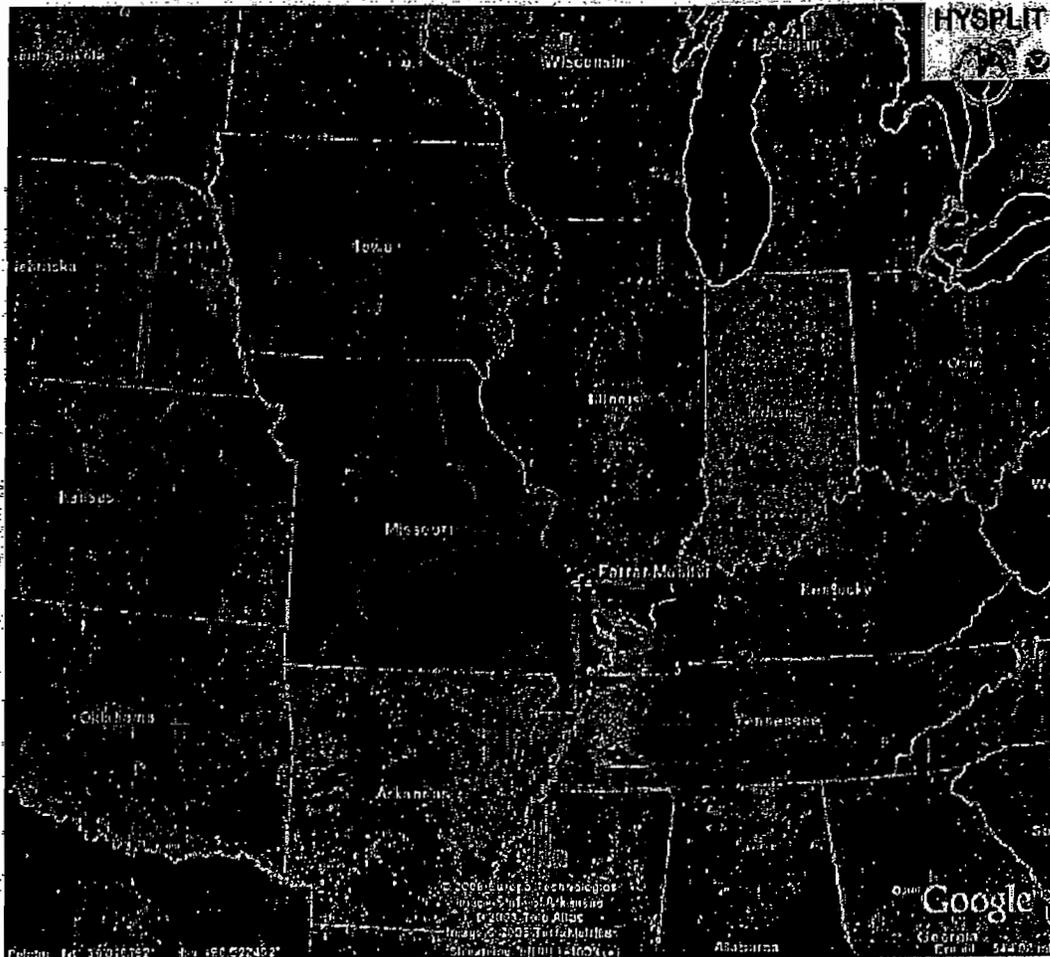
DNR Exhibit 1

Site: Farrar  
Years of Operation: 2004-2007



DNR back azimuth study of wind patterns on highest ozone days recorded at the Farrar Monitor.

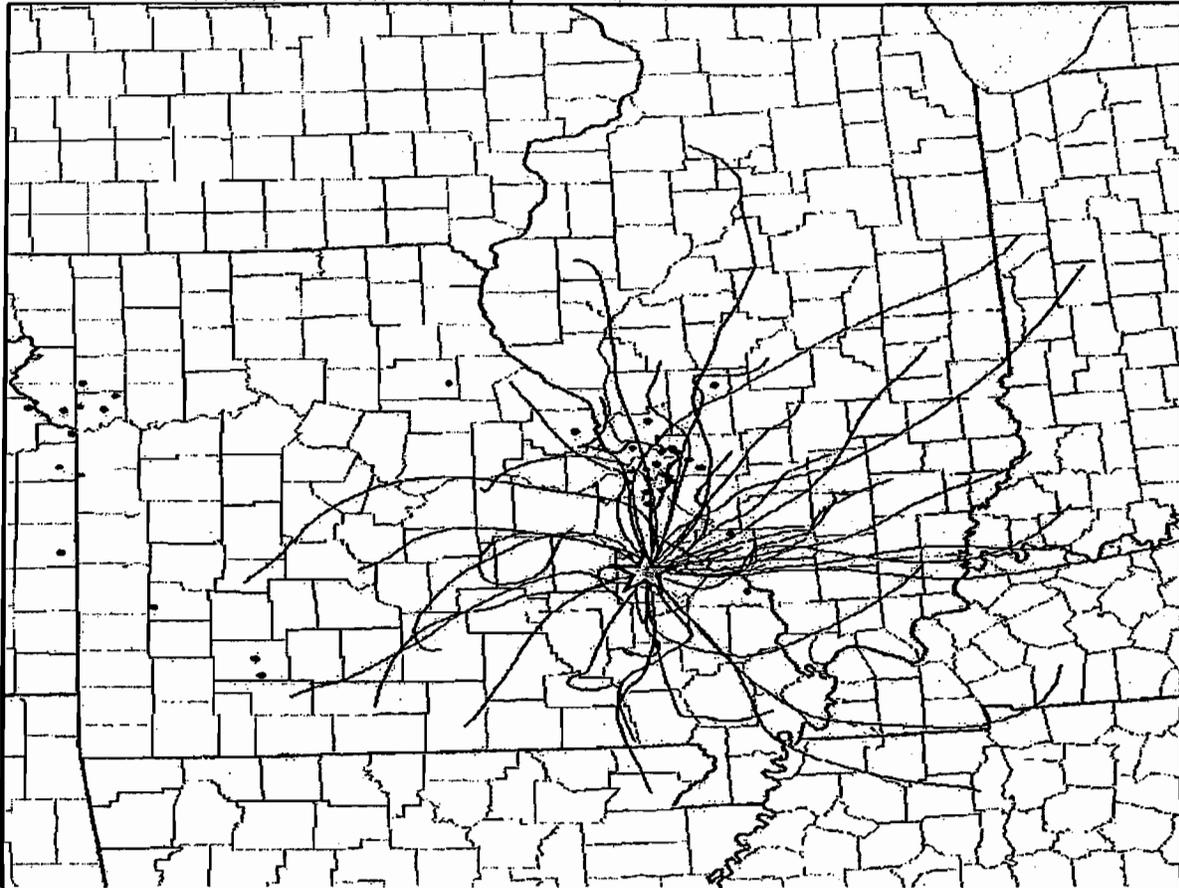
URS Exhibit 1



NOAA ARL/HYSPLIT Model Back Trajectories on the 15 Highest 8-hr Ozone Days at the Farrar Monitor

DNR Exhibit 2

Site: Bonne Terre  
Years of Operation: 2003-2007

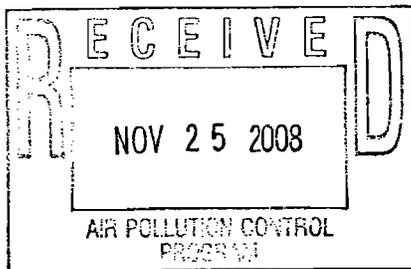


DNR back azimuth study of wind patterns on highest ozone days recorded at the Bonne Terre Monitor.

URS Exhibit 2



Conditional probability function (CPF) plots of hourly ozone at Arnold, Bonne Terre and Farrar.



Discovering what's possible with calcium

Kimberly S. Lagomarsino, PhD - Director, Environmental Affairs  
16147 U.S. Highway 61, Ste Genevieve, MO 63670  
(573) 883-4046 Fax (573) 883-4363

November 13, 2008

Mr. Mark A. Fohey  
MACC Chairman  
8760 County Rd. 422  
Hannibal, MO 63401

Mr. Mark Garnett  
MACC Member  
10363 County Rd. 9510  
West Plains, MO 65775

Mr. Gary J. Pendergrass, P.E., R.G.  
MACC Vice-Chairman  
4032 S. Gatlin Court  
Springfield, MO 65807

Mr. Richard Rocha  
MACC Member  
Bayer Crop Science LP  
8400 Hawthorn Road  
Kansas City, MO 64120

Mr. Jack C. Baker  
MACC Member  
Rt. 1, Box 259  
Butler, MO 64730

Mr. Kevin Rosenbohm  
MACC Member  
18358 395<sup>th</sup> St.  
Graham, MO 64455

Mr. Ronald Boyer  
MACC Member  
5654 E. State Highway AF  
Fair Grove, MO 65648

**Subject: Position Concerning MDNR Draft Recommendations  
Designation of Ozone Non-Attainment Areas  
Mississippi Lime Company  
Ste. Genevieve, MO**

**Reference: 1) Position Paper in response to Missouri Department of Natural Resources['] Draft Recommendations Regarding Designation of Nonattainment Areas Under New Ground-Level Ozone Standards, Southeast Missouri Regional Planning and Economic Development Commission in consultation with URS Corporation, October 21, 2008.  
2) Letter to Mr. Chauncy D. Buchheit, Executive Director, Southeast Missouri Regional Planning and Economic Development Commission from Mr. James L. Kavanaugh, Director, Missouri Department of Natural Resources, November 4, 2008.**

Dear Missouri Air Conservation Commissioners:

This correspondence is in response to the referenced documents (also attached) in which: 1) the Southeast Missouri Regional Planning and Economic Development Commission (SEMORPC) commented on Missouri Department of Natural Resources (MDNR) recommended designations of nonattainment areas under the 2008 ground-level ozone standards, and 2) the MDNR rejected suggestions put forth by SEMORPC concerning such recommended designations.

Mississippi Lime Company accepts as appropriate that Ste. Genevieve County be designated a nonattainment area, as determined by the MDNR based on data collected at the ozone monitor in western Ste. Genevieve County. However, we respectfully disagree with the MDNR's recommended designation of including Ste. Genevieve County in the St. Louis Ozone Nonattainment Area.

The SEMORPC *Position Paper* presents thorough rationale for not including Ste. Genevieve County in the St. Louis Ozone Nonattainment Area. And while we concur with the noted points and whole-heartedly support SEMORPC's positions, it is our estimation that the below arguments – taken directly from the MDNR's *St. Louis / Southeast Missouri Area Draft Technical Support Document*<sup>1</sup> – are particularly relevant to excluding Ste. Genevieve County from the St. Louis Ozone Nonattainment Area.

- Ste. Genevieve County is not located in the St. Louis Metropolitan Statistical Area (MSA) nor closely connected to the St. Louis MSA.
- The population growth rate and population for Ste. Genevieve County are low compared to other counties in the area, as well as counties in the St. Louis MSA.
- Ste. Genevieve County is rural and has only a small component of relatively high population density around the town of Ste. Genevieve. Also, Ste. Genevieve County has a population of less than 20,000 and a flat population projection between 2000 and 2020.
- Total VOC emissions within Ste. Genevieve County are less than half of those reported for the county with the lowest total VOC emissions in the existing St. Louis Ozone Nonattainment Area (i.e., Franklin County).
- Total NOx emissions within Ste. Genevieve County are less than 70% of those in Franklin County, the county with the lowest total NOx emissions in the existing St. Louis Ozone Nonattainment Area.

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<sup>1</sup> The MDNR's *St. Louis / Southeast Missouri Area Draft Technical Support Document* corresponds to the MDNR's *Summary for Proposed Missouri Recommendation: 8-hour Ozone Nonattainment Designations, 2008 National Ambient Air Quality Standard*.

Additionally, we believe the below aspects, which have been communicated to the MDNR by the SEMORPC, are salient to our position that, while Ste. Genevieve County may be a nonattainment area, the county need not be included in the St. Louis Ozone Nonattainment Area.

- The conditional probability function plots of hourly ozone at the Arnold, Bonne Terre, and Farrar monitors indicate that all of these sites measure highest ozone concentrations when winds are from the east (not from Ste. Genevieve County as indicated by the MDNR) with air flows originating in the Ohio River Valley.<sup>2</sup>
- Long-standing political jurisdictions separate the St. Louis MSA and the rural counties, including Ste. Genevieve County, of southeastern Missouri. Although this matter has been elucidated to the MDNR as an issue of much importance, it is our impression that insufficient credence has been given this critical topic.

Existing institutions, including the SEMORPC, the Missouri Department of Transportation – District 10, the Southeast Missouri Economic Development District, and the Delta Regional Authority were developed to focus actions specifically in the southeastern area of Missouri. Conversely, the East-West Gateway Council of Governments (EWGCOG) has been the lead air quality and transportation planning agency for the St. Louis MSA since 1977. Such examples of political jurisdictions exemplify the striking separation and distinct differences between rural southeastern Missouri, including Ste. Genevieve County, and the St. Louis MSA.

- Given the unique nature of the areas, it is obvious that dissimilar techniques will be required to improve air quality in southeastern Missouri, including Ste. Genevieve County, and in the existing St. Louis Ozone Nonattainment Area, which encompasses the majority of the St. Louis MSA.

Based on the comments presented herein, as well as those outlined in the SEMORPC *Position Paper*, it is our belief that those who live and work in Ste. Genevieve County would be better served by including the county into a newly created rural nonattainment area and NOT including Ste. Genevieve County in the St. Louis Ozone Nonattainment Area. In fact, Perry County, which borders Ste. Genevieve County to the southeast, is also designated a nonattainment area. As such, combining these two counties into a rural nonattainment area would enable air quality improvement endeavors to be implemented on a consistently rural basis as opposed to a disjointed rural and urban schematic.

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<sup>2</sup> *Evaluation of Factors Related [to] the Eight Hour Ozone Attainment Status for Perry County & Ste. Genevieve County*. Prepared for Southeast Missouri Regional Planning Commission, Perryville MO. September 9, 2008. Prepared by URS Corporation, St. Louis, MO.

Mississippi Lime Company greatly appreciates your time and consideration of our position presented in this letter. Please contact me at (573) 883-4046 with questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Kimberly S. Lagomarsino". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Kimberly S. Lagomarsino, Ph.D.  
Director – Environmental Affairs

cc: Mr. Doyle Childers, Director, MDNR  
Ms. Leanne Tippet Mosby, MDNR  
Mr. Roger Walker, REGFORM

"Kathy Andria" <kathyandria@gmail.com>  
12/11/2008 03:15 PM

Subj: Comments on 2008 Ozone Boundary Recommendation

Mr. Bennett:

American Bottom Conservancy strongly supports the inclusion of Ste. Genevieve County as part of the St. Louis region 8-hour ozone nonattainment area.

Ste. Genevieve is the home of the new Holcim cement kiln, which is scheduled to begin operating in 2009. Holcim located its cement kiln right on the Ste Genevieve county line bordering nonattainment Jefferson County, thereby escaping stronger emission controls.

In your support document of projected NOx emissions for 2009, Ste. Genevieve will emit 30.2 tons of NOx PER DAY, which is more than 7 per cent of total NOx for the entire bi-state nonattainment region. As you indicate, the level of NOx emissions from Ste. Genevieve County is substantial and provides sufficient evidence that it contributes to the downwind monitors in St. Louis—and in Illinois.

Ste. Gen is immediately upwind of Illinois and the entire St. Louis nonattainment area. In fact, due to prevailing winds, Illinois will get most of the air pollution generated in Ste. Genevieve County.

We have thousands of children with asthma in St. Clair and Madison counties in Illinois and a high rate of heart and lung disease. The health of our families, especially our children, should outweigh all economic considerations put forth by Ste. Genevieve County and those opposed to its inclusion in the 8-hour ozone nonattainment area.

We appreciate that you included it in your proposed nonattainment area. Thank you for your consideration of our comments.

Kathy Andria, President

American Bottom Conservancy

P.O. Box 4242  
Fairview Heights, IL 62208-4242

"Joyce Blumenshine" <joblumen@yahoo.com>  
12/11/2008 03:02 PM

Subj.: Comments on 2008 Ozone Boundary Recommendation

TO: Mr. Jeff Bennett  
Missouri DNR

RE: Comments in Support of Adding Ste. Genevieve County to the Nonattainment  
Area  
for 8-hour Ozone Nonattainment Boundaries

Dear Mr. Bennett,

This letter is to request that Ste. Genevieve County be added to the 8-hour  
ozone Nonattainment boundaries  
under consideration by your agency.

I am greatly concerned about the need to protect the elderly, young children,  
and individuals with asthma or  
other breathing or health difficulties from the dangerous health impacts of  
ozone. It is essential that  
accurate information be available for the considerations of human health and  
safety, and I urge that  
Ste. Genevieve County be included in the Nonattainment Area.

Current issues in the county include an operating cement kiln, along with  
other industrial and polluting  
sites that add huge amounts of ozone and other substances of concern to the  
area air. Other nonattainment  
locations, such as St. Louis and Jefferson County are upwind of Ste.  
Genevieve. It is essential that Ste. Genevieve  
be added to the Nonattainment Area so more awareness of the pollution load and  
impacts can be made. Pollution  
from Ste. Genevieve impacts Illinois problem air locations, and I strongly  
urge this is an additional justification for  
placing this county in the 8-hour ozone Nonattainment boundaries.

Thank you for your consideration of these remarks.

Sincerely,  
Joyce Blumenshine  
Conservation Committee Chair  
Illinois Sierra Club  
2419 E. Reservoir  
Peoria, IL 61614-8029  
309-688-0950  
joblumen@yahoo.com

December 11, 2008

"Brian Urbaszewski" <burbaszewski@lungchicago.org>  
12/11/2008 04:33 PM

Subj.: FINAL Comments on 2008 Ozone Boundary Recommendation

Re: **2008 Eight-Hour Ozone Boundary Recommendation**

Dear Mr. Bennett,

On behalf of my organization I would strongly encourage you to retain Ste. Genevieve County in the proposed St. Louis metropolitan nonattainment area for the new 0.075ppm/8hr ozone standard established by U.S. EPA earlier this year.

Ozone triggers asthma attacks, contributes to increased numbers of emergency room visits and hospitalizations, and has also been implicated in thousands of deaths annually. It continues to be a health problem on both sides of the border between our States and more effort will be needed to reduce emissions from sources both large and small. Reducing emissions from large industrial sources of emissions, including power plants, refineries and cement kilns will be critical to reducing ozone in coming years. Our understanding is that one source in Ste Genevieve County, the Holcim cement kiln, will by itself be allowed to emit over 30 tons of NOx per day into the bi-state region.

The fact that the facility is within a stones throw of the existing 0.08ppm/8hr ozone nonattainment boundary, which does not include Ste. Genevieve County, means that strategies to control emissions from local sources within a nonattainment area would not result in emissions reductions from this large facility and others in the County.

Thank you,

Brian Urbaszewski  
Director of Environmental Health Programs  
Respiratory Health Association of Metropolitan Chicago  
(312) 628-0245 direct  
(312) 243-3954 fax  
***Chicago's Lung Health Leader Since 1906***

"Tyler Harris" <harrist@stlouiscity.com>  
12/11/2008 09:53 PM

Subj: Comments on 2008 Ozone Boundary Recommendation

Dear Mr. Bennett:

I support the ozone non-attainment area designation as presented during the public meetings held at Powder Valley Nature Center and formalized in the SUMMARY FOR PROPOSED MISSOURI RECOMMENDATION document posted on the Missouri DNR website. I believe the process used to develop the proposed non-attainment area was open, transparent and technically sound. Specifically, I support the inclusion of Ste. Genevieve County in the non-attainment area. The nitrogen oxide emissions from large sources in that county contribute significantly to ozone formation in the St. Louis Metropolitan Area.

Thank you for your attention to this matter.

Tyler S. Harris  
harrist@stlouiscity.com  
(314) 613-7300

Tyler S. Harris  
Chief of Permitting  
City of St. Louis Air Pollution Control  
1415 N. 13th Street  
St. Louis, MO 63106  
Tel.: (314) 613-7300  
Fax: (314) 613-7275  
Email: harrist@stlouiscity.com

**"Caroline Ishida" <cishida@moenviron.org>**

Sent by: caroline.ishida@gmail.com

12/11/2008 07:40 PM

Subj.: Comments on 2008 Ozone Boundary Recommendation

Mr. Bennett-

Please see the attached the attached comment letter regarding the 2008 8-hour Ozone Nonattainment Designations, submitted on behalf of Missouri Coalition for the Environment. Please feel free to contact me at this email or the phone number listed below if you have any questions or concerns.

Sincerely,  
Caroline Ishida

Staff Attorney  
Missouri Coalition for the Environment  
6267 Delmar, Ste 2E  
St. Louis, MO 63108  
(314) 727-0600

# MISSOURI COALITION FOR THE ENVIRONMENT

6267 Delmar Blvd. 2-E • St. Louis MO 63130 • 314-727-0600 Fax: 314-727-1665 • moenviron@moenviron.org • www.moenviron.org



December 11, 2008

Mr. Jeff Bennett  
Missouri Department of Natural Resources  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65101

**Re: 8-hour Ozone Nonattainment Designations, 2008 National Ambient Air Quality Standard**

Dear Mr. Bennett:

This letter is submitted on behalf of the Missouri Coalition for the Environment in response to the 2008 8-Hour Ozone Nonattainment Designations, and more specifically, to Ste. Genevieve County's inclusion in the St. Louis non-attainment area. Because of the significant impact Ste. Genevieve County has on the ambient air quality of the St. Louis region, the Coalition is in strong support of its designation as non-attainment.

Given the importance of improving air quality in Missouri, especially in the St. Louis region, it is imperative that Ste. Genevieve County be included among the counties listed as non-attainment for ozone in the St. Louis area. As you are aware, there is a Holcim, Inc. cement plant located near the border of Ste. Genevieve and Jefferson Counties, which is a significant source of area air pollution. Given the documented quantity of criteria pollutants that the Holcim facility emits each year, ignoring Ste. Genevieve County's contribution to ozone non-attainment in the St. Louis area would be a failure to account for a major contributor.

Certain comments on this issue currently posted on DNR's website suggest that, because of Ste. Genevieve County's population size and rural character, including it in the St. Louis non-attainment area is a mischaracterization of the County's emission contributions and would be a burden on local development. On the contrary, however, as stated in DNR's Summary for Proposed Recommendation, the County's contribution is notable. Page 11 of the Summary states, "The 2009 projected NOx emissions in Ste. Genevieve County are quite large, 30.2 tons per day, which account for over 7% of the total St. Louis nonattainment area inventory, and will be primarily generated from three large point sources in the county" (emphasis added). Additionally, as further stated in page 11 of the Summary, it is clear that emissions in Ste. Genevieve County contribute to

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the readings on the downwind monitors in St. Louis. If DNR were to fail to consider the County's role in area non-attainment as a whole, it would misrepresent the collective contribution of the County's facilities and would make it extremely difficult, if not impossible, for the St. Louis region to be in attainment for ozone.

Additionally, given that NAAQS are set at levels "requisite to protect human health", it would be remiss to fail to include such a significant contribution to area ozone on the non-attainment list. 42 U.S.C. § 7409(b)(1). This is especially true because emitted pollutants have real potential for health consequences for area residents, both in St. Genevieve County and beyond. These health consequences, like asthma, are representative of the cost externalizations of area air emissions. Correctly recognizing and remediating non-attainment for ozone and other criteria pollutants in the County would be an affirmative step towards redressing pollutant-related illnesses.

Despite the percentage of the area population that Ste. Genevieve County comprises, it contributes significantly to criteria pollutants in the St. Louis region and therefore must necessarily be included among the ozone non-attainment counties in that area. Thank you for this opportunity to comment regarding the 8-hour Ozone Nonattainment Designations.

Sincerely,



Caroline C. Ishida, #58589

Staff Attorney

Missouri Coalition for the Environment

c: David  
Jim  
Jeff

Chief, Operations Section  
Department of Natural Resources  
Air Pollution Control Program  
Director: Mr. James Kavanaugh

Terry & Kay Stewart  
11045 Pleasant Heights  
Bloomsdale, MO 63627

Pg. 1 of 2

12/08/08

Dear Director Kavanaugh,

In regard to the proposed inclusion of Ste. Genevieve County in the St. Louis Ozone Nonattainment Zone (StLNA), it is our understanding that DNR 'Air Pollution Control' intends to recommend such inclusion.

We will attempt to express how *extremely* twisted and illogical this rational is by your department.

**First:** There are *not* enough strategically positioned 'air monitoring stations' within Ste. Genevieve County to *reasonably* make such determination, and *should be* the first initiative *before* making a determination!

*Several* years ago we recommended/requested an 'air monitoring station' to be placed at the Bloomsdale Elementary School in northern Ste. Genevieve County, and yet there is *not* one. The elementary school with our children and grand-children is '*sandwiched*' between Interstate 55 and US Highway 61 with Brickey's *quarry* within about 3 miles, and Holcim –*the world's largest cement plant*– within about 5 miles. An 'air monitoring station' at this location is *imperative* and *should be* the first initiative *before* making such an *imparity* determination!

**Second:** The DNR 'Air Pollution Control' operates with a *retrogressive mentality!* To *approve* any/all "permits of operation" primacy, *then* see what *damage* is done is *not only retrogressive* it is *irresponsible!!*

With *all* the 'intellect' of the DNR, the Attorney General's office, etc., the *allowing* of Holcim and so many other *industries and developments* in the name of "*progress*" with the 'wait & see' attitude in the *global warming-climate change atmosphere* in which we live is *not only irresponsible* it is *unconscionable!!*

With Holcim, as *only one example:* (with *all* the 'intellect' considered!) it *had* to be known *prior* to their 'approval to permit' that by *allowing* their activity and the removal of 1700 acres of carbon sequestering trees it would *automatically add 6800 metric TONS of carbon into our atmosphere annually!!!* That's the equivalent to a fully loaded *freight train: 8818.48 TONS, or 17,636,960 pounds of carbon!!!* That's one hell-of-a '*carbon footprint!*' This does not take into account how *much more carbon* industries/developments and progress *activities* add to our atmosphere! Yet, they were *allowed* by the DNR 'Air Pollution Control' their 'permit to operate'!!

Now, after the fact, the *retrogressive mentality* wants to *add* yet *another burden* on the people, who are *against* such *erroneous permitting*, by the inclusion of our county with the St.LNA! *And*, without adequate monitoring *prior* to your decision!! Have you ever heard, "*Two wrongs won't make it right*"?!!

REC'D  
2008 DEC -9 AM 10:08  
AIR POLLUTION CONTROL PGM

Pg. 2 of 2

Terry & Kay Stewart  
12/08/08

**Third:** The *'trickle-down'* mentality **MUST STOP!!!** It was *not* the decision of the *people* to allow the permitting of *all* the *industries/developments and progress* which deplete our 'AIR FILTERING, OXYGEN PRODUCING, EARTH COOLING TREES' thus *depleting our* air quality!

With actions come consequences, and their actions *should be* their consequences with them being accountable!! Rather than an inclusion of the *entire county* with the St.LNA let the *industries/developments and progress* 'pay the piper'! Again, with Holcim as *only one example*: if they were *charged* even  $\frac{1}{4}$  per *additional pound of carbon* which is now being un-sequestered in our atmosphere that would amount to \$4,409,240.00 annually!! How much *more* would it be with *all industries/developments and progress* 'paying the piper'?! Such revenue for *their depletion of our environment* would easily pay for *more* 'air monitoring stations', research, new innovations, *the planting of trees*, etc., etc.!!!

**Fourth:** Some would *attempt* to argue that, "*All the industries/developments and progress* promote our economy with jobs, *regardless of the ill effects to our environment*"! What a JOKE of a *trade-off*!! Have you seen the state of our economy?! And, yet *more economic burden* is being proposed *on the people*!

As with Holcim, they are a *recent and prime example in all scenarios*, their investment of the \$1 billion industry in northern Ste. Genevieve County with the *prelude promise* of about 250 jobs is all 'fine & well' (?), *until* you consider the *fact* that recently the company announced the closing of two other American plants, including one in Clarksville, MO, which will result in a total layoff of about 340 employees!! *Where or what is the economic fortitude in that*?! The closures of *two existing plants* which have *already depleted* our environment by their inception (*will they be mandated to replace thousands of acres of trees*?! ) are now closed with *more jobs lost* than what the newest plant will produce!!

OH!! The retrogressive mentality *and the price we will all pay*!!! *But*, we should *not all* be penalized for *judgments and actions of the few for the few*!

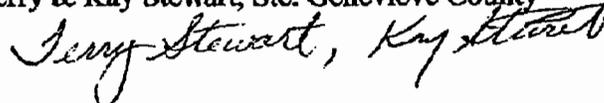
The one-sided, ill-informed, retrogressive, trickle down mentality **MUST STOP!!**

In closing we ask that you *reconsider* the position of the inclusion of Ste. Genevieve County with the StLNA given the scenarios and *facts*. We ask that all aspects be taken into consideration *first, then give the responsibility and accountability to the perpetrators who are allowed to devastatingly deplete our air quality*!

"Thank you" for your time and consideration on this matter.

Sincerely,

Terry & Kay Stewart, Ste. Genevieve County



"Donna S. Oldham" <commish@capecounty.us>  
11/26/2008 03:39 PM

Subj.: Cape Girardeau County Ozone Designation

**CAPE GIRARDEAU STAKEHOLDER OZONE DESIGNATION INPUT**

December 4, Public Hearing

**TO:** Air Quality Commission  
**From:** Gerald W. Jones, Presiding Commissioner  
**SUBJECT:** Cape Girardeau County Ozone Designation  
**DATE:** November 26, 2008

Cape Girardeau County is in support of the Position Paper prepared by the Southeast Missouri Regional Planning Commission on behalf of Cape Girardeau, Perry, St. Francois and Ste. Genevieve Counties relating to the air quality changes by the Missouri Department of Natural Resources.

We specifically recommend that Cape Girardeau County and St. Francois County be designated as attainment or unclassifiable areas and that Perry and Ste. Genevieve Counties be included into a newly designated Southeast Missouri Nonattainment Area. The counties should not be included in an expanded St. Louis non-attainment zone. Efforts needed by rural areas would certainly be lost in urban requirements.

We believe the Missouri DNR did not fully review the documentation submitted by the Southeast Missouri DNR. Also, the Mo. DNR is currently in a lawsuit against the U. S. EPA over these very air quality standards that have been proposed for change by EPA.

We strongly feel the DNR draft recommendations are in error due to there being no scientific basis for designating either Cape Girardeau or St. Francois Counties as nonattainment areas. We believe DNR should take more time and do more studies before making any major changes in how our citizens lives are affected with higher costs and reduced economic opportunities.

Numerous factors impact the monitor in Farrar that came from outside our region and state. The monitor was very slightly out of compliance once in 2007 and none in 2008.

We stongly believe that Cape Girardeau County should not be included in any new Southeast Missouri nonattainment zone as currently recommended.

Thank you for your consideration.

*Cape*

**"Maurice R. Sandfort"** <msandfort@bankofmissouri.com>  
11/26/2008 03:34 PM

Subj.: Non attainment area

Jeff, I currently serve on the Board of Directors of MAGNET, Cape Area Chamber of Commerce, and several other civic, church, and social boards and have been listening to some of the concerns of other business and professional associates wondering why we are included in the review of the air quality issue. We have a minimal amount of manufacturing in the Southeast Missouri region and in reviewing the measurements it appears that our area is very close to attainment by the standards MoDNR uses. I don't believe we should be included in the non-attainment area at this time. At the very least, we should be reviewed in future years as additional industry, if we can persuade any to locate in our County, opens a plant, or when our area wide population increases closer to the size of other larger regions in Missouri.

Thank you for considering my concern and I look forward to hearing the outcome of your review.

Maurice R. Sandfort  
Community Bank President  
The Bank of Missouri  
3427 William Street  
Cape Girardeau, MO 63703  
573-335-3100 Voice  
573-335-4994 Fax

"Sonny Underwood" <Sonny@midsouthsteel.com>  
12/01/2008 02:59 PM

Subj.: Cape Girardeau 8-Hour Ozone Standard

Mr. Bennett:

It is my position that Cape Girardeau County should not be re-classified as a non-attainment area under the recently revised 8-hour Ozone (O<sub>3</sub>) standard. My reasoning for this is as follows:

Definition of C/MSA may not have been properly defined and/or utilized for Cape Girardeau County. The Census Bureau has officially acknowledged that Cape Girardeau County does not meet the qualifications for a Metropolitan Statistical Area (MSA).

Because of the rural nature of Cape Girardeau County and extensive vegetation, it is very important that the MDNR have a better understanding of the potential affect of biogenic sources on the formation of O<sub>3</sub> in rural type counties (i.e., Cape Girardeau).

There doesn't seem to be available good, clean data to conclude that Cape Girardeau County significantly contributes to the high measured O<sub>3</sub> concentrations at the Farrar ambient O<sub>3</sub> monitor located in Perry County.

What existing data that is available, indicates that O<sub>3</sub> impacts at the Farrar monitor may also be caused by long range transport of VOC and NO<sub>x</sub> emissions from other large metropolitan areas north, east and south of Cape Girardeau County. Thus, regulations to reduce source emissions in Cape Girardeau County may have minimal benefit or affect on O<sub>3</sub> concentration levels in Perry County.

I understand that your agency has some real concerns about these regulations, and are joining with other states to voice your concerns with the Federal EPA. My experience is that works with some people in the EPA. I spend a lot of time with the OUST (Office of Underground Storage Tanks) folks, and have on several occasions made them realize that certain regulations just aren't enforceable because they make no common sense in field applications. I am sure you have had similar experiences, so I applaud your efforts. Good luck with your protest.

And finally, some of my area business friends have plant expansions on hold for the moment, until these issues are resolved. If these regulations are applied to Cape Girardeau County, there will be loss of jobs and much worse, future opportunity for other businesses to locate in the area. In today's business climate, we can ill afford to lose any of our area manufacturers, or have new ventures turn to other areas for growth because of these proposed changes.

Thank you for considering my comments on the 8-hour Ozone process for Cape Girardeau County.

Best regards,  
Sonny Underwood  
Mid-South Steel Products, Inc.   
2071 Corporate Circle  
Cape Girardeau, MO 63703  
573.335.5529  
[sonny@midsouthsteel.com](mailto:sonny@midsouthsteel.com)

"Mitch Robinson" <mrobinson@capeareamagnet.com>  
12/01/2008 05:17 PM

Subj.: Comments concerning Southeast Missouri Non-Attainment Zone

Mr. Bennett:

This letter is in opposition to the effort by the Missouri Department of Natural Resources to establish a new Southeast Missouri Non-Attainment Zone. For numerous reasons we can not support this new zone inclusion of Cape Girardeau County into the zone. Those reasons include:

- MoDNR suing the federal EPA over the new regulations
- Long range transport of ozone from large metro areas
- Insufficient data to designate Cape Girardeau County as non-attainment
- EPA has not published rules for making recommendations
- Large man-made sources of ozone are already under DNR control via regulations
- Cape County is a rural county and natural sources of ozone can not be controlled
- There is no MSA designation for this area

Cape Girardeau County should be left as attainment or at the minimum unclassified. Thank you for your consideration of this critical issue for the future of Cape Girardeau County. The change to a non-attainment area would have a massive impact on the economy of Cape Girardeau County causing the lose of jobs with our existing companies and the restriction on future new jobs from expansions or new investment within the county. This change would put a halt on any positive growth.

Please call me or email me if you have any questions.

D. Mitch Robinson, CEcD  
Executive Director  
Cape Girardeau Area MAGNET  
1267 N. Mount Auburn Road  
Cape Girardeau MO 63701

573-334-5000 voice  
573-335-4686 fax  
573-270-3786 cell

[mrobinson@capeareamagnet.com](mailto:mrobinson@capeareamagnet.com)  
[www.capeareamagnet.com](http://www.capeareamagnet.com)

"Bruce Blankenship" <bruce.blankenship@biokyowa.com>  
12/01/2008 03:05 PM

Subj.: FW: PDF File

Mr. Bennet:

Please find the attached letter in regards to the  
Ozone non attainment issue.



PDF\_File.pdf

"John Mehner" <jmehner@capechamber.com>  
11/26/2008 08:35 AM

Subj.: Cape Girardeau County

Mr. Bennett:

The purpose of this email is to express my opposition to Cape Girardeau County being re-designated as a non-attainment area under the revised 8-hour Ozone Standard.

I agree with Director Childers comments that maintaining good air quality is important for the health of Missourians but that new federal regulations will place thousands of Missouri jobs at risk. This comes at a time when losing jobs is the LAST thing we need in Missouri.

There is insufficient data to re-designate Cape County. The issue of ozone transport from large metropolitan areas is hard, if not impossible, to measure and the large man-made sources of ozone (manufactures) are already controlled. Cape Girardeau and Cape Girardeau County are not even an MSA recognized by the federal government and therefore don't have the high population density generally associated with urban areas. The monitor in Perry County has had readings below 75 ppb in two of the last four years. So close even by the new standards.

It is my understanding that the EPA has not yet published rules for re-designated areas. For these, and so many other reasons, I believe Missouri DNR should minimize the counties classified as non-attainment - especially Cape Girardeau County.

JEM

John Mehner, CCE  
President & CEO  
Cape Girardeau Area Chamber of Commerce  
1267 North Mount Auburn Road  
Cape Girardeau, MO 63701  
[www.capechamber.com](http://www.capechamber.com)

*Cape*

**Jackson Chamber of Commerce" <director@jacksonmochamber.org**  
11/25/2008 04:46 PM

Subj: Jackson, MO Chamber of Commerce

Mr. Bennett,

My name is Brian Gerau and I am the new Director of the Jackson, MO Chamber of Commerce. I am writing you this correspondence in regards to the Missouri Non-Attainment issue affecting Cape Girardeau County.

I implore you to assist our city of Jackson in not being included in the surrounding counties attainment measures. Like many proposals the intentions are very well and good but come up short on all practicality.

This measure would drastically affect business in Jackson, MO. The potential for large industry to move in our area would be decreased. The potential for current large industry to restructure and downsize would be increased. Gas stations and other industry would be affected as well. These good intentions will eventually fall on the shoulders of the people living in Jackson and they will bare the burden of trying to afford higher gas and the potential of job loss.

Being employed with the Jackson Chamber of Commerce it is my responsibility to increase new business in the area. It is also my responsibility to represent current business and look out for their best interest. This attainment is not in their best interest and will hurt the local economy. please record this as opposition to the Missouri Attainment issue.

Thank you.

Brian S. Gerau  
Executive Director  
Jackson Chamber of Commerce  
125 E Main Street  
Jackson, MO 63755  
P) 573-243-8131  
F) 573-243-0725

**Barbara Lohr**" <mayor@jacksonmo.org>  
12/01/2008 01:43 PM

Subj.: Cape Girardeau Stakeholder Ozone Designation Input

Mr. Bennett:

Because there is insufficient information to declare Cape Girardeau County as a non-attainment area and because the large man-made sources of ozone in Cape Girardeau County are already carefully controlled, I am not in favor of the agency re-designating Cape Girardeau County as a non-attainment area.

Barbara Lohr

A handwritten signature in black ink, appearing to read "Barbara Lohr", is located in the lower-middle portion of the page.

**"Frey, Steve" <SFrey@PIRNIE.COM>**  
12/02/2008 11:44 AM

Subj.: Cape-Perryville Stakeholder Ozone Input

On behalf of the "Concerned Citizens for Economic Growth Coalition" we are providing the attached stakeholder input (i.e., formal comments) pertaining to the Cape-Perryville Ozone revised 8-hour NAAQS re-designation process.

We would appreciate you review of these comments and a formal response to our proposed recommendation for designating Cape Girardeau County as attainment under the revised 8-hour Ozone NAAQS.

If you have any questions related to our formal comments please feel free to contact Mr. Steven Frey at the phone number or email provided below. If possible can you please provide us with a confirmatory email acknowledging receipt of our formal comment.

The following individuals are members of the "Concerned Citizens for Economic Growth Coalition" and should be included in all correspondence as well.

**D. Mitch Robinson, Executive Director Cape Girardeau Area MAGNET**  
1267 N. Mount Auburn Road  
Cape Girardeau, MO 63701  
Phone: 573-334-5000  
Email: [mrobinson@capeareamagnet.com](mailto:mrobinson@capeareamagnet.com)

**John Mehner, President & CEO**  
Cape Girardeau Area Chamber of Commerce  
1267 N. Mount Auburn Road  
Cape Girardeau, MO 63701  
Phone: 573-335-3312  
Email: [jmehner@capechamber.com](mailto:jmehner@capechamber.com)

Regards

Steven Frey

Senior Associate - Air Services Group Leader  
Malcolm Pirnie, Inc.  
1515 E. Woodfield Road, Suite 360  
Schaumburg, IL 60173  
Phone: 847-517-4062  
Email: [sfrey@pirnie.com](mailto:sfrey@pirnie.com)

"Malcolm Pirnie is dedicated to helping clients and their communities create enduring solutions that make our world cleaner and safer. Please consider the environment prior to printing this email."

# The 8-Hour Ozone Designation Process

## “Concerned Citizens for Economic Growth Coalition” Stakeholder Input – Formal Comment

### ***Primary Objective:***

This memo provides comments to the Missouri Department of Natural Resources (MoDNR), Division of Environmental Quality from the “Concerned Citizens for Economic Growth Coalition” (Coalition) representing Cape Girardeau County, MO. The Coalition is not in favor of the agency re-designating Cape Girardeau County as a non-attainment area under the revised 8-hour ozone standard.

It is the Coalition’s position that Cape Girardeau County should not be re-classified as a non-attainment area under the recently revised 8-hour ozone (O<sub>3</sub>) standard. This position is based on the following technical and procedural issues:

- There are insufficient data to define the existing ambient levels of O<sub>3</sub> present in Cape Girardeau County. Thus, no data are available to support reclassification of Cape Girardeau to non-attainment at this time.
- There are insufficient data to conclude that Cape Girardeau County *significantly* contributes to the elevated measured O<sub>3</sub> concentrations at the Farrar ambient O<sub>3</sub> monitor located in Perry County. Therefore, Cape Girardeau County should remain designated attainment.
- There are insufficient data to support MoDNR’s position that further controlling VOC and NO<sub>x</sub> emission sources in Cape Girardeau County will have a significant effect on *reducing* measured O<sub>3</sub> concentrations at the Farrar ambient O<sub>3</sub> monitor located in Perry County.
- The identifiable point sources are already controlled and the amounts of emissions inventoried are relatively low. A report submitted to MoDNR, which was prepared by URS Corporation for the Southeast Missouri Regional Planning and Economic

Development Commission, provided technical data related to 2009 projected VOC and NO<sub>x</sub> emissions for counties in Southeast Missouri. As shown in that report, VOC and NO<sub>x</sub> emissions from Cape Girardeau County are contributed by several categories of sources. These categories include area sources, non-road sources, mobile sources, Electric Generating Units (EGUs) and Non-Electric Generating Units. The distribution of VOC emissions based on percentages of the estimated tons per day of emissions are 45% from area sources, 17% from non-road sources, 15% from mobile sources, 0% from EGUs and 23% from Non-EGUs. The distribution of NO<sub>x</sub> emissions based on percentages of the estimated tons per day of emissions are 10% from area sources, 22% from non-road sources, 26% from mobile sources, 0% from EGUs and 42% from Non-EGUs. The importance of this data is that it shows that a variety of sources contribute to the overall VOC and NO<sub>x</sub> emissions for Cape Girardeau County. Because of this variation in emission sources, there is no single source category that can be targeted for potential VOC and NO<sub>x</sub> emission reduction that would contribute to significantly reducing O<sub>3</sub> concentrations measured at the Perry monitor. Thus, regulations to reduce VOC and NO<sub>x</sub> source emissions in Cape Girardeau County will likely have minimal benefit or effect on O<sub>3</sub> concentration levels in Perry County. Several sources in the county have already implemented BACT on NO<sub>x</sub> and VOC sources, including low NO<sub>x</sub> burners on combustion sources.

- Existing sources in Cape Girardeau County have obtained approval from the MoDNR for the construction and modification of air emission sources. This approval has required that these sources meet emission limits and standards established by the MoDNR, thus already incorporating design/operating procedures to ensure that potential emissions of VOC and NO<sub>x</sub> are not adversely impacting human health and welfare. Further reduction of VOC and NO<sub>x</sub> emissions from these sources will not have a significant effect on reducing measured O<sub>3</sub> concentration at the Farrar ambient monitor located in Perry County. Refer to Figures 1-A and 1-B for the VOC and NO<sub>x</sub> emission sources in southeast Missouri and southwest Illinois, respectively.
- Existing data indicate that O<sub>3</sub> impacts at the Farrar monitor may also be caused by long range transport of VOC and NO<sub>x</sub> emissions from other large metropolitan areas located north, east and south of Cape Girardeau County. MoDNR representatives commented about the significance of these emissions on Farrar monitor readings at the August 2008 stakeholders meeting. Controls are already in place to reduce NO<sub>x</sub> and VOC emissions in these areas. On March 10, 2005 the USEPA finalized the Clean Air Interstate Rule (CAIR) with its primary objective being to reduce

substantial NO<sub>x</sub> emissions from power plants and to help over 450 counties throughout the U.S. with meeting the protective air quality standard for O<sub>3</sub>. Although the status of CAIR is currently in flux, because of its national significance, it is likely to be reinstated in some manner to address regional transport issues that are affecting this area. Thus, implementation of regulations requiring further controls to reduce VOC and NO<sub>x</sub> emissions from existing sources operating in Cape Girardeau County will likely have minimal benefit or effect on O<sub>3</sub> concentration levels in Perry County. USEPA has initially estimated that implementation of CAIR will reduce NO<sub>x</sub> emissions by 1.7 million tons, achieving a regional emissions level of 1.3 million tons, a 61% reduction from 2003 levels. This rule is designed to provide cleaner air while allowing for continued economic growth. The USEPA has concluded that initiation of this program in Missouri, will 1) reduce emissions of NO<sub>x</sub> by 87,000 tons or by 60% by year 2015, 2) help Missouri meet and maintain the NAAQS for ground level O<sub>3</sub>, and 3) because air emissions travel across state boundaries, reducing emissions from sources in Missouri will reduce potential impacts on neighboring states such as Ohio and Wisconsin. It should be noted that the USEPA supports the conclusion that sources can significantly contribute to ground-level O<sub>3</sub> in other states, thus supporting the presence of long range transport.

- Based on MoDNR's analysis in their recommendation for defining Perry County as non-attainment, the St Louis area, as well as other large metropolitan areas (i.e., Nashville, TN) can be seen to have some impact on the ozone readings at the Perry County monitor. Thus improvements to ambient air quality in St Louis and these other metropolitan areas will have a positive impact on the Perry County monitor readings, reducing the need for inclusion of Cape Girardeau County in the non-attainment region. Refer to Figure 2 which shows these larger metropolitan areas and their relationship to the Perry County monitor. Several large metropolitan areas are located within the predominant wind flow sectors for southeast Missouri (refer to Figure 3 for wind roses that show the predominant wind directions for this area). As shown in this figure, winds predominantly occur from the south, southwest, southeast and northwest directions. It is important to note the large metropolitan areas that exist within these wind direction sectors.
- Average 8-hour average O<sub>3</sub> concentrations for each individual year (i.e. 2005, 2006, 2007 and 2008 hourly O<sub>3</sub> and wind direction data as measured at the Farrar monitor) by wind direction sector (30 degree sectors with 0 degrees representing true north) show that the east-northeast through southwest wind directions result

in the highest average 8-hour average O<sub>3</sub> concentrations at the Farrar monitor located in Perry County. Additionally the data indicate that concentrations above 75 parts per billion occur when the wind is blowing from nine of the twelve wind direction sectors (i.e., 0, 30, 60, 90, 120, 150, 180, 210, 330 degrees). Refer to Figures 4 and 5 that provide O<sub>3</sub> concentrations (i.e., O<sub>3</sub> concentration wind roses) measured at the Perry County monitor based on individual wind direction sectors. These figures were created from the actual O<sub>3</sub> concentrations and wind direction data measured at the Perry County monitor over a period of time. This data was provided by the MoDNR. The data suggests that measured O<sub>3</sub> concentrations at the Farrar monitor in Perry County may be influenced by long range transport of emissions from major metropolitan areas located in these directions and non-man made sources (biogenic), and may not be significantly influenced by emission sources located in Cape Girardeau County. For point of reference, the City of Cape Girardeau lies within the 150 and 180 degree sectors.

- To better illustrate the impact of large urban areas on regional monitors, we offer the following discussion. Existing monitoring data show that O<sub>3</sub> concentrations increase as you move from south to north across the City of St. Louis, thus simulating the effects of urban sources on the formation of O<sub>3</sub>. Figure 1 shows the O<sub>3</sub> concentration measured at monitors located throughout southeast Missouri. The data depict O<sub>3</sub> concentration and the affect of a large metropolitan area over a similar spatial distance that is represented by the distance from the cities of Cape Girardeau and Jackson to the Perry County monitor. The data show that O<sub>3</sub> concentrations over a six (6) year period increased from 0.006 to 0.012 ppm from the southern monitor to the northern monitor. This would suggest that a large urbanized area such as St. Louis (approximately 2,800,000 people) is increasing the potential for O<sub>3</sub> formation by around 10% or less depending on atmospheric conditions, etc. In trying to predict or establish the potential effects of the City of Cape Girardeau, with a population less than 50,000 people, on the formation of O<sub>3</sub> concentrations at the Farrar monitor, the potential change in O<sub>3</sub> concentration of less than 1% could be anticipated based on a review of the St. Louis monitoring data. If a large population area results in a potential change in the O<sub>3</sub> concentration by less than 0.012 ppm, than a smaller populated area such as Cape Girardeau might show a potential affect or change in O<sub>3</sub> concentrations of less than 0.001 ppm. Thus, the City of Cape Girardeau is not likely to be a major contributor or *significant contributor* to the formation of O<sub>3</sub>, and future regulations on the sources operating within the County of Cape Girardeau will have almost no effect

on the concentrations being measured at the Farrar Monitor located in Perry County.

- An analysis was performed using the VOC/NO<sub>x</sub> Point Source Screening Tables, developed by Richard D. Scheffe for the USEPA in September 1988. This analysis provides a simple, but conservative (high ozone increment predictions) screening procedure for calculating O<sub>3</sub> increment based on the ratio of VOC/NO<sub>x</sub> emissions in tons/year. The O<sub>3</sub> increment estimates produced from this analysis are conservative predictions when compared to an actual event. This technique provides a simple, conservative and non-resource intensive tool for estimating O<sub>3</sub> increment. An estimate of predicted O<sub>3</sub> increment by wind sector using the VOC/NO<sub>x</sub> Point Source Screening Tables using NO<sub>x</sub> and VOC emissions data provided by the MoDNR and the Illinois Environmental Protection Agency (IEPA) for counties surrounding Perry County shows that predicted O<sub>3</sub> increment could potentially increase by 0.017 ppm and 0.004 ppm in wind direction sectors 150° and 180° (winds blowing from the southeast and south), respectively. Refer to Figure 6 which shows the potential incremental change in O<sub>3</sub> concentrations based on the Scheffe conversion approach for VOC and NO<sub>x</sub> emissions sources. Additionally, O<sub>3</sub> increment for the east and southeast wind direction sectors were calculated to be 0.017 ppm and 0.016 ppm, respectively. The data show that VOC and NO<sub>x</sub> sources other than those located in Cape Girardeau County are potentially influencing the O<sub>3</sub> concentrations at the Farrar Monitor. Therefore, further controlling VOC and NO<sub>x</sub> emission sources currently operating in Cape Girardeau County is not likely to have a substantial impact on concentrations at the Farrar monitor since elevated O<sub>3</sub> concentrations have been shown to occur from multiple wind direction sectors.
- Because of the rural nature of Cape Girardeau County and extensive vegetation, it is very important that the MoDNR have a better understanding of the potential effect of biogenic sources on the formation of O<sub>3</sub> in rural counties (i.e., Cape Girardeau County). The California Regulatory Agency has established a study group and has been collecting data to determine the effect of biogenic sources on O<sub>3</sub> formation in southern California. It is recommended that the MoDNR also form a study group to investigate the feasibility of collecting similar data so that a better understanding of the overall affect biogenic sources located in Cape Girardeau and surrounding counties have on O<sub>3</sub> concentrations. It is important to understand the relationship between biogenic and man-made VOC and NO<sub>x</sub> sources, thus better defining the source categories where reductions (if feasible) can be proposed so that future O<sub>3</sub> concentrations can be lowered at the Farrar monitor in Perry County.

MoDNR representatives explained this issue in the August 2008 meeting with local stakeholders. Those representatives indicated that this topic should be further evaluated so that it could be addressed as part of the analysis for the 8-hour ozone NAAQS designation process.

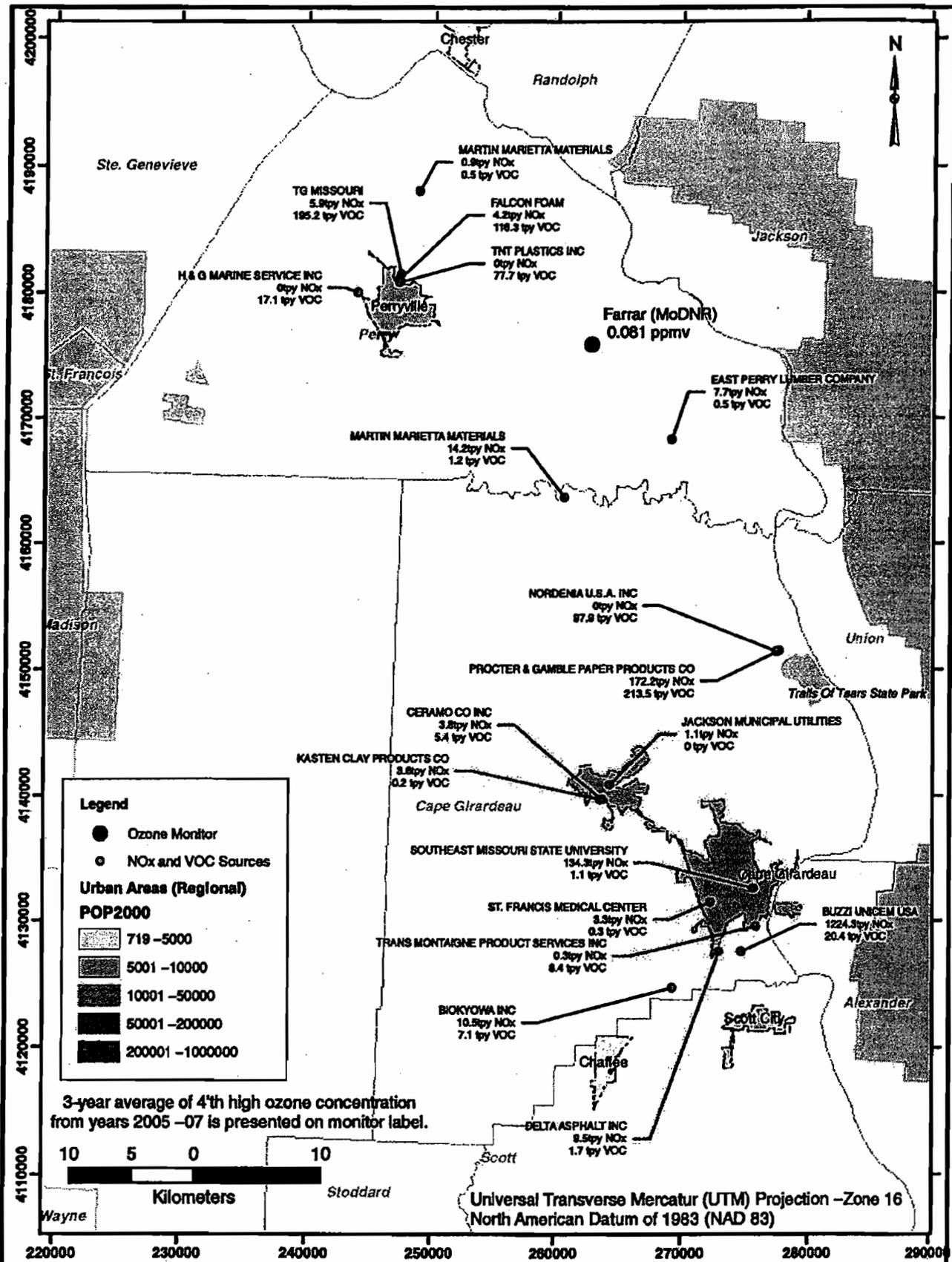
- MoDNR's director Doyle Childers' has stated that the agency is seeking to join a lawsuit to halt new nationwide federal ozone restrictions. Mr. Childers also stated "No one disputes the importance of maintaining good air quality for the health of Missourians. We believe the new federal regulation will place thousands of Missouri jobs at risk, jeopardizing income for Missouri families, and will result in unwarranted and burdensome regulations on industry". Residents of Cape Girardeau County express the same concern. MoDNR should minimize the number of counties designated non-attainment until this issue is resolved.
- Definition of C/MSA may not have been properly defined and/or utilized for Cape Girardeau County. The Census Bureau has officially acknowledged that Cape Girardeau County does not meet the qualifications for a Metropolitan Statistical Area (MSA), let alone a C/MSA. The U.S. Census Bureau defines MSA as "Areas having at least one urbanized area of 50,000 or more inhabitants". The entire county of Cape Girardeau has a population density of 72,740 based on an estimate for 2007. The largest urbanized areas in Cape Girardeau County, which includes the cities of Cape Girardeau and Jackson, have an estimated 2007 population of 37,158 and 13,514, respectively. Both of these urbanized areas are less than 50,000 inhabitants.
- The USEPA has not yet promulgated rules for defining the extent of non-attainment areas. MoDNR used criteria for defining the extent of the non-attainment area based on guidance provided in support of the initial 1997 8-hour O<sub>3</sub> standard, which may not be appropriate for the revised 8-hour O<sub>3</sub> standard. MoDNR should request guidance from the USEPA that supports the revised 8-hour standard for rural counties measuring O<sub>3</sub> concentration in excess of the revised standard. Guidance should be developed by USEPA and provided to the MoDNR on how to address rural counties that have measured exceedances of the revised 8-hour standard that are caused by regional O<sub>3</sub> contributions. It is important to note that for these regions, implementation of localized VOC and NO<sub>x</sub> controls may have no significant contribution to reducing O<sub>3</sub> concentration in rural areas affected by regional O<sub>3</sub> formation influences. Because of the uniqueness of these areas, the criteria established by USEPA (March 28, 2000) in support of the initial 8-hour

standard can be considered out dated and new criteria need to be established for rural areas affected by regional influences.

- Applying the eleven criteria provided by USEPA, MoDNR has defined Cape Girardeau as a significant contributor to O<sub>3</sub> concentrations at the Farrar monitor. This is based on two specific issues: 1) the level of VOC and NO<sub>x</sub> emissions (i.e., 25 tons per day) and 2) the meteorological conditions present in the region. The data suggest that Cape Girardeau County has some influence on the O<sub>3</sub> data measured in Perry County. However, further review of the O<sub>3</sub> data and wind direction data measured over the last 5 year period does not suggest a significant contribution, but rather a normal contribution from a rural environment (i.e., regional influence). As stated previously, O<sub>3</sub> data are consistent from various wind direction sectors and no one sector can be considered a significant contributor. The data suggest that O<sub>3</sub> concentration in the southeast counties of Missouri are formed by regional influences and targeting reductions of VOC and NO<sub>x</sub> emissions sources in Cape Girardeau County will not have a significant reduction in measured O<sub>3</sub> concentrations in Perry County. The final O<sub>3</sub> data set for 2008 shows a reduction in measured O<sub>3</sub> concentrations which may be reflective of the reduction in NO<sub>x</sub> emission sources that is occurring because of regulatory mandates on large NO<sub>x</sub> sources in the region (i.e., Clean Air Interstate Rule), as well as air quality improvement occurring within large metropolitan areas.
- Designation of an area as non-attainment may make it difficult to retain and attract new businesses to the region due to the increased regulatory requirements. Additionally, new projects at existing sources will be forced to install and operate additional controls with no proven data or analysis to demonstrate that these types of reductions will significantly affect O<sub>3</sub> concentrations at the Perry monitor. This may impact facilities located in Cape Girardeau County by losing opportunities for expansion, as there are other sites in the U.S. which may be more attractive for that expansion due to increased costs and longer time to permit and install new emissions sources in a non-attainment area. This change will likewise affect the economic development in the area by reducing future tax revenues and job opportunities for residents. Thus, the designation of a region as non-attainment may restrict or slow economic growth.
- In applying the eleven criteria provided by USEPA, MoDNR was able to show correlation, however limited, to 2 of those criteria. If we were to apply a similar procedure with regard to classification of PM attainment, meeting two of the

eleven criteria is certainly not evidence of a significant contribution of a county on an adjacent county's monitor readings. In fact, designating Cape Girardeau as an MSA is without support in the definitions of MSA provided by the Census Bureau. As Cape Girardeau is not an MSA, this would preclude even beginning the analysis of whether it should be included in the non-attainment area.

For the reasons set forth above, it is the Coalition's position that Cape Girardeau County should be classified as attainment.



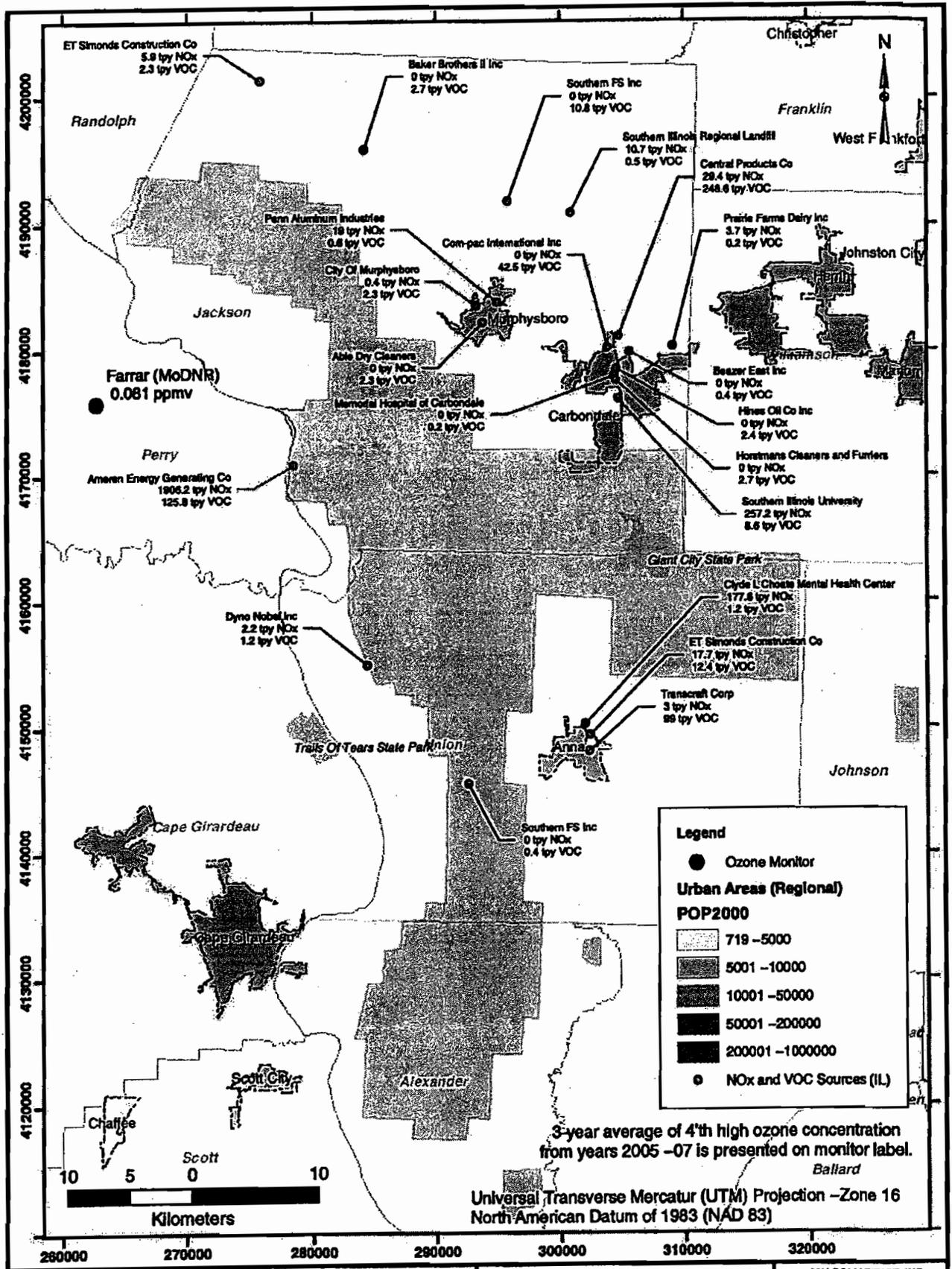
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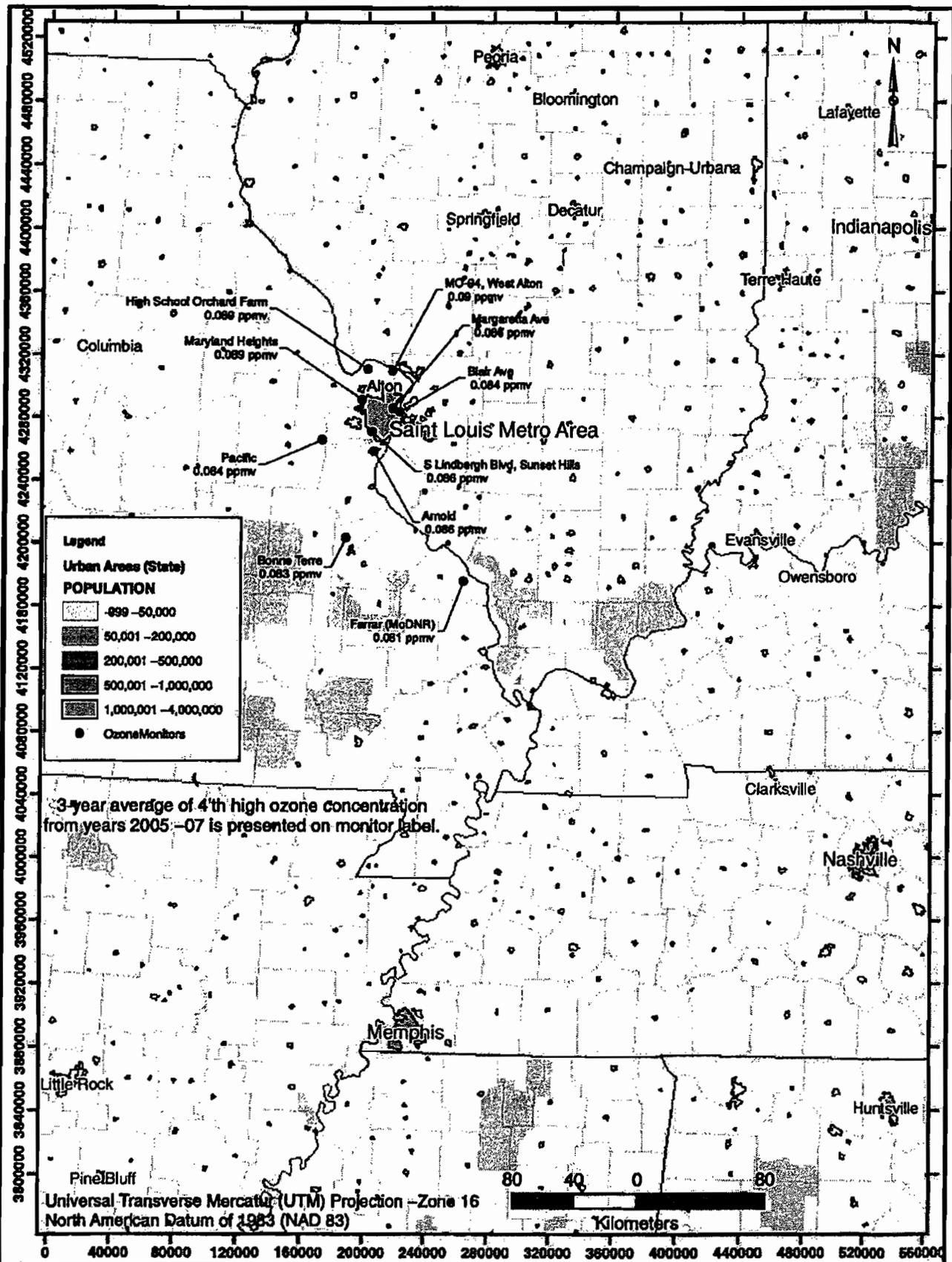
Missouri  
Cape Girardeau County  
Ozone NAAQS Designation  
0165464

Ozone Monitor, Populated Areas, and  
Industrial NOx and VOC Sources of  
Cape Girardeau and Perry Counties

MALCOLM PIRNIE, INC.  
October 2008  
Figure 1-A



Map Document: (6/2/08) ResourcesStandards\_GuidelinesMapTemplateGIS\_TEMP\_LATES\_20081113.6.6\_Portal.mxd  
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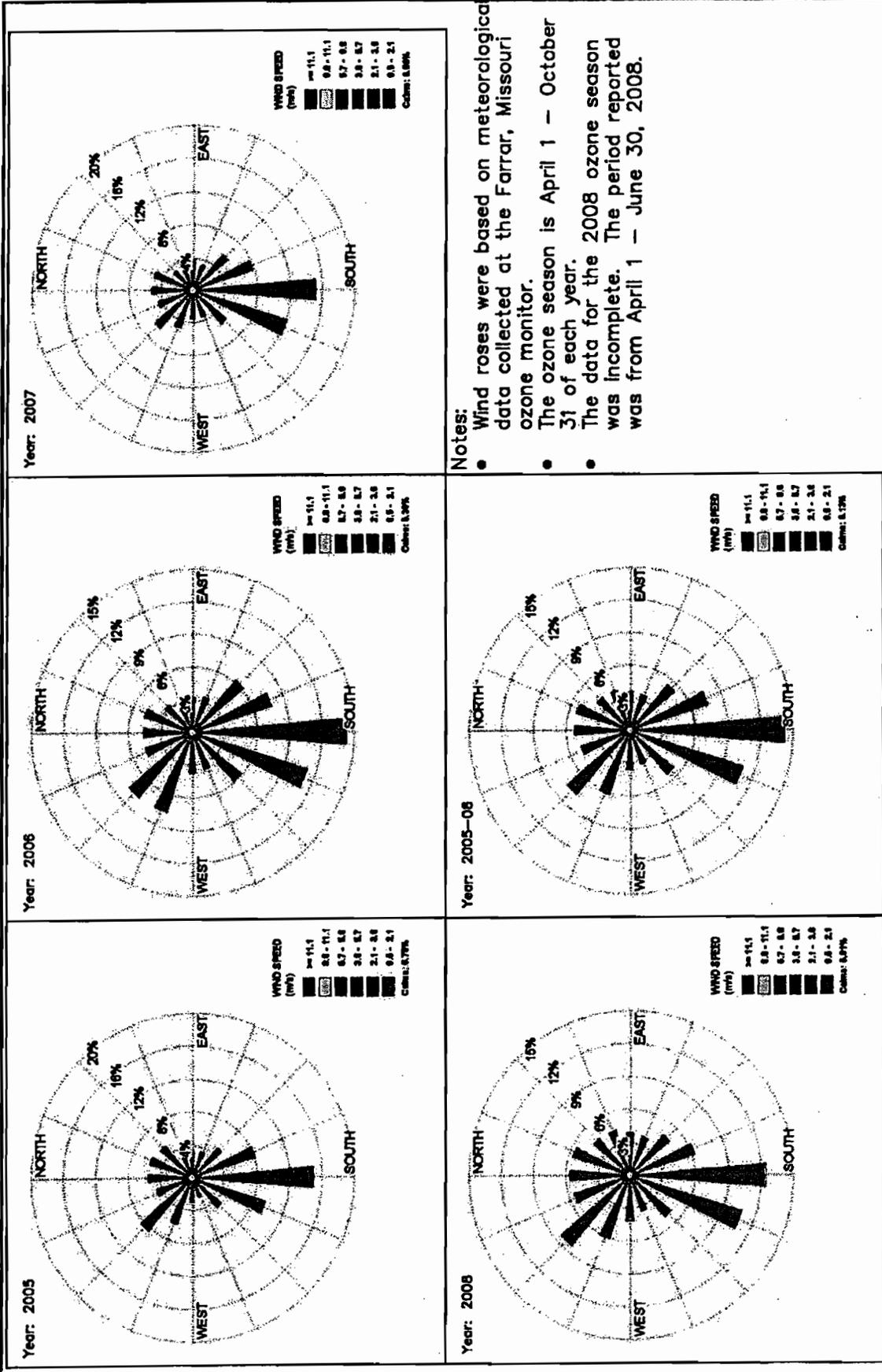
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Missouri  
Cape Girardeau County  
Ozone NAAQS Designation  
0165464

Populated Areas of the  
Neighboring States in the  
Cape Girardeau Region

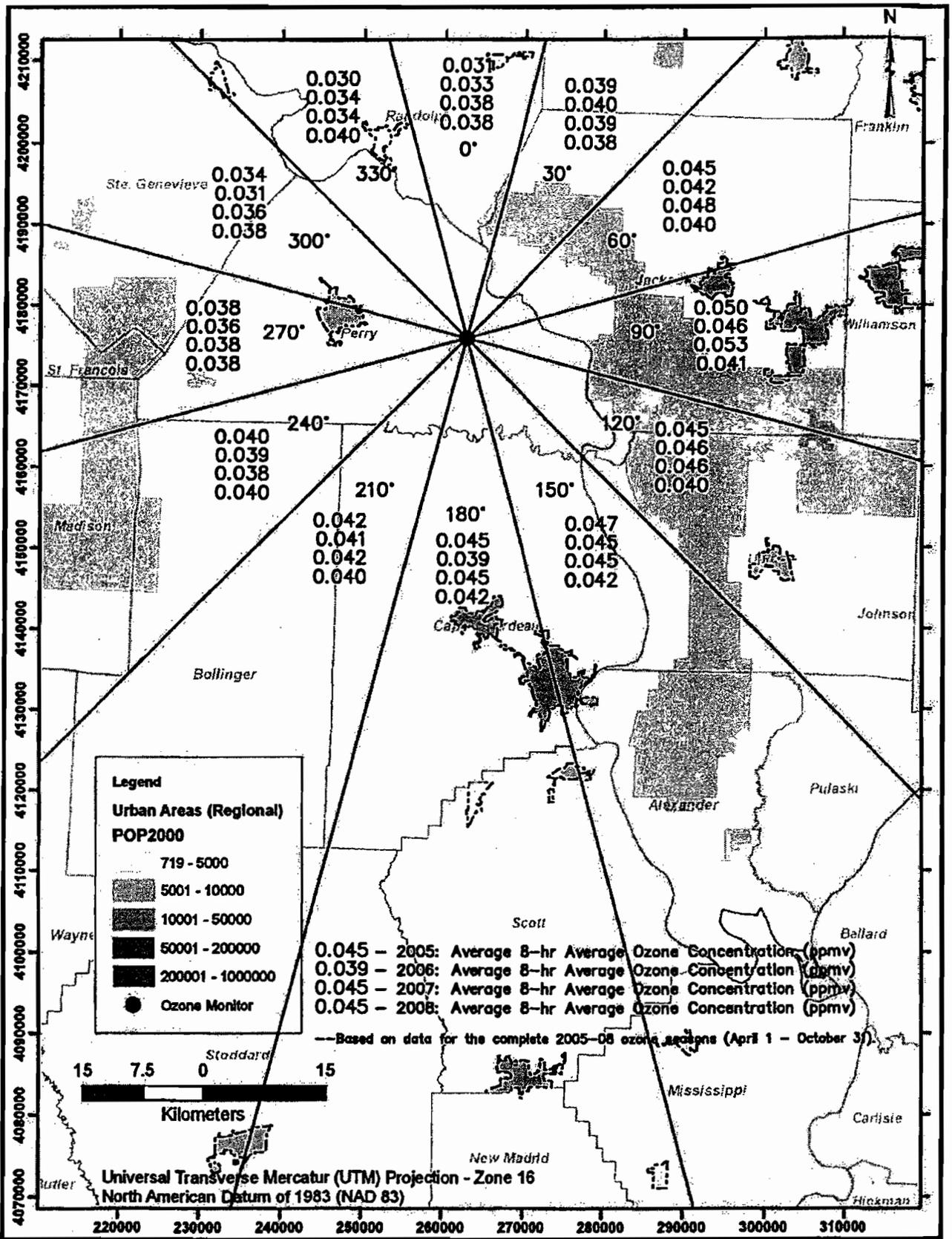
MALCOLM PIRNIE, INC.  
October 2008  
Figure 2



**Notes:**

- Wind roses were based on meteorological data collected at the Farrar, Missouri ozone monitor.
- The ozone season is April 1 – October 31 of each year.
- The data for the 2008 ozone season was incomplete. The period reported was from April 1 – June 30, 2008.

<b>MALCOLM PIRNIE</b> Cape Girardeau County Ozone NAAQS Designation 0165464	Cape Girardeau Wind Roses For the Ozone Seasons of 2005-08 Farrar Ozone Monitor	MALCOLM PIRNIE, INC. November 2008 Figure 3
	Missouri Cape Girardeau County Ozone NAAQS Designation 0165464	

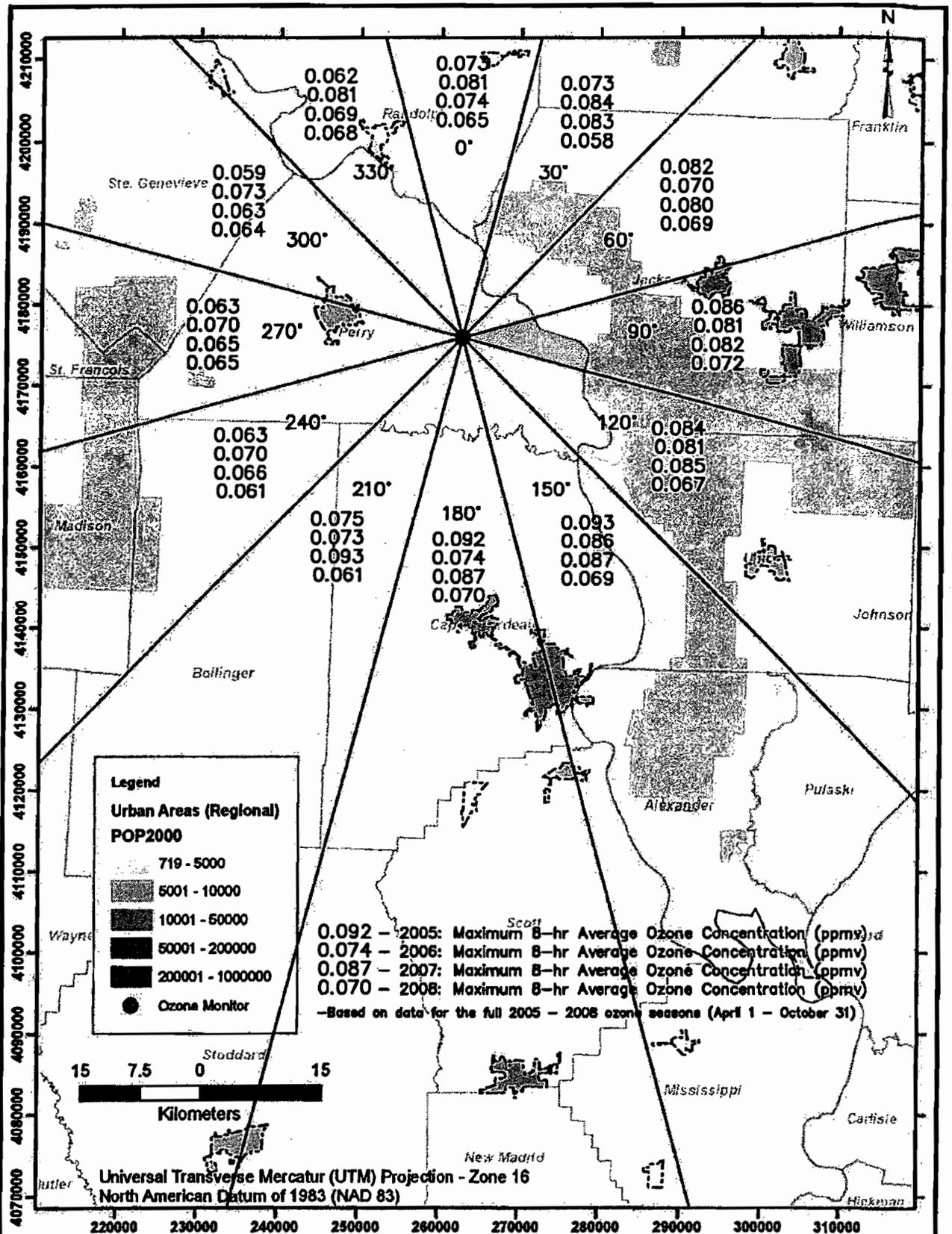


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Missouri  
Cape Girardeau County  
Ozone NAAQS Designation  
0165464

Farrar Ozone Monitor  
Wind Direction Sector  
Analysis: 8-hr Ozone  
Average 8-hr Average By Year

MALCOLM PIRNIE, INC.  
October 2008  
Figure 4

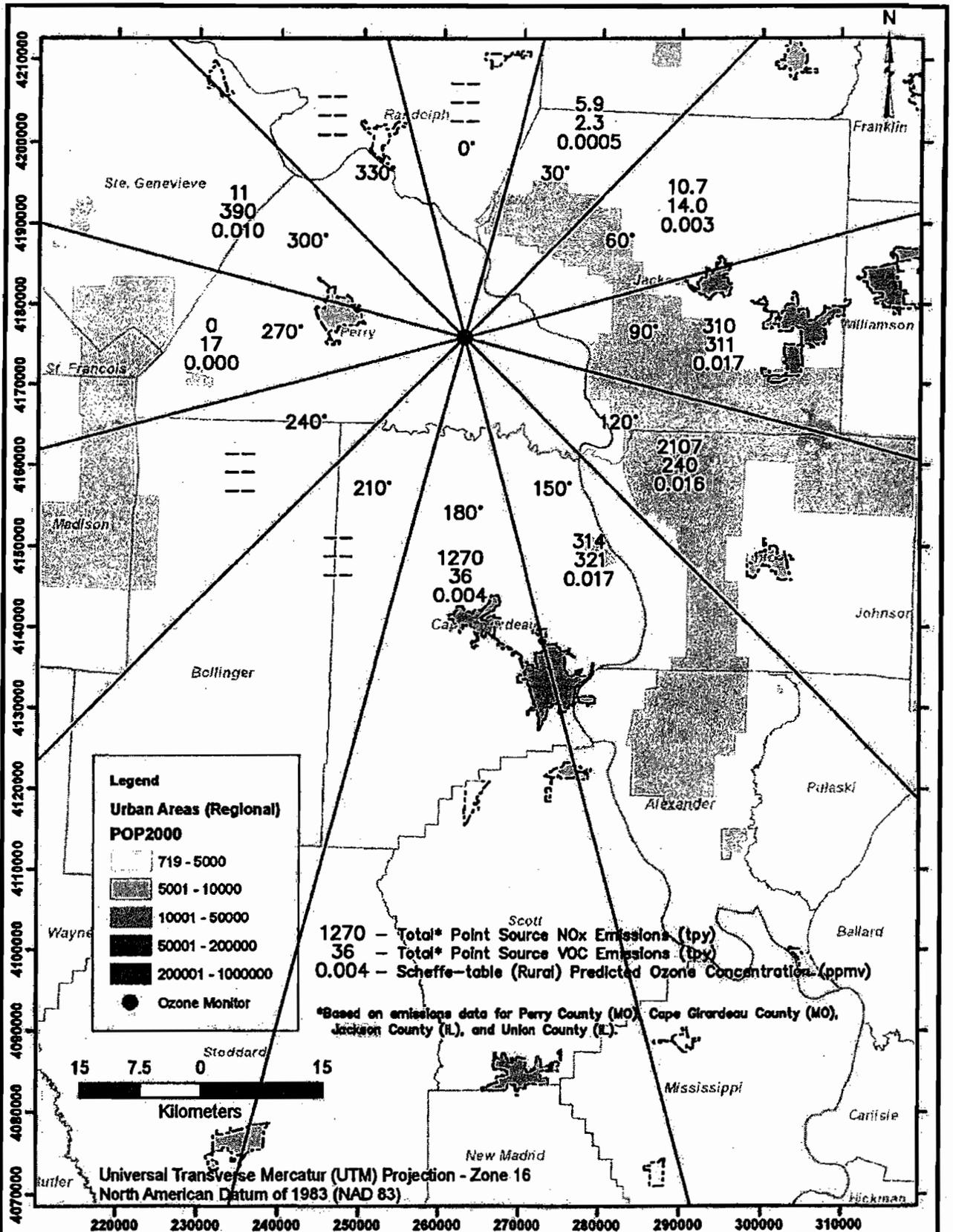


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Missouri  
 Cape Girardeau County  
 Ozone NAAQS Designation  
 0165464

Farrar Ozone Monitor  
 Wind Sector Analysis  
 8-hr Ozone  
 Maximum 8-hr Average By Year

**MALCOLM PIRNIE, INC.**  
 October 2008  
 Figure 5



"Schoch, Marc" <schoch.mk@pg.com>  
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Comments on 2008 Ozone Boundary Recommendation

**MR. JEFF BENNETT**

We would like to submit comments to the MDNR's recommendation regarding Perry County ozone designation.

Myself and Regina Gray represent the Procter & Gamble facility located in Cape Girardeau County, Missouri.

Please contact us if you have questions or comments regarding the attached document.

Sincerely,

Regina Gray  
Family Care  
Plant Manager

Marc Schoch  
Baby Care  
Plant Manager

*ms*

# The 8-Hour Ozone Designation Process

## Procter & Gamble Stakeholder Input – Formal Comment

This memo provides comments to the Missouri Department of Natural Resources, Division of Environmental Quality (MDNR) from Procter & Gamble Manufacturing Company (P&G), located in Cape Girardeau County, MO. P&G Cape Girardeau is not in favor of the agency re-designating Cape Girardeau County as a non-attainment area under the revised 8-hour Ozone Standard.

It is our position that Cape Girardeau County should not be re-classified as a non-attainment area under the recently revised 8-hour Ozone (O<sub>3</sub>) standard. This position is based on the following technical and procedural issues:

- There are insufficient data to define the existing ambient levels of O<sub>3</sub> present in Cape Girardeau County. Thus no data are available to support reclassification of Cape Girardeau to non-attainment at this time.
- There are insufficient data to conclude that Cape Girardeau County *significantly* contributes to the high measured O<sub>3</sub> concentrations at the Farrar ambient O<sub>3</sub> monitor located in Perry County, so Cape Girardeau County should remain in attainment.
- There are insufficient data to support MDNR's position that controlling VOC and NO<sub>x</sub> emission sources in Cape Girardeau County will have a significant effect on *reducing* measured O<sub>3</sub> concentrations at the Farrar ambient O<sub>3</sub> monitor located in Perry County.
- The identifiable point sources are already controlled and the amounts of emissions inventoried are relatively low (see URS report submitted to MDNR with Southeast Missouri Regional Planning and Economic Development Commission comment). Thus, regulations to reduce VOC and NO<sub>x</sub> source emissions in Cape Girardeau County likely will have minimal benefit or effect on O<sub>3</sub> concentration levels in Perry County. P&G has implemented BACT on all NO<sub>x</sub> and VOC sources, including low NO<sub>x</sub> burners on combustion sources.

- Existing sources in Cape Girardeau County have obtained approval from the MDNR for the construction and modification of air emission sources. This approval has required that these sources meet emission limits and standards established by the MDNR, thus already incorporating designs / operating procedures to ensure that potential emissions of VOC and NO<sub>x</sub> are not adversely impacting human health and welfare.
- Existing data indicate that O<sub>3</sub> impacts at the Farrar monitor may also be caused by long range transport of VOC and NO<sub>x</sub> emissions from other large metropolitan areas north, east and south of Cape Girardeau County. MDNR representatives commented about the significance of these emissions on Farrar monitor readings at the August 2008 stakeholders meeting. Controls are already in place to reduce NO<sub>x</sub> and VOC emissions in these areas, see CAIR data from USEPA studies attached below. Although the status of CAIR is currently in flux, because of its national significance, it is sure to be re-instated in some manner to address regional transport issues that are affecting this area. Thus, regulations or controls to reduce VOC and NO<sub>x</sub> source emissions in Cape Girardeau County likely will have minimal benefit or affect on O<sub>3</sub> concentration levels in Perry County.
- Based on MDNR's analysis in their recommendation for defining Perry County as non-attainment, the St Louis area can be seen to have some impact on the readings at the Perry County monitor. Thus improvements to ambient air quality in St Louis will have a positive impact on the Perry County monitor readings, reducing the need for including Cape Girardeau County in the non-attainment region.
- Average 8-hour average O<sub>3</sub> concentrations for each individual year (i.e. 2005, 2006, 2007 and 2008 hourly O<sub>3</sub> and wind direction data as measured at the Farrar monitor) by wind direction sector (30 degree sectors with 0 degrees representing true north) show that the east-northeast through southwest wind directions result in the highest average 8-hour average O<sub>3</sub> concentrations at the Farrar monitor located in Perry County. Additionally the data indicate that concentrations above 75 parts per billion occur when the wind is blowing from nine of the twelve wind direction sectors (i.e., 0, 30, 60, 90, 120, 150, 180, 210, 330 degrees). The data also suggest that measured O<sub>3</sub> concentrations at the Farrar monitor in Perry County may be influenced by long range transport of emissions from major metropolitan areas located in these directions and non-man made sources (biogenic), and may not be significantly influenced by emission sources located in Cape Girardeau County. For

point of reference the City of Cape Girardeau lies within the 150 and 180 degree sectors.

- To better illustrate the impact of large urban areas on regional monitors, we offer the following discussion. Existing monitoring data show that O<sub>3</sub> concentrations increase as you move from south to north across the City of St. Louis, thus simulating the effects of urban sources on the formation of O<sub>3</sub>. The data show that O<sub>3</sub> concentrations over a six (6) year period increased from 6 to 12 ppb from the southern monitor to the northern monitor. This would suggest that a large urbanized area such as St. Louis (approximately 2,800,000 people) is increasing the potential for O<sub>3</sub> formation by around 10% or less depending on atmospheric conditions, etc. In trying to predict or establish the potential effects of the City of Cape Girardeau, with a population less than 50,000 people, on the formation of O<sub>3</sub> concentrations at the Farrar monitor, the potential change in O<sub>3</sub> concentration of less than 1% could be anticipated based on a review of the St. Louis monitoring data. If a large population area results in a potential change in the O<sub>3</sub> concentration by less than 12 ppb, than a smaller populated area such as Cape Girardeau might show a potential affect or change in O<sub>3</sub> concentrations of less than 1 ppb. Thus, the City of Cape Girardeau is not likely to be a major contributor or *significant contributor* to the formation of O<sub>3</sub>, and future regulations on the sources associated with the County of Cape Girardeau will have almost no effect on the concentrations being measured at the Farrar Monitor located in Perry County.
- An analysis was performed using the VOC/NO<sub>x</sub> Point Source Screening Tables, developed by Richard D. Scheffe for the U.S. EPA in September 1988. This analysis provides a simple, but conservative (high ozone increment predictions) screening procedure for calculating O<sub>3</sub> increment based on the ratio of VOC/NO<sub>x</sub> emissions in tons/year. The O<sub>3</sub> increment estimates produced from this analysis are conservative predictions when compared to an actual event. This technique provides a simple, conservative and non-resource intensive tool for estimating O<sub>3</sub> increment. An estimate of predicted O<sub>3</sub> increment by wind sector using the VOC/NO<sub>x</sub> Point Source Screening Tables using NO<sub>x</sub> and VOC emissions data provided by the MDNR and the Illinois Environmental Protection Agency (IEPA) for counties surrounding Perry County shows that predicted O<sub>3</sub> increment could potentially increase by 17 ppb and 4 ppb in wind direction sectors 150° and 180° (winds blowing from the southeast and south), respectively. Additionally, O<sub>3</sub> increment for the east and southeast wind direction sectors were calculated to be 17 ppb and 16 ppb, respectively. The data show that VOC and NO<sub>x</sub> sources other

than those located in Cape Girardeau County are potentially influencing the O<sub>3</sub> concentrations at the Farrar Monitor. Therefore, controlling VOC and NO<sub>x</sub> emission sources located in Cape Girardeau County is not likely to have a substantial impact on concentrations at the Farrar monitor since elevated O<sub>3</sub> concentrations have been shown to occur from multiple wind direction sectors.

- Because of the rural nature of Cape Girardeau County and extensive vegetation, it is very important that the MDNR have a better understanding of the potential affect of biogenic sources on the formation of O<sub>3</sub> in rural counties (i.e., Cape Girardeau County). The California Regulatory Agency has established a study group and has been collecting data in southern California to determine the affect of biogenic sources on O<sub>3</sub> formation in southern California. It is recommended that the MDNR should also form a study group to investigate the feasibility of collecting similar data so that a better understanding of the overall affect biogenic sources located in Cape Girardeau and surrounding Counties have on O<sub>3</sub> concentrations. It is important to understand the relationship between biogenic and man-made VOC and NO<sub>x</sub> sources, thus better defining the source categories where reductions (if feasible) can be proposed so that future O<sub>3</sub> concentrations can be lowered at the Farrar monitor in Perry County. MDNR representatives explained this issue in the August 2008 meeting with local stakeholders. Those individuals indicated this topic was to be addressed as part of their analysis of designation.
- From the MDNR's website per news release 385 dated June 26, 2008, MDNR's director Doyle Childers' has stated that the agency is seeking to join a lawsuit to halt new nationwide federal ozone restrictions. Mr. Childers also stated "No one disputes the importance of maintaining good air quality for the health of Missourians. We believe the new federal regulation will place thousands of Missouri jobs at risk, jeopardizing income for Missouri families, and will result in unwarranted and burdensome regulations on industry". Residents of Cape Girardeau County express the same concern. MDNR should minimize the number of counties designated non-attainment until this issue is resolved.
- Definition of C/MSA may not have been properly defined and/or utilized for Cape Girardeau County. The Census Bureau has officially acknowledged that Cape Girardeau County does not meet the qualifications for a Metropolitan Statistical Area (MSA), let alone a C/MSA.
- US EPA has not yet promulgated rules for defining the extent of non-attainment areas. MDNR used criteria for defining the extent of the non-attainment area

based on guidance provided in support of the initial 1997 8-hour O<sub>3</sub> standard, which may not be appropriate for the revised 8-hour O<sub>3</sub> standard. MDNR should request guidance from the EPA that support the revised 8-hour standard.

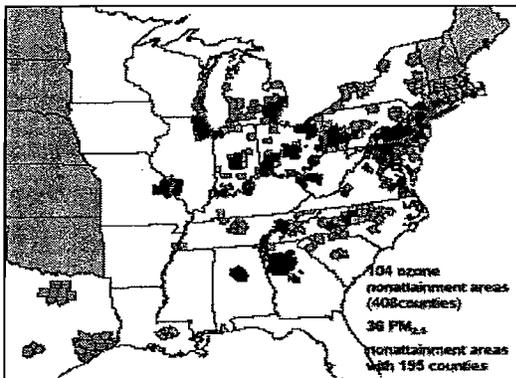
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- Designation of an area as nonattainment may make it difficult to retain and attract new businesses to the region due to the increased regulatory requirements. Additionally, new projects at existing sources will be forced to install and operate additional controls. This may impact P&G's facility in Cape Girardeau County by losing opportunities for expansion. Other sites in the U.S. may be more attractive for expansion if Missouri has increased costs and longer time to permit and install new emission sources. This change will likewise affect the economic development in the area by reducing future tax revenues and job opportunities for residents. Thus, the designation of a region as nonattainment may restrict or slow economic growth.
- In applying the 11 criteria provided by USEPA, MDNR was able to show correlation, however limited, to 2 of those criteria. If we were to apply a similar procedure with regard to classification of PM attainment, meeting two of the eleven criteria is certainly not evidence of a significant contribution of a county on an adjacent county's monitor readings. In fact, designating Cape Girardeau as an MSA is without support in the definitions of MSA provided by the Census Bureau or

USEPA's guidance. As Cape Girardeau is not an MSA, this would preclude even beginning the analysis of whether it should be included in the non-attainment area.

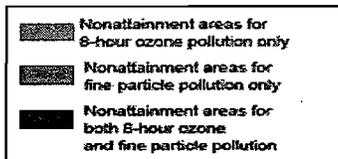
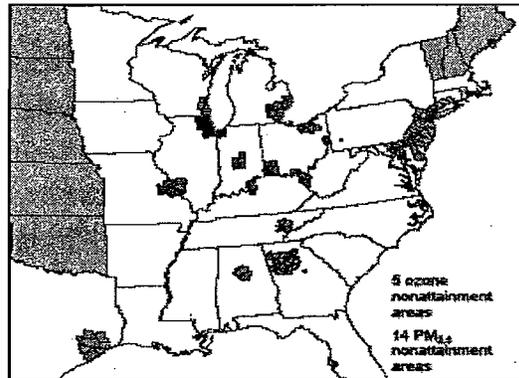
For the reasons set forth above, it is our position that Cape Girardeau County should be classified as attainment.

### Ozone and Particle Pollution: CAIR, together with other Clean Air Programs, Will Bring Cleaner Air to Areas in the East - 2015

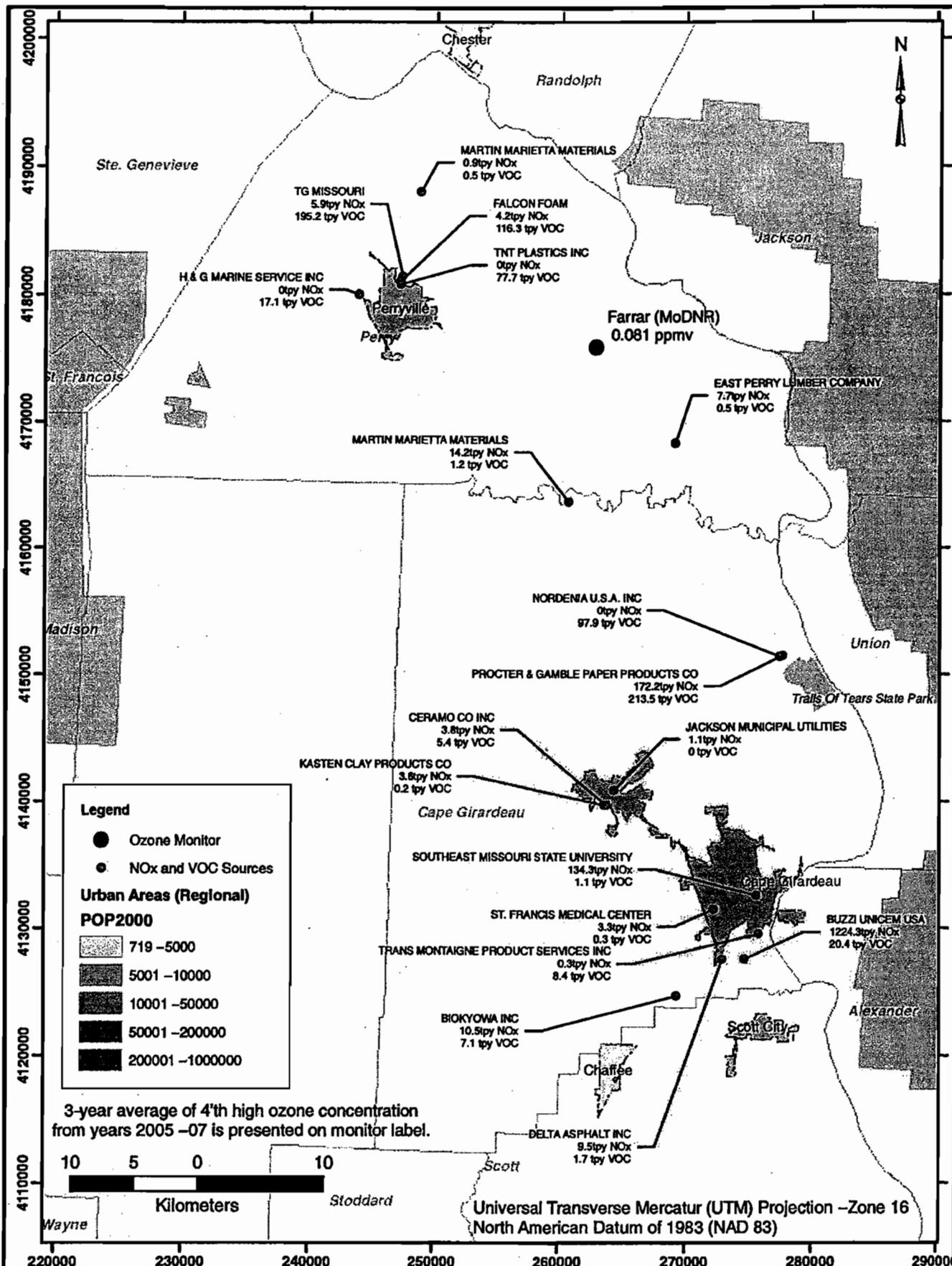
Ozone and Fine Particle Nonattainment Areas (April 2005)



Projected Nonattainment Areas in 2015 after Reductions from CAIR and Existing Clean Air Act Programs

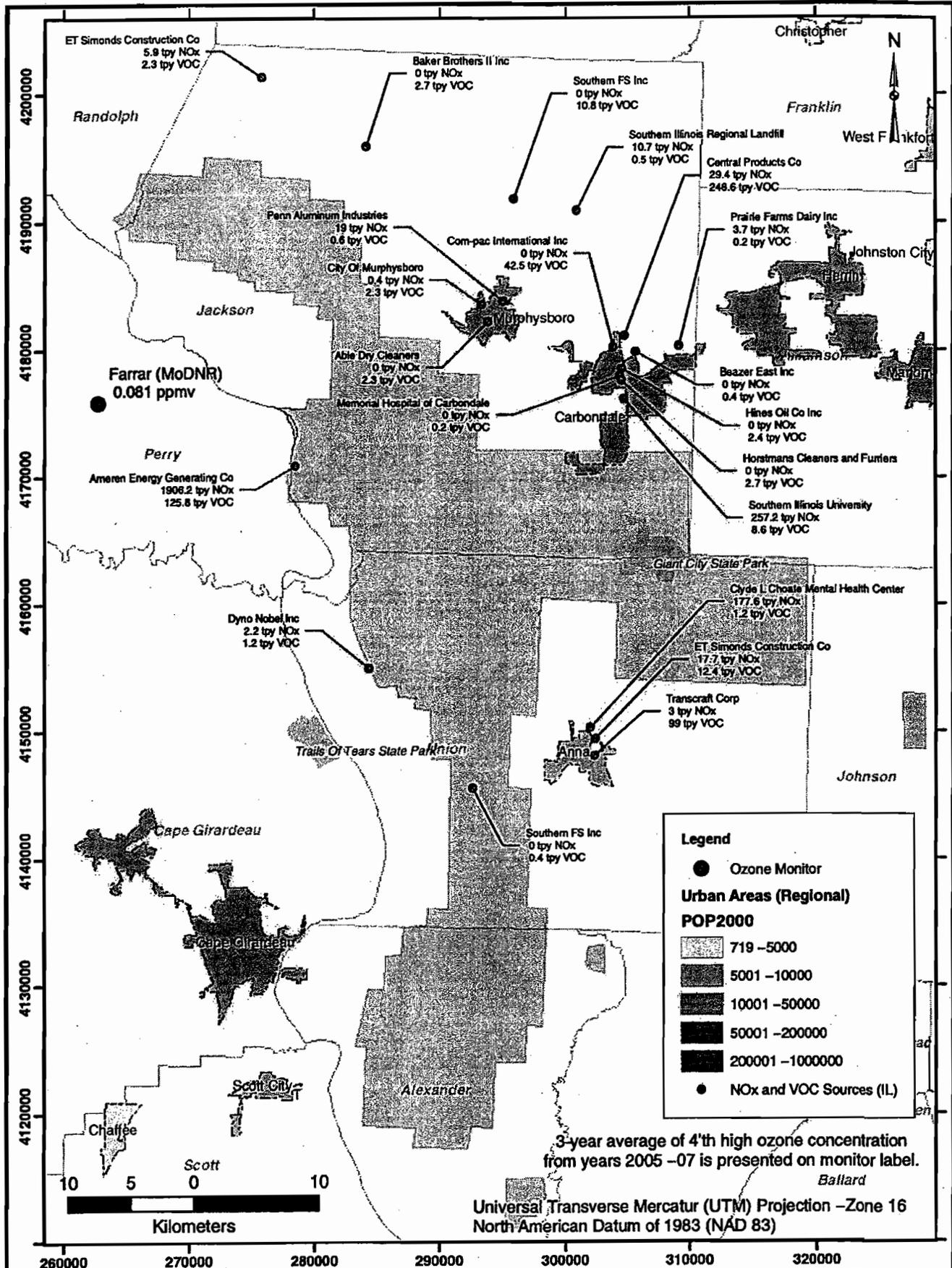


Projections concerning future levels of air pollution in specific geographic locations were estimated using the best scientific models available. They are estimations, however, and should be characterized as such in any description. Actual results may vary significantly if any of the factors that influence air quality differ from the assumed values used in the projections shown here.

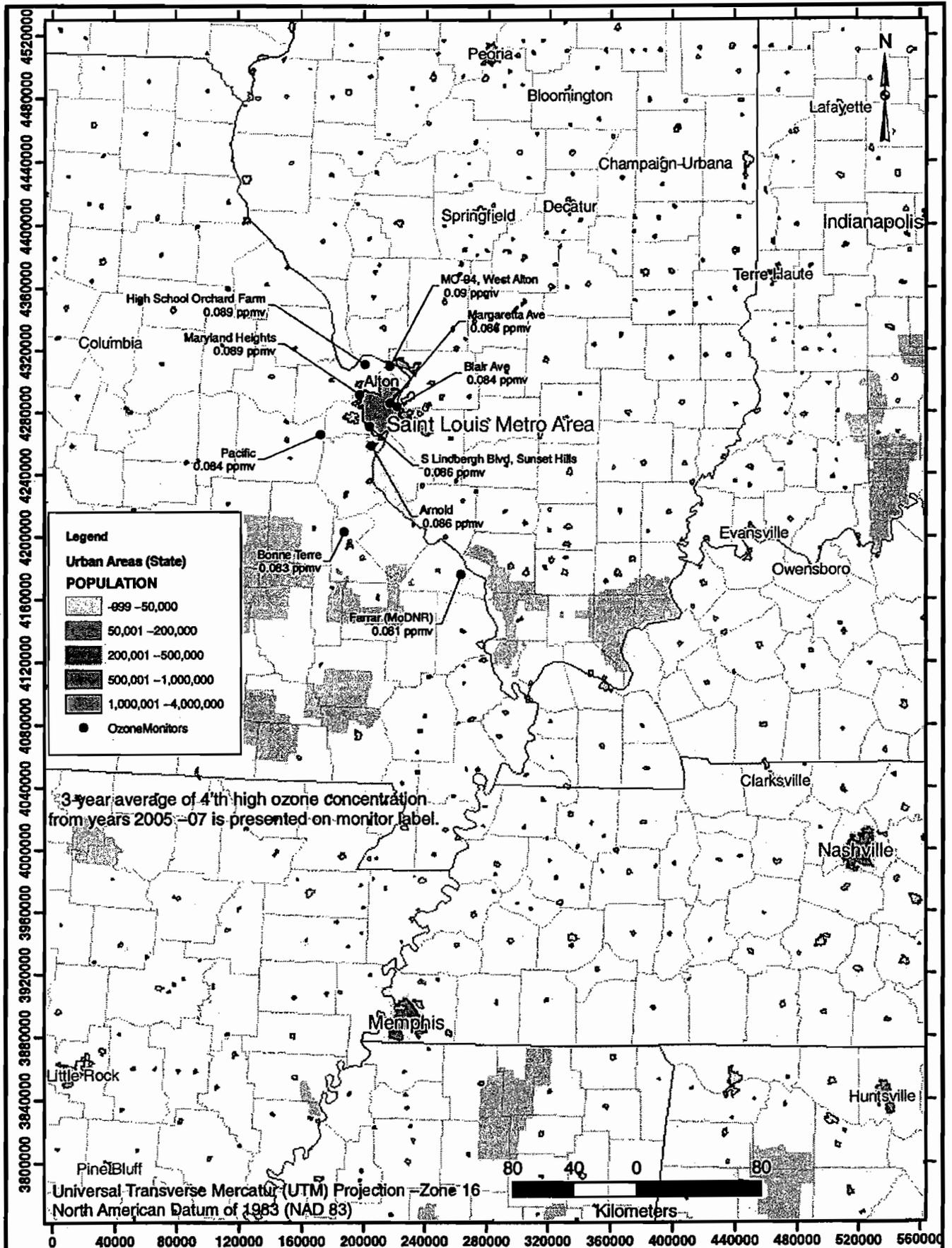


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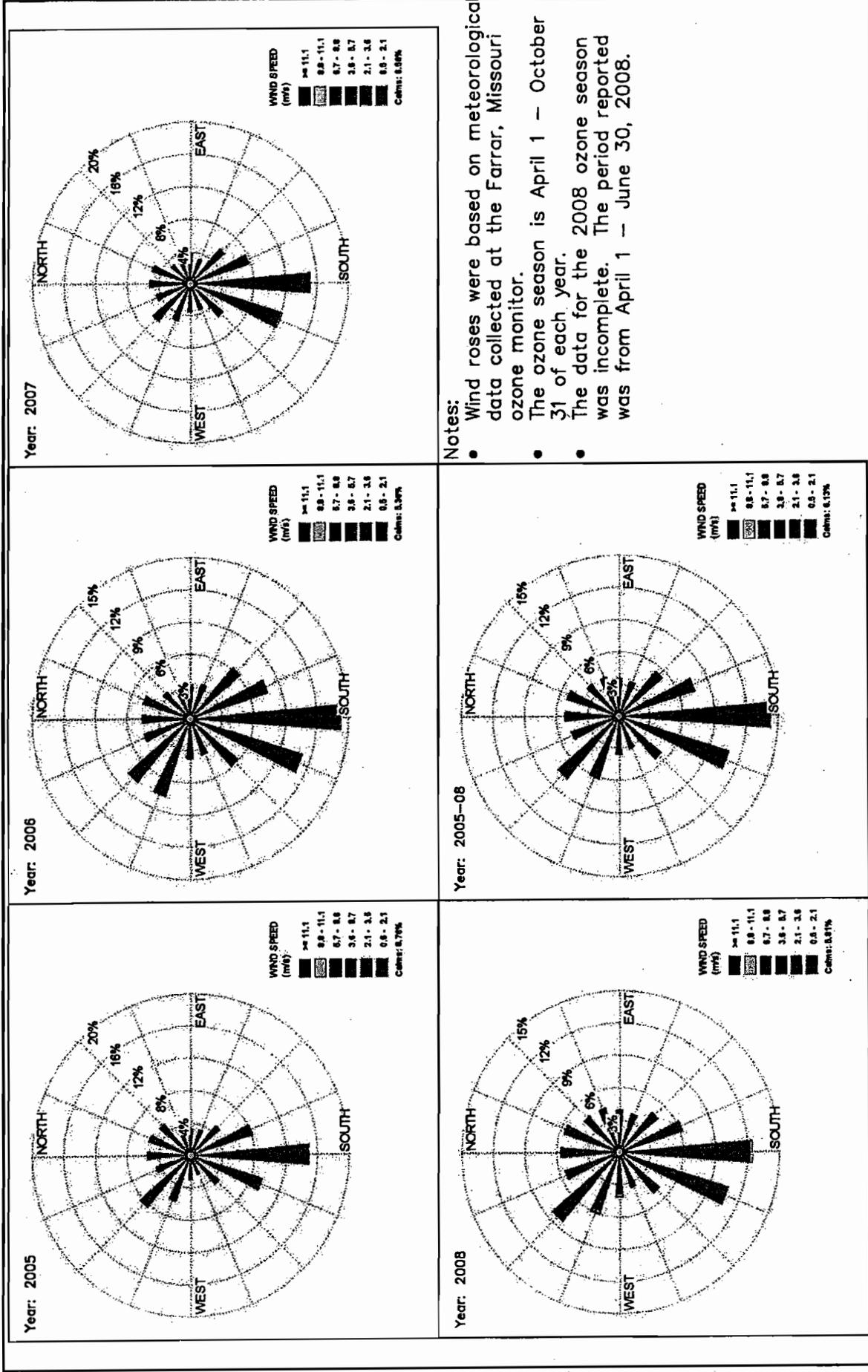
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Missouri  
 Cape Girardeau County  
 Ozone NAAQS Designation  
 0165464

Populated Areas of the  
 Neighboring States in the  
 Cape Girardeau Region

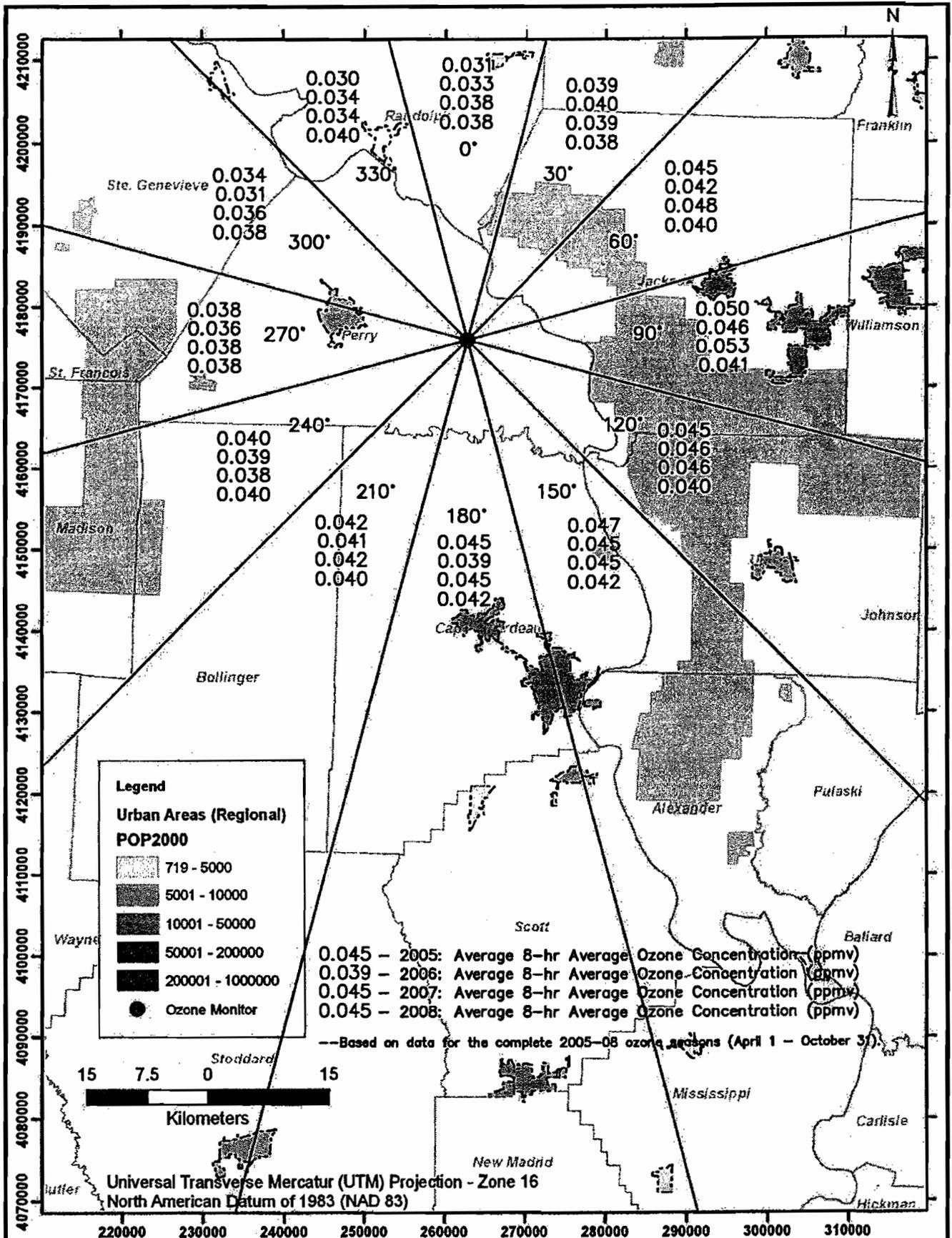
MALCOLM PIRNIE, INC.  
 October 2008  
 Figure 2

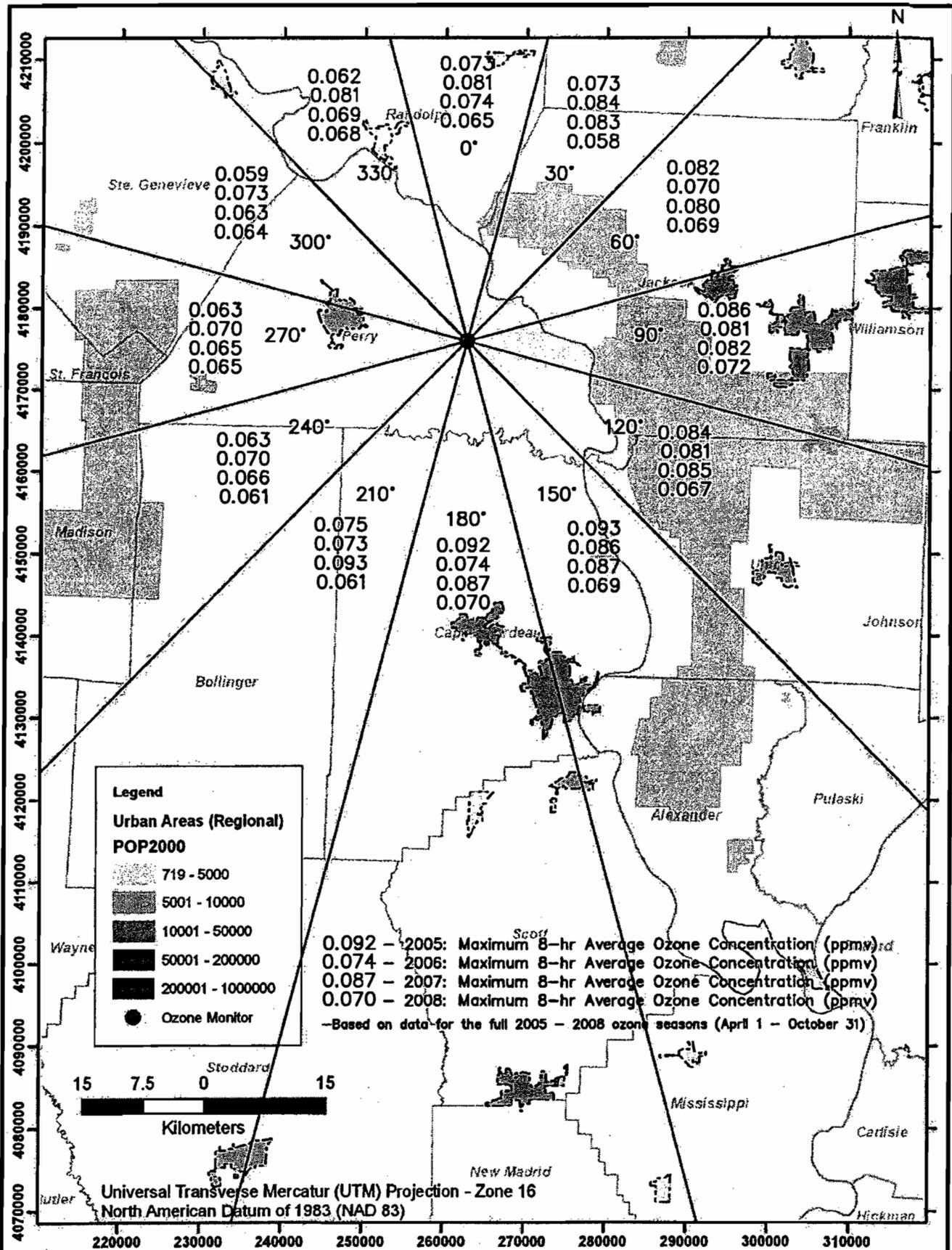


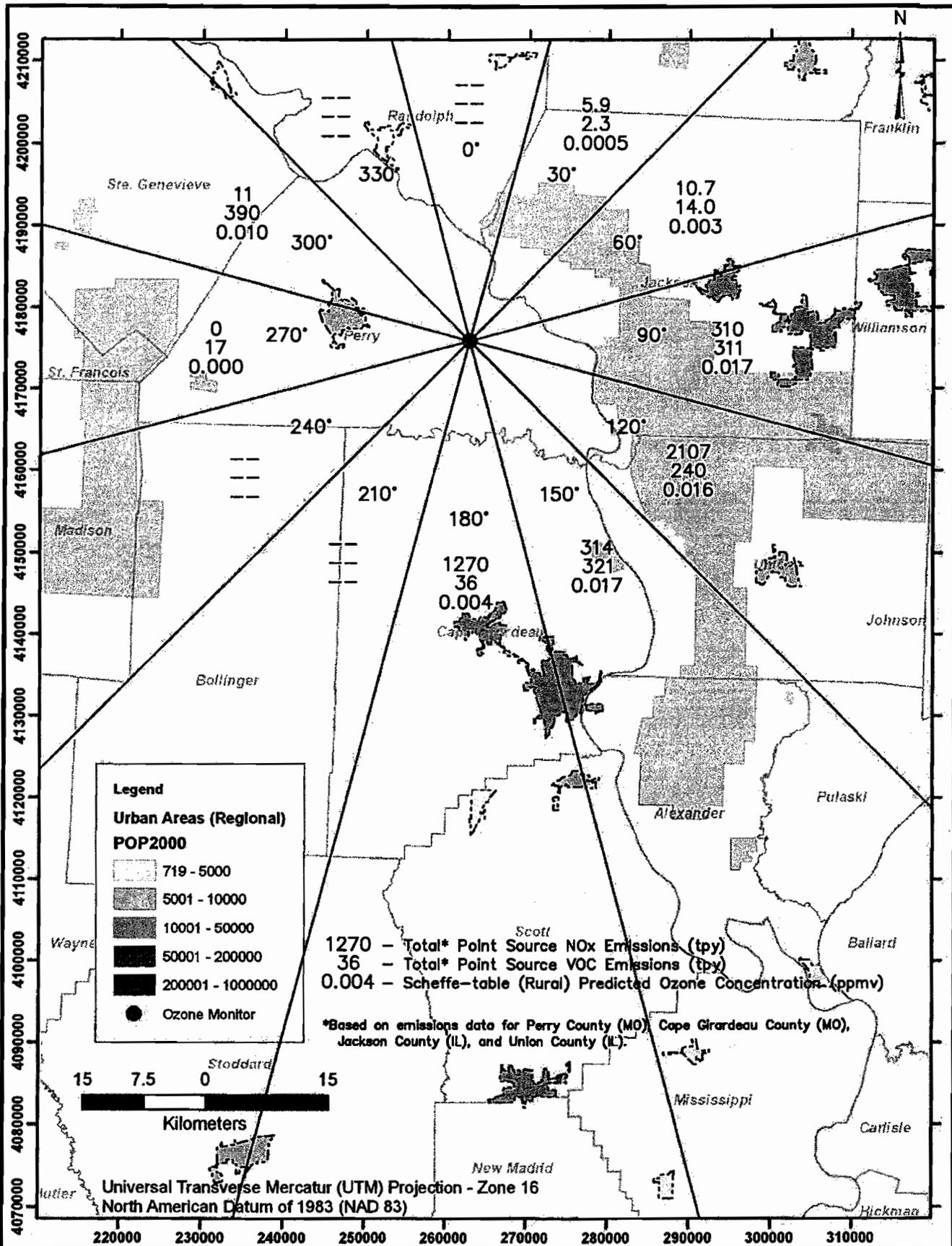
**Notes:**

- Wind roses were based on meteorological data collected at the Farrar, Missouri ozone monitor.
- The ozone season is April 1 – October 31 of each year.
- The data for the 2008 ozone season was incomplete. The period reported was from April 1 – June 30, 2008.

<b>MALCOLM PIRNIE</b> Missouri Cape Girardeau County Ozone NAAQS Designation 0165464	Cape Girardeau Wind Roses For the Ozone Seasons of 2005-08 Farrar Ozone Monitor	MALCOLM PIRNIE, INC. November 2008 Figure 3









*Southeast Missouri*  
REGIONAL PLANNING & ECONOMIC  
DEVELOPMENT COMMISSION

1 WEST ST. JOSEPH ST. • P.O. BOX 366 • PERRYVILLE, MO 63775

(573) 547-8357 • FAX (573) 547-7283

E-MAIL [semorpc@semorpc.org](mailto:semorpc@semorpc.org) • WEBSITE [www.semorpc.org](http://www.semorpc.org)

H. Weldon Macke  
Chairman

John Singleton  
Vice Chairman

Albert Fufts  
Treasurer

Larry Kennon  
Secretary

Chauncy Buchheit  
Executive Director

September 10, 2008

Mr. James L. Kavanaugh, Director  
Air Pollution Control Program  
Missouri Department of Natural Resources  
P. O. Box 176  
Jefferson City, MO 65102

Dear Mr. Kavanaugh:

Since the announcement of the new 8-Hour Ozone Standard by the U. S. Environmental Protection Agency, and the initiation of the process for designating Nonattainment Areas (NAs) based on this standard, Ste. Genevieve and Perry Counties have taken an active role in addressing this question. They went to the extent of pooling their resources and hiring a consultant to provide a professional analysis of the questions surrounding the issue. The report that is enclosed is the result of that work.

This report speaks for itself and I won't belabor it here. I did, however, want to take a few minutes to stress a few things. I will stick with that which I know, the counties themselves.

First, I need to say that both Ste. Genevieve and Perry Counties have absolutely no history of involvement with the St. Louis Metropolitan Area. The simple fact is that, if these counties get melded into a group that includes the much more populous Metropolitan Area, it is a foregone conclusion that funding for any projects in the rural counties will be lost to metropolitan projects that can show a much greater impact. Both of these counties do have a history of working together, and within the larger Southeast Missouri Region, to address problems.

Second, we are addressing this issue on a regional level, and we believe we can do so more effectively than would be possible if Ste. Genevieve and/or Perry Counties were "rolled into" the larger metropolitan NA. We fully support air quality improvement. We do not, however, think that grouping a rural area into the metropolitan area would be effective in promoting our mutual goals. Indeed, we believe that including Ste. Genevieve and Perry Counties with those counties that are a part of the existing St. Louis ozone nonattainment area would complicate air quality planning. For example, complying with transportation conformity requirements would be unwieldy with two regional planning commissions (East-West Gateway Coordinating Council and the Southeast Missouri Regional Planning Commission) trying to coordinate a single conformity process.

Mr. James L. Kavanaugh  
September 10, 2008

Page 2

Third, and I suppose the heart of the matter, is that these rural areas are insignificant to the overall problem. The fact that the monitors are located within the counties derives from DNR's desire for an "upwind" background monitor. Setting aside, for now, the question of whether or not we are truly monitoring background, or material transported from some remote location, or locally produced materials, the simple fact is that we can easily identify well into the 90<sup>th</sup> percentile of our point source emissions, and all of them are tightly regulated now. The Southeast Missouri Regional Planning Commission has recently authorized the creation of a Regional Air Quality Committee, and we will be using that vehicle to investigate what can be done about mobile and area sources of ozone precursor emissions.

I would hope that the conclusions from this report would carry the day and Ste. Genevieve and Perry Counties can be designated as Unclassified. Since I understand that the presumption is that a monitor measuring nonattainment means the county is in nonattainment status, I accept that this will probably be the case. Our "fallback position," then, would be to be designated as a Nonattainment Area but with the option of developing plans (similar to an Early Action Compact) that are suitable for a rural area such as ours pending our committee's review and recommendations. It is our understanding that, if this alternative is available, it would delay the effectiveness of a nonattainment designation, hopefully until further controls on sources upwind of us reduce precursor emissions to the point that we are attaining the standard.

Thank you for your time and attention.

Sincerely,



Chauncy Buchheit  
Executive Director

CB/kh

Enclosure

cc: Mr. Doyle Childers, Director, Missouri Department of Natural Resources  
Ms. Leanne Tippet-Mosby, Deputy, Environmental Quality, MDNR  
Mr. Jeffrey Bennett, Air Pollution Control Program, MDNR

# Final Report

## EVALUATION OF FACTORS RELATED THE EIGHT HOUR OZONE ATTAINMENT STATUS FOR PERRY COUNTY & STE. GENEVIEVE COUNTY

*Prepared for*  
Southeast Missouri Regional Planning Commission  
1 West Joseph Street  
Perryville, Missouri 63775

September 9, 2008

*Prepared by*

**URS**

URS Corporation  
1001 Highlands Plaza Drive West  
St. Louis, MO 63110  
(314) 429-0100

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## Executive Summary

On March 12, 2008, the United States Environmental Protection Agency (EPA) adopted a new National Ambient Air Quality Standard (NAAQS) for ozone (O<sub>3</sub>). By adopting this new standard, the agency will commence a chain of events to ensure that all areas of the country meet the new NAAQS. These events include:

- Identifying areas that are not attaining the new NAAQS;
- Identifying areas that may contribute to nonattainment of the NAAQS in other areas;
- Developing plans to reduce emissions such that the NAAQS can be met;
- Implementing the plans that are developed, and culminating in attainment of the NAAQS.

This entire process can take a minimum of eight years and, depending on how far over the NAAQS ozone levels are, many more years.

In Missouri, based on the most recent complete monitoring data, all but one monitoring site in the state presently exceeds the new O<sub>3</sub> NAAQS. Included in the sites that presently measure O<sub>3</sub> levels above the NAAQS are sites in Bonne Terre (Ste. Genevieve County on the border of St. Francois County) and Farrar (Perry County).

Neither Ste. Genevieve nor Perry County had monitoring data in excess of the previous O<sub>3</sub> NAAQS. Now, the counties find themselves in the position of having to address the potential they might be found to not be in attainment of the new NAAQS. While a simple analysis would conclude that each of the two counties has a monitor that has recorded O<sub>3</sub> levels in excess of the new NAAQS, leaders in each of the counties believe that the question is not a simple one. This is because if the counties are designated as not attaining the new NAAQS, it not only means that residents of the counties may be breathing air that is not healthful; but also, it means that actions must be considered and possibly taken to reduce emissions that are precursors to O<sub>3</sub>. These emissions include volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>). Leaders in the counties want their citizens to breath air that meets EPA standards. However, these are rural counties with limited emissions of O<sub>3</sub> precursors and being designated as not attaining the O<sub>3</sub> NAAQS will start a statutorily driven process which may include mandatory controls that would have little or no impact on the attainment of the O<sub>3</sub> NAAQS.

For this reason, the Southeast Missouri Regional Planning Commission (SEMORPC), which includes both Ste. Genevieve and Perry Counties, retained URS to evaluate whether the counties should be designated as not attaining the new O<sub>3</sub> NAAQS.

The governor of Missouri, relying on advice from the Missouri Department of Natural Resources (MDNR) has the opportunity to recommend to the EPA an appropriate attainment status for each county in the state. This recommendation must be made to

the EPA by March 12, 2009. The MDNR is expected to present its recommendation to the Missouri Air Conservation Commission (MACC) late in 2008 for their consideration.

This report is intended to provide information to SEMORPC to support their recommendations to the MDNR, the MACC and the governor of Missouri to support regarding the attainment status of Perry and Ste. Genevieve based upon a thorough science and policy based analysis.

1. Even though the governor of the state must make recommendations to EPA by March 12, 2009, there are no published criteria as yet as to what considerations the EPA will use in the designation process. Therefore, this report relies on the guidance issued by the EPA as part of the last process to designate O<sub>3</sub> nonattainment areas in 2003. At that time, the EPA identified eleven criteria to be considered when identifying nonattainment areas.

Each of these criteria are addressed in the report in relation to Ste. Genevieve and Perry Counties.

**1. Emissions and air quality in adjacent areas (including adjacent C/MSAs)**

The emissions data for Ste. Genevieve and Perry Counties clearly show that the emissions generated in the counties are small when compared to the existing St. Louis NA; and that the emissions patterns are indicative of the rural nature of the area.

**2. Population density and degree of urbanization including commercial development (significant difference from surrounding areas)**

The population density in counties within the St. Louis NA is significantly greater than it is in Ste. Genevieve and Perry Counties. These data support a recommendation to not include Ste. Genevieve or Perry Counties in the St. Louis NA.

**3. Monitoring data representing ozone concentrations in local areas and larger areas (urban or regional scale)**

Monitoring data show that while the monitors in Ste. Genevieve and Perry Counties show ozone levels slightly in excess of the new ozone NAAQS, the levels appear to be decreasing and with expected future emissions reductions due to requirements that have not yet been implemented, the monitors will likely show attainment of the ozone NAAQS in the future without the counties being designated as nonattainment.

**4. Location of emission sources (emission sources and nearby receptors should generally be included in the same nonattainment area)**

Ozone precursor emission sources in Ste. Genevieve Count and Perry Counties that emit more than 1 ton per day in the ozone season are at least 19 miles from the Bonne Terre monitor and at least 28 miles from the Farrar monitor. These sources are not local to the monitors in Ste. Genevieve and Perry Counties and, by that measure, these sources are not local to the West Alton and Orchard Farms monitors that measure the

highest levels in the St. Louis nonattainment area and are 80 or more miles from sources in Ste. Genevieve and Perry Counties.

#### **5. Traffic and commuting patterns**

DNR staff have noted the importance of "connectivity" as measured by factors such as commuting patterns in establishing whether areas that are outside an MSA should be considered for inclusion in an MSA based nonattainment area. The commuting patterns show that Perry and Ste. Genevieve Counties are not well connected to the St. Louis MSA and therefore they should not be included in a St. Louis nonattainment area.

#### **6. Expected growth (including extent, pattern and rate of growth)**

2000 to 2007 population growth in Ste. Genevieve and Perry Counties was less than that of each of the Missouri counties in the proposed NA, except for St. Louis City. Population growth does not make Ste. Genevieve or Perry Counties a candidate for inclusion in the St. Louis eight-hour ozone NA.

#### **7. Meteorology (weather/transport patterns)**

While it is difficult to draw extensive conclusions from observational data analyses, one can learn several things from evaluation of the data. First of all, while ozone concentrations at the Blair and Arnold monitoring sites in the St. Louis NA increase under southerly winds, the same occurs at Bonne Terre and Farrar. Without background sites to the south of Ste. Genevieve and Perry Counties to quantify regional transport, it can be concluded that a potentially significant regional contribution exists to the south. The increase at St. Louis area monitors under southerly winds cannot be specifically attributed to Ste. Genevieve and Perry Counties.

Several analyses indicate transport into Ste. Genevieve and Perry Counties contributing to elevated ozone concentrations at the Bonne Terre and Farrar monitors. Both CPF plots and back trajectories indicate high ozone levels originating in areas to the south and east of the monitors, particularly the Ohio River Valley. This transport is especially evident in the subset of days with high wind speeds as well as high ozone. Trajectories ending on these days show a consistently fast flow transporting air masses (and their constituents) from the Gulf Coast into Ste. Genevieve and Perry Counties.

#### **8. Geography/topography (mountain ranges or other air basin boundaries)**

Geographical features by themselves are not a major influence on ozone levels in the St. Louis region or in Ste. Genevieve and Perry Counties.

#### **9. Jurisdictional boundaries (e.g., counties, air districts, existing one-hour nonattainment areas, Reservations, etc.)**

The Southeast Missouri Regional Planning Commission (SEMORPC) requested that this report be prepared because they represent Ste. Genevieve and Perry Counties (as well as other southeast Missouri counties). Regional planning for the existing ozone nonattainment area is the responsibility of the East West Gateway Council of Governments (EWGCOG). This existing jurisdictional linkage sets Ste. Genevieve and

Perry Counties apart from the counties that presently comprise the St. Louis ozone nonattainment area. The SEMORPC represents Ste. Genevieve and Perry Counties.

The SEMORPC is presently in the process of constituting an Air Quality Advisory Committee similar to that established by the EWGCOG. This committee, as a part of the SEMORPC, will be well suited to deal with air quality planning issues in Southeast Missouri.

#### **10. Level of control of emission sources**

Within Ste. Genevieve and Perry Counties, major new sources or major modifications permitted since 1975 have been subject to Best Available Control Technology (BACT) emission limitations for ozone precursors. BACT represents a more stringent level of control than Reasonably Available Control Technology (RACT) limits applied to existing sources in the existing nonattainment area. Future major new source construction and all modifications to existing sources in the counties will be subject to more restrictive BACT limits. Thus the existing and future levels of control for ozone precursors support the exclusion of Ste. Genevieve and Perry Counties from an ozone nonattainment area.

#### **11. Regional emission reductions (e.g., NO<sub>x</sub> SIP call or other enforceable regional strategies)**

The DNR has adopted NO<sub>x</sub> emissions control requirements for Electric Generating Units (EGUs) located outside of the proposed eight-hour ozone NA. These reductions were initiated as a result of EPA's NO<sub>x</sub> SIP Call, a federal initiative designed to reduce the impact of emissions transported from one area to another. There are no EGUs affected by this requirement in Ste. Genevieve or Perry Counties; however, this regional requirement demonstrates how the DNR can put in place requirements on existing sources outside of the St. Louis ozone NA if it is shown to be necessary to bring about attainment of the NAAQS.

It should also be noted that a more recent federal initiative, the Clean Air Interstate Rule (CAIR) would have provided for even more reduction of ozone precursor emissions. This rule, however, was recently vacated as a result of a court decision. EPA is now working on plans to further reduce the impact of transported emissions in a way that is consistent with the court's decision.

The ability of the DNR and the EPA to adopt regional emission reductions is consistent with and supports not including Ste. Genevieve and Perry Counties in the St. Louis eight-hour ozone NA.

#### **Summary**

Evaluation of the eleven factors which EPA previously identified in 2003 show that Ste. Genevieve and Perry Counties should not be classified as nonattainment for the new O<sub>3</sub> NAAQS. While it is true that there are monitoring sites in the two counties that exceed the new NAAQS, emission sources in the counties are not likely to significantly

contribute to O<sub>3</sub> NAAQS exceedances in the St. Louis region and exceedances at the Farrar and Bonne Terre monitoring sites are likely related to emissions generated in the St. Louis area or in areas south and east and transported into these counties.

Designation of the counties as nonattainment will not significantly advance the progress towards attainment at the monitoring sites in the counties or at monitoring sites in the St. Louis region.

Notwithstanding this finding, should MDNR determine that the counties must be designated as nonattainment due to the simple fact that O<sub>3</sub> levels at county monitoring sites are slightly in excess of the new O<sub>3</sub> NAAQS, the counties should be a nonattainment area separate from the St. Louis nonattainment area. The counties by all measures are rural in nature and unlike the urban St. Louis NA. Should the counties be designated nonattainment for the new O<sub>3</sub> NAAQS, the SEMORPC through its new air quality advisory committee is in a position to consider early action measures similar to those that were acceptable to EPA to attain the previous O<sub>3</sub> NAAQS. This option of early action to affect the effectiveness of a nonattainment designation would be unavailable to the counties if they were a part of a St. Louis nonattainment area.

If Ste. Genevieve and Perry Counties are ultimately to be designated as nonattainment of the new NAAQS, they should be provided with the tools to address their unique rural character. The State Implementation Plans which will be developed as a result of the designation process would need to be much different to address the issues in the rural counties versus the more urban areas.

The SEMORPC requested that this report be prepared with support of both county and affected city governments as well as, the business community within them.

## **1 INTRODUCTION**

The Environmental Protection Agency (EPA) established a new eight-hour National Ambient Air Quality Standard (NAAQS) for ozone on March 12, 2008. That NAAQS has been challenged in court by a number of parties including the Missouri Department of Natural Resources (MDNR). The basis of that challenge is that the new NAAQS is too stringent and/or that it is not necessary since progress is being made in lowering ozone levels due to actions prompted by the previous eight-hour ozone NAAQS. There are other parties that have challenged the new NAAQS as not stringent enough. They claim that EPA's record and its outside advisory committee support a lower NAAQS for ozone. Despite these challenges, EPA is moving forward with the implementation process for the new NAAQS.

The first step in the implementation process is to determine those areas that do not meet the new standard. EPA's analysis of monitored ozone data in the St. Louis Region shows that there are monitors in the region that do not meet this new NAAQS. Thus further consideration is required.

That further consideration involves setting of the geographical boundaries that define the extent of the area not attaining the new NAAQS (called the nonattainment area or NA). EPA is at this point in the implementation process.

The State of Missouri, through its Governor, has the responsibility to recommend to EPA the boundaries of the Missouri portion of the St. Louis eight-hour ozone NA. These recommendations should be identified by the state by March 12, 2009. The EPA must notify any state of changes that EPA intends to make to the state recommended boundaries at least 120 days prior to March 12, 2010 and then must publish the final NA boundaries by March 12, 2010.

This document examines issues related to the establishment of the NA boundary for the St. Louis eight-hour NA and in particular, information related to the potential for inclusion of Ste. Genevieve and Perry Counties as part of the St. Louis NA area.

### **1.1 Statutory Background**

The federal Clean Air Act (CAA) contains the requirements governing the establishment of boundaries of NAs. Section 107(d) of the CAA states:

“(d) Designations.

(1) (A) Submission by Governors of Initial Designations Following Promulgation of New or Revised Standards. — By such date as the Administrator may reasonably require, but not later than 1 year after promulgation of a new or revised national ambient air quality standard for any pollutant under section 109, the Governor of each State shall (and at any other time the Governor of a State deems appropriate the Governor

may) submit to the Administrator a list of all areas (or portions thereof) in the State, designating as—

(i) nonattainment, any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant,

(ii) attainment, any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant, or

(iii) unclassifiable, any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

The Administrator may not require the Governor to submit the required list sooner than 120 days after promulgating a new or revised national ambient air quality standard.

(B) Promulgation by EPA of Designations. —

(i) Upon promulgation or revision of a national ambient air quality standard, the Administrator shall promulgate the designations of all areas (or portions thereof) submitted under subparagraph (A) as expeditiously as practicable, but in no case later than 2 years from the date of promulgation of the new or revised national ambient air quality standard. Such period may be extended for up to one year in the event the Administrator has insufficient information to promulgate the designations.

(ii) In making the promulgations required under clause (i), the Administrator may make such modifications as the Administrator deems necessary to the designations of the areas (or portions thereof) submitted under subparagraph (A) (including to the boundaries of such areas or portions thereof). Whenever the Administrator intends to make a modification, the Administrator shall notify the State and provide such State with an opportunity to demonstrate why any proposed modification is inappropriate. The Administrator shall give such notification no later than 120 days before the date the Administrator promulgates the designation, including any modification thereto. If the Governor fails to submit the list in whole or in part, as required under subparagraph (A), the Administrator shall promulgate the designation that the Administrator deems appropriate for any area (or portion thereof) not designated by the State.

(iii) If the Governor of any State, on the Governor's own motion, under subparagraph (A), submits a list of areas (or portions thereof) in the State designated as nonattainment, attainment, or unclassifiable, the Administrator shall act on such designations in accordance with the procedures under paragraph (3) (relating to redesignation).

(iv) A designation for an area (or portion thereof) made pursuant to this subsection shall remain in effect until the area (or portion thereof) is redesignated pursuant to paragraph (3) or (4)."

The recommendation of the State of Missouri called for in section 107(d)(1)(A) is presently the subject of consideration by MDNR. The agency has stated that they will

engage parties interested in this decision, develop a recommendation and then seek concurrence from the Missouri Air Conservation Commission (MACC).

## **1.2 Policy Background**

The EPA issued a guidance document<sup>1</sup> in November of 2002 to suggest to states the factors that should be considered in making NA recommendations. EPA has not yet issued guidance for the determination of areas not meeting the new ozone NAAQS. That guidance is expected in the fourth quarter of 2008. However, the MDNR has stated that they expect the new guidance will be similar to that issued in 2002. Therefore, the analysis in this document is based on the November 2002 guidance and may need to be updated when new guidance is issued by the EPA.

### **1.2.1 Information to Support State Recommendations**

The EPA outlines eleven types of information that should be considered and included with a state's recommended NA boundaries:

1. Emissions and air quality in adjacent areas (including adjacent C/MSAs)
2. Population density and degree of urbanization including commercial development (significant difference from surrounding areas)
3. Monitoring data representing ozone concentrations in local areas and larger areas (urban or regional scale)
4. Location of emission sources (emission sources and nearby receptors should generally be included in the same nonattainment area)
5. Traffic and commuting patterns
6. Expected growth (including extent, pattern and rate of growth)
7. Meteorology (weather/transport patterns)
8. Geography/topography (mountain ranges or other air basin boundaries)
9. Jurisdictional boundaries (e.g., counties, air districts, existing one-hour nonattainment areas, Reservations, etc.)
10. Level of control of emission sources
11. Regional emission reductions (e.g., NO<sub>x</sub> SIP call or other enforceable regional strategies)

This document contains information related to the eleven factors listed by EPA.

## **1.3 DNR Process to Develop Recommendation**

The DNR has started the process of developing their recommendation by convening meetings with parties that may be interested in the definition of the NA.

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<sup>1</sup> Boundary Guidance on Air Quality Designations for the 8-Hour Ozone National Ambient Air Quality Standards (NAAQS or Standard), John Seitz, Director OAQPS, March 28, 2000.

The DNR has identified four areas where they are considering a potential NA designation. These are focused on Metropolitan (or Micropolitan) Statistical Areas (MSAs) and include:

- The Kansas City, MO-KS MSA
- Springfield MO MSA
- St. Louis, MO-IL MSA, and
- Cape Girardeau-Jackson, MO-IL Micropolitan Statistical Area

These MSAs were chosen for consideration because they either contain or are adjacent to an ozone monitoring site that has measured levels that are in excess of the new ozone NAAQS.

#### **1.4 DNR Recommendation**

The DNR recommends that the Missouri portion of the St. Louis eight-hour ozone NA include the following political subdivisions:

- St. Louis City,
- St. Louis County,
- St. Charles County,
- Franklin County, and
- Jefferson County

This recommendation sets the proposed NA boundary exactly as it was for the previous eight-hour ozone NAAQS.

#### **1.5 Ste. Genevieve and Perry Counties Role and Interest**

The DNR proposed recommendation considered the possible expansion of the NA to potentially include:

- Pike County
- St. Francois County
- Lincoln County
- Warren County
- Crawford County
- Bollinger County
- Washington County
- Cape Girardeau County
- Montgomery County
- Perry County
- Gasconade County, and
- Ste. Genevieve County.

MDNR has initially organized the information related to the designation process into two separate areas in the eastern part of the state. MDNR has included information concerning Ste. Genevieve County along with that of counties that are presently part of the St. Louis ozone nonattainment area. Perry County information has been included with an area that includes the Cape Girardeau Micropolitan area (Cape Girardeau, and Bollinger Counties in Missouri and a portion of Jackson County in Illinois).

As counties that are part of DNR's evaluation process, Ste. Genevieve and Perry Counties have a keen interest in DNR's proposed recommendation and the ultimate outcome of this process.

## **2 APPLICATION OF EPA REGULATIONS AND POLICY**

EPA policy specifies the process that should be followed in order to develop boundaries for eight-hour ozone nonattainment areas. The policy says:

“... In reducing ozone concentrations above the NAAQS, EPA believes it is best to consider controls on sources over a larger area due to the pervasive nature of ground level ozone and transport of ozone and its precursors. Thus, EPA recommends that the Metropolitan Statistical Area or the Consolidated Metropolitan Statistical Area (C/MSA) serve as the presumptive boundary for 8-hour NAAQS nonattainment areas.<sup>2</sup> We believe this approach will best ensure public health protection from the adverse effects of ozone pollution caused by population density, traffic and commuting patterns, commercial development, and area growth. In the past, areas within C/MSAs have generally experienced higher levels of ozone concentrations and ozone precursor emissions than areas not in C/MSAs. In addition, the 1990 Amendments to the CAA established the C/MSA as the presumptive boundary for ozone nonattainment areas classified as serious, severe and extreme.”

### **2.1 Areas Which Must Be Considered**

The EPA guidance on setting NA boundaries suggests that the boundaries of the Consolidated Metropolitan Statistical Area (C/MSA) serve as the presumptive NA boundaries. In the case of the St. Louis NA, those counties include:

- Franklin County,

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<sup>2</sup> C/MSAs are identified by the U.S. Bureau of the Census and can be found at: <http://www.census.gov/population/www/estimates/aboutmetro.html>.

- Jefferson County,
- Lincoln County,
- St. Charles County,
- St. Louis County,
- Warren County, and
- St. Louis City.

Each of these political subdivisions was considered by the DNR as part of the formulation of their proposed recommendation.

The second county grouping that MDNR is considering includes:

- Cape Girardeau County,
- Bollinger County, and
- Perry County.

In the case of this grouping, Perry County is the only county where there is presently a monitor that has recorded levels above the new ozone NAAQS. Neither Cape Girardeau nor Bollinger Counties (the counties that make up the Missouri portion of the Micropolitan Statistical Area) have an ozone monitor. They are adjacent to Perry County where there is presently an ozone monitor.

## **2.2 Areas Which May Be Considered**

The EPA guidance on NA boundaries states:

“In some cases, the most appropriate nonattainment area boundary may be larger than the C/MSA. For example, if sources located in a county or on Indian lands outside the C/MSA contribute to violations within the C/MSA, States or Tribes should consider whether it would be appropriate to expand the nonattainment area to include the area in which those sources are located.”

Additional counties include:

- Pike County,
- St. Francois County,
- Ste. Genevieve County,
- Bollinger County,
- Perry County,
- Cape Girardeau County,
- Crawford County,
- Washington County,
- Montgomery County, and
- Gasconade County.

### **2.3 Consideration of Ste. Genevieve and Perry Counties**

The sections below consider the possible designation of Ste. Genevieve and Perry Counties as nonattainment areas. These counties are considered relative to the eleven evaluation factors suggested in the EPA guidance. For those evaluation factors, where appropriate, this analysis uses the existing eight-hour ozone NA as the baseline for the evaluation of these counties' potential designation as nonattainment areas.

#### **2.3.1 Emissions and Air Quality**

Emissions of ozone precursors (Nitrogen Oxides [NO<sub>x</sub>] and Volatile Organic Compounds [VOC]) are low in Ste. Genevieve and Perry Counties when compared to the emissions for the entire recommended Nonattainment Area.

Perry County VOC and NO<sub>x</sub> emissions are about one sixth of the emissions recorded in Franklin County, the county with the least emissions of the counties in the present ozone nonattainment area. Likewise, Ste. Genevieve County VOC and NO<sub>x</sub> emissions equal approximately one half of the emissions recorded in Franklin County.

**Table 1** below shows 2009 projected VOC and NO<sub>x</sub> emissions for the present nonattainment area and the percent of those emissions that would be added if the nonattainment area were to include Ste. Genevieve and Perry Counties.

**Table 1: 2009 Projected VOC and NO<sub>x</sub> Emissions**

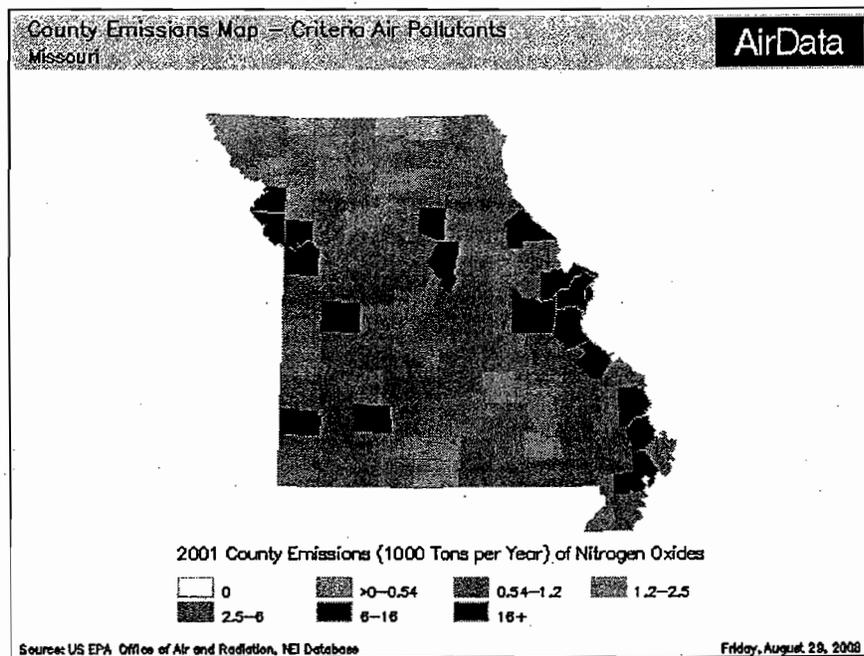
County	VOC Source Category Emissions, Tons per day						% of NA
	Area	Non-road	Mobile	EGU	Non-EGU	Total	
St. Louis	39.22	19.57	32.66	0.33	13.43	105.22	49.98%
St. Charles	10.06	7.01	7.67	0.63	3.07	28.43	13.51%
Jefferson	8.99	7.35	5.58	0.48	1.68	24.07	11.44%
St. Louis City	14.06	3.82	9.53	0.00	10.78	38.19	18.14%
Franklin	4.23	3.25	4.35	0.85	1.93	14.61	6.94%
NA Area (Missouri portion)	76.56	41.01	59.79	2.28	30.88	210.52	
Cape Girardeau	4.04	1.53	1.37	0.00	2.04	8.98	4.27%
Perry	1.23	1.28	1.15	0.00	0.90	4.56	2.16%
Bollinger	0.79	0.49	0.44	0.00	0.08	1.80	0.86%
Ste. Genevieve	1.14	0.86	1.02	0.00	2.76	5.79	2.75%

County	NO <sub>x</sub> Source Category Emissions, Tons per day						% of NA
	Area	Non-road	Mobile	EGU	Non-EGU	Total	
St. Louis	10.22	30.71	73.86	17.89	2.31	135.01	42.34%
St. Charles	2.50	7.01	17.61	21.90	1.23	50.24	15.76%
Jefferson	1.46	2.11	13.13	15.20	18.33	50.24	15.76%
St. Louis City	4.39	10.24	19.56	0.00	5.14	39.33	12.34%
Franklin	1.82	3.36	10.60	28.15	0.10	44.03	13.81%
NA Area (Missouri portion)	20.40	53.44	134.76	83.14	27.11	318.85	
Cape Girardeau	1.71	3.63	4.37	0.01	7.11	16.83	5.28%
Perry	1.47	2.84	1.98	0.00	0.09	6.39	2.00%
Bollinger	0.11	0.55	0.68	0.00	2.86	4.20	1.32%
Ste. Genevieve	1.03	1.68	2.27	0.00	25.17	30.16	9.46%

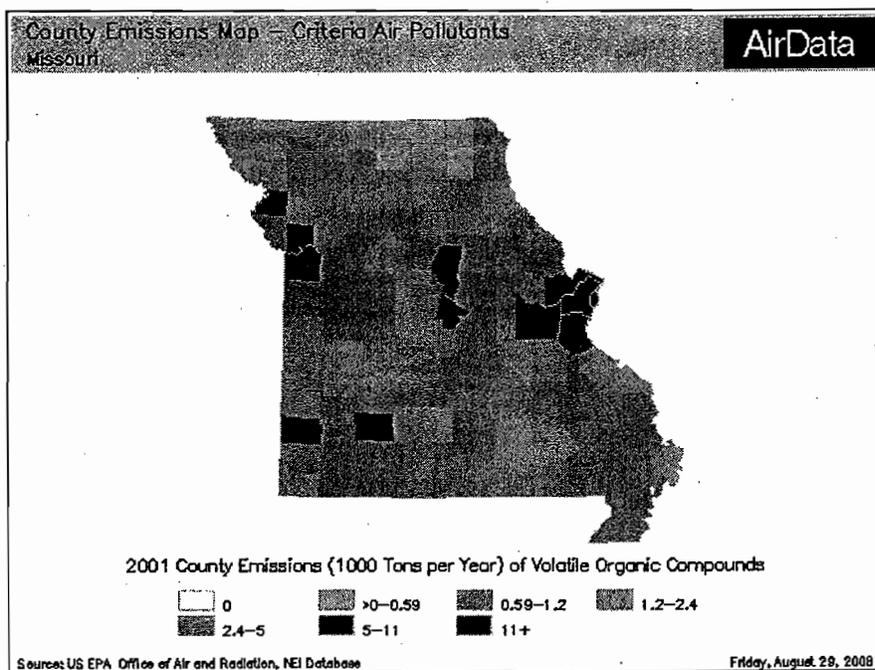
EPA has mapped 2001 emissions on their website,<sup>3</sup> shown in Figures 1 and 2.

<sup>3</sup> <http://www.epa.gov/air/data/emisdist.html>

**Figure 1. 2001 NO<sub>x</sub> Emissions (1000 tons per year)**



**Figure 2. 2001 VOC Emissions (1000 tons per year)**



The emissions data for Ste. Genevieve and Perry Counties clearly show that the emissions generated in the counties are small when compared to the existing St. Louis NA; and, that the emissions patterns are indicative of the rural nature of the area. The ozone precursor emissions in these counties are not consistent with the need to classify the counties as not attaining the new eight hour ozone standard,

### 2.3.2 Population Density

Ste. Genevieve and Perry Counties are rural areas with small populations and low population density. Table 2 shows population and population density statistics.

**Table 2: St. Louis MSA and Southeast Missouri Counties Population Data**

County	2007 Population Density <sup>4</sup>	2007 Population <sup>5</sup>
	(persons / sq. mi.)	(persons)
St. Louis	1,960	995,118
St. Charles	614	343,952
Jefferson	329	216,076
St. Louis City	5,665	350,759
Franklin	108	100,045
NA Area (Missouri Portion)		2,005,950
Ste. Genevieve	36	17,841
Perry	40	18,794
Bollinger	20	12,118
Cape Girardeau	126	72,740

Figure 3<sup>6</sup> shows the population density for the counties that comprise the recommended NA and surrounding counties. This figure shows that the population density in counties within the St. Louis NA is greater than it is in Ste. Genevieve and Perry Counties. These data support a recommendation to not include Ste. Genevieve or Perry Counties in the St. Louis NA.

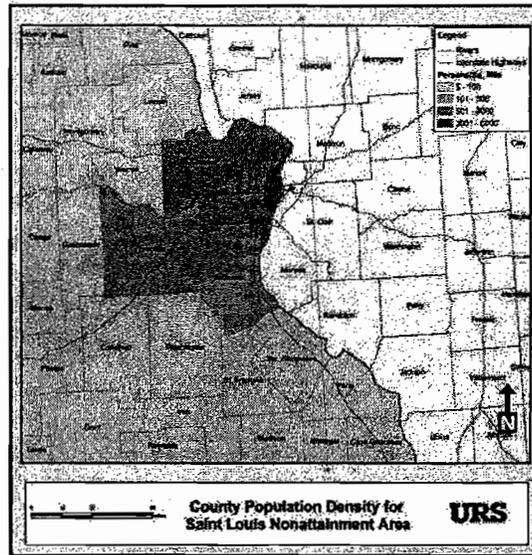
<sup>4</sup> Based on population data provided by Southeast Missouri Planning Commission and land area from Fact Finder on the U.S. Census web site.

<sup>5</sup> Data provided by the Southeast Missouri Regional Planning Commission

<sup>6</sup> Data taken from the US Census Bureau

<http://factfinder.census.gov/servlet/ThematicMapFramesetServlet>

**Figure 3. Population Density by County.**

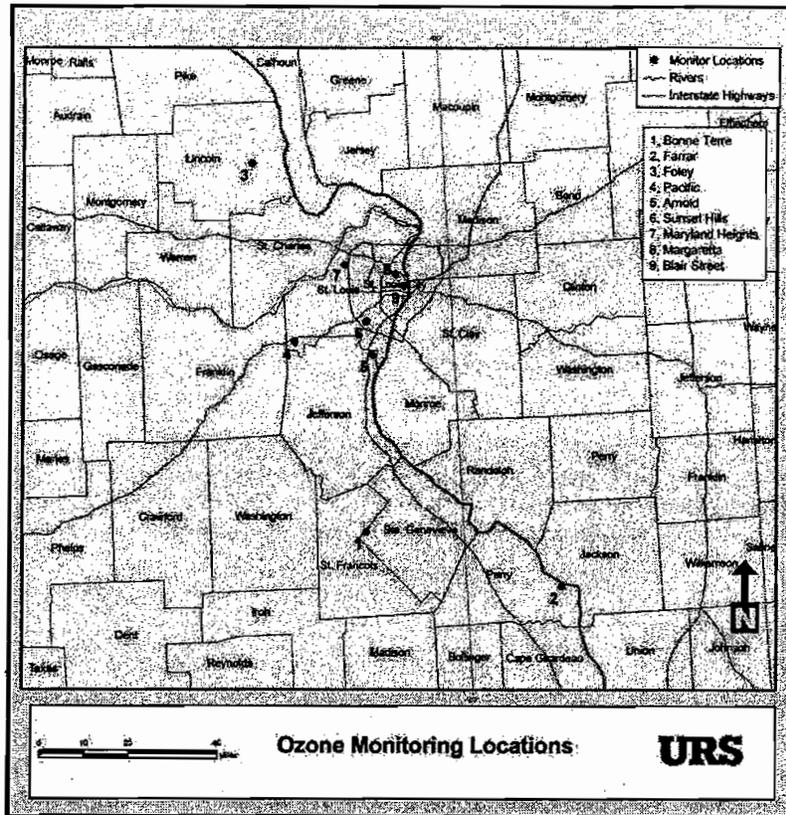


### 2.3.3 Monitoring Data

The ozone monitoring site in Ste. Genevieve County is located in Bonne Terre, while the Perry County ozone monitoring site is located in Farrar. **Figure 4<sup>7</sup>** shows the location of the sites. **Figure 4** below shows that the Bonne Terre and Farrar ozone monitors are not downwind of Ste. Genevieve County sources when there are wind flows from the south. Elevated ozone levels recorded at this monitor are not likely to be related to sources in Ste. Genevieve County or Perry County.

<sup>7</sup> Data from: Missouri Department of Natural Resources  
<http://www.dnr.mo.gov/env/apcp/docs/stl-dvmaps.pdf>

Figure 4. St. Louis Area Ozone Monitors.



The data in Table 3 shows that the three-year average ozone level for the most recent period (2005-2007) is only slightly above the new NAAQS for ozone. This table also includes year-to-date data for the Bonne Terre and Farrar monitors. Those data show that with only a few weeks left of potentially high ozone levels, the 2006 to 2008 fourth high average has decreased significantly.

**Table 3: Ozone Design Values – St. Louis Area and Southeast Missouri Monitors (ppb)**

Monitor	02-04	03-05	04-06	05-07	06-08
	Average	Average	Average	Average	Average
Arnold	81	77	80	83	
West Alton	89	85	85	87	
Orchard Farm	88	83	86	88	
Blair				80	
Sunset Hills	85	82	79	83	
Margaretta	86	84	79	83	
Maryland Heights				87	
Pacific				83	
Bonne Terre	82	79	77	83	77
Foley				84	
Farrar			76	81	76

Monitoring data show that while the monitors in Ste. Genevieve and Perry Counties show ozone levels slightly in excess of the ozone NAAQS, the levels appear to be decreasing and with expected future emissions reductions due to requirements that have not yet been implemented, the monitors will likely show attainment of the ozone NAAQS without designating the counties as nonattainment.

#### **2.3.4 Location of Emission Sources**

Ozone precursor emission sources in Ste. Genevieve Count and Perry Counties that emit more than 1 ton per day in the ozone season are at least 19 miles from the Bonne Terre monitor and at least 28 miles from the Farrar monitor. These sources are not local to the monitors in Ste. Genevieve and Perry Counties and, by that measure, these sources are not local to the West Alton and Orchard Farms monitors that measure the highest levels in the St. Louis nonattainment area and are 80 or more miles from sources in Ste. Genevieve and Perry Counties.

#### **2.3.5 Traffic and Commuting Patterns**

The 2004 data available from the U.S. Census Bureau contain information concerning commuting patterns between resident and workplace counties in Missouri<sup>8</sup>. These data show that over 50% of the work-trips from Ste. Genevieve County were to either Ste. Genevieve or Perry Counties and over 70% of the work-trips originating in Perry County were to either Perry County or Ste. Genevieve County. Conversely, less than 7% of the work-trips from the existing ozone NA were to Ste. Genevieve or Perry Counties. Table 4 summarizes work trip information.

DNR staff have noted the importance of “connectivity” as measured by factors such as commuting patterns in establishing whether areas that are outside an MSA should be considered for inclusion in an MSA based nonattainment area. The commuting patterns

<sup>8</sup> U.S. Census Bureau, Longitudinal Employer-Household Dynamics, <http://lehd.did.census.gov/led/>.

shown here clearly show that Perry and Ste. Genevieve Counties are not well connected to the St. Louis MSA and therefore they should not be included in a St. Louis nonattainment area.

**Table 4: Residence / Workplace Relationships**

Location of Residence \ Location of Employment	Ste. Genevieve County	Perry County	St. Louis Nonattainment Area
St. Louis Nonattainment Area	2,438 / 27.5%	632 / 8.6%	837,281 / 92.8%
Perry, Missouri	577 / 6.5%	329 / 68.0%	<31,245 / <3.5%
Ste. Genevieve, Missouri	4,149 / 46.7%	1,389 / 4.5%	<31,245 / <3.5%
All Other Locations	1,711 / 19.3%	7,341 / 18.9%	34,041 / 3.8%

Note: Units are (workers / % of total workers)

Reflecting less populated areas, fuel stations in both Perry and Ste. Genevieve are modest in number. Perry County has nineteen, while Ste. Genevieve has twelve<sup>9</sup>.

These data support a DNR recommendation to not include Ste. Genevieve or Perry County in the eight-hour ozone NA.

### 2.3.6 Expected Growth

As shown in Table 5, population growth between the 1990 census and the 2000 census was 4.5% for the proposed NA. Population growth in Ste. Genevieve and Perry Counties averaged 11% in each case; however, because the 1990 population was small, this represented a growth of approximately 2,000 residents per county. In 1990, Ste. Genevieve and Perry Counties combined population equaled about 1.6% of the population of the proposed NA. In 2000, this percentage grew to about 1.8%.

<sup>9</sup> Information provided by the Southeast Missouri Regional Planning Commission.

**Table 5: Population Growth**

<i>County</i>	<i>2000 Census</i>	<i>2007</i>	<i>Population</i>	<i>Population</i>
	<i>(1,000)</i>	<i>(estimated)</i>	<i>Growth</i>	<i>Growth</i>
	<i>(1,000)</i>	<i>(1,000)</i>	<i>(1,000)</i>	<i>(%)</i>
St. Louis	1,016	995	-21	-2.1%
St. Charles	284	344	60	21.1%
Jefferson	198	216	18	9.1%
St. Louis City	348	351	3	0%
Franklin	94	100	6	6.4%
NA Area (Missouri Portion)	1,940	2,006	66	3.4%
Perry	18.13	18.79	0.66	3.7%
Bollinger	12.03	12.12	0.09	0.7%
Cape Girardeau	68.69	72.74	4.05	5.9%
Ste. Genevieve	17.84	17.84	0	0%

2000 to 2007 population growth in Sté. Genevieve and Perry Counties was less than that of each of the Missouri counties in the proposed NA, except for St. Louis City,. Population growth does not make Ste. Genevieve or Perry Counties a candidate for inclusion in the St. Louis eight-hour ozone NA.

### **2.3.7 Meteorology**

A suite of observational data analysis techniques were applied to the relevant data to address the question of how meteorology affects ozone transport in the region. Hourly meteorology data was obtained from Mississippi Lime Company's onsite measurement tower. Hourly ozone data was obtained from the AQS DataMart for ozone seasons (April 1 – October 31) from 2005-2007. The following sites were used in the analyses: Orchard Farm, Blair Street, Arnold, Bonne Terre and Farrar.

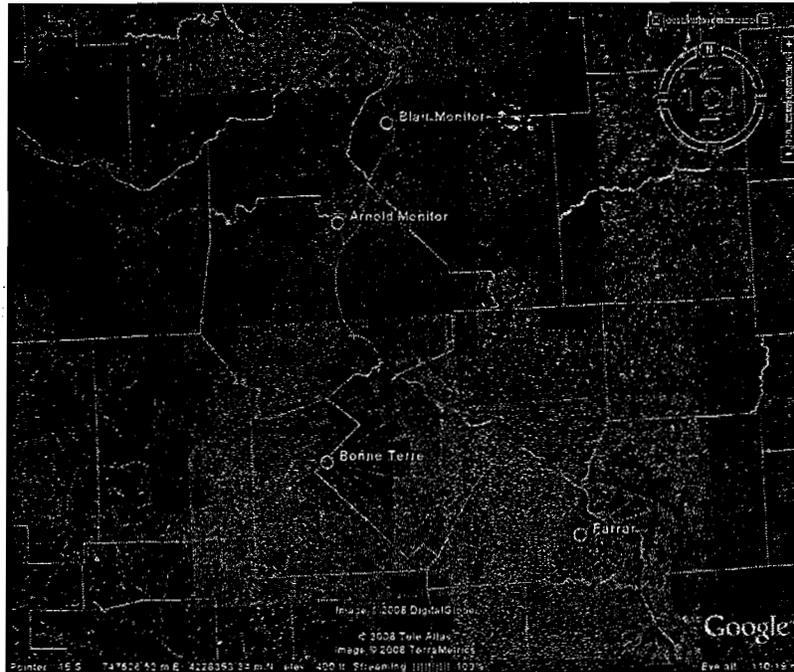
Conditional probability function (CPF) plots use hourly wind speed/direction and ozone concentration data to determine how often winds from a given direction lead to high ozone. The result is a plot resembling a wind rose, showing which direction (if any) favors high ozone, and can be used to identify source regions or point sources. Back trajectories plot air mass history for a given period of time prior to arrival at the receptor. They are also used as a tool for source identification.

Another analysis method is to organize ozone concentration data by wind direction. Box plots of these distributions can then shed light on ozone behavior under certain transport regimes. Scatter plots of the ozone data versus wind speed, wind direction, and other monitoring sites are also useful. These are all tools used to better understand ozone and ozone precursor transport between counties in eastern Missouri.

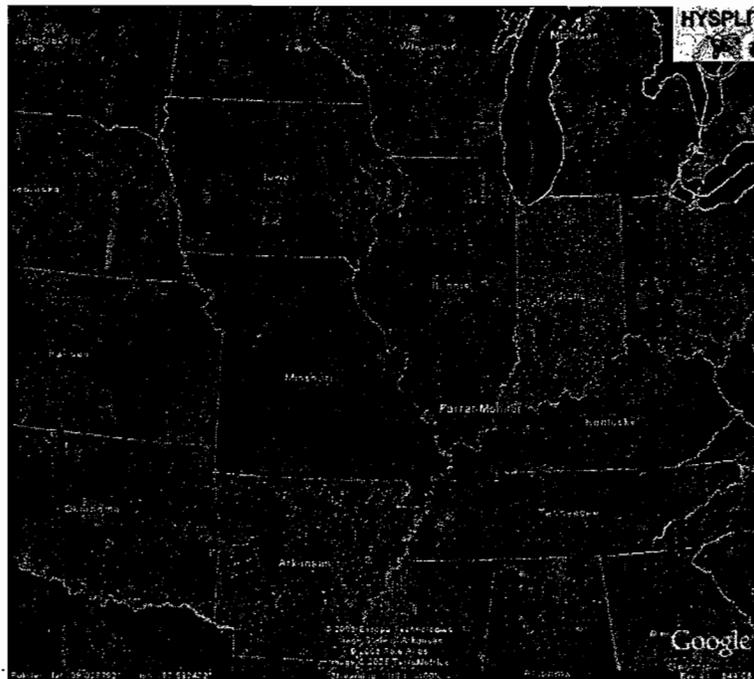
## AREA-WIDE OZONE

Regionally, all sites measure highest ozone concentrations when winds are from the eastern sector. This is seen in both the CPF plots (Figure 5) and box plots of ozone distributions in that sector. Trajectory analyses using NOAA's ARL/HYSPLIT model show that on the highest 8hr ozone days at all sites a number of days are characterized by flows originating in the Ohio River Valley and areas to the east with significant  $\text{NO}_x$  sources. The Farrar analysis is presented in Figure 6. This particular flow pattern is often associated with summer time high pressure systems over the Great Lakes which would be accompanied by conditions favorable for ozone formation: high temperatures, sunny skies, and minimal vertical mixing.

**Figure 5.** Conditional probability function (CPF) plots of hourly ozone at Arnold, Bonne Terre and Farrar.



**Figure 6.** NOAA ARL/HYSPLIT Model Back Trajectories on the 15 Highest 8-hr Ozone Days at the Farrar Monitor.

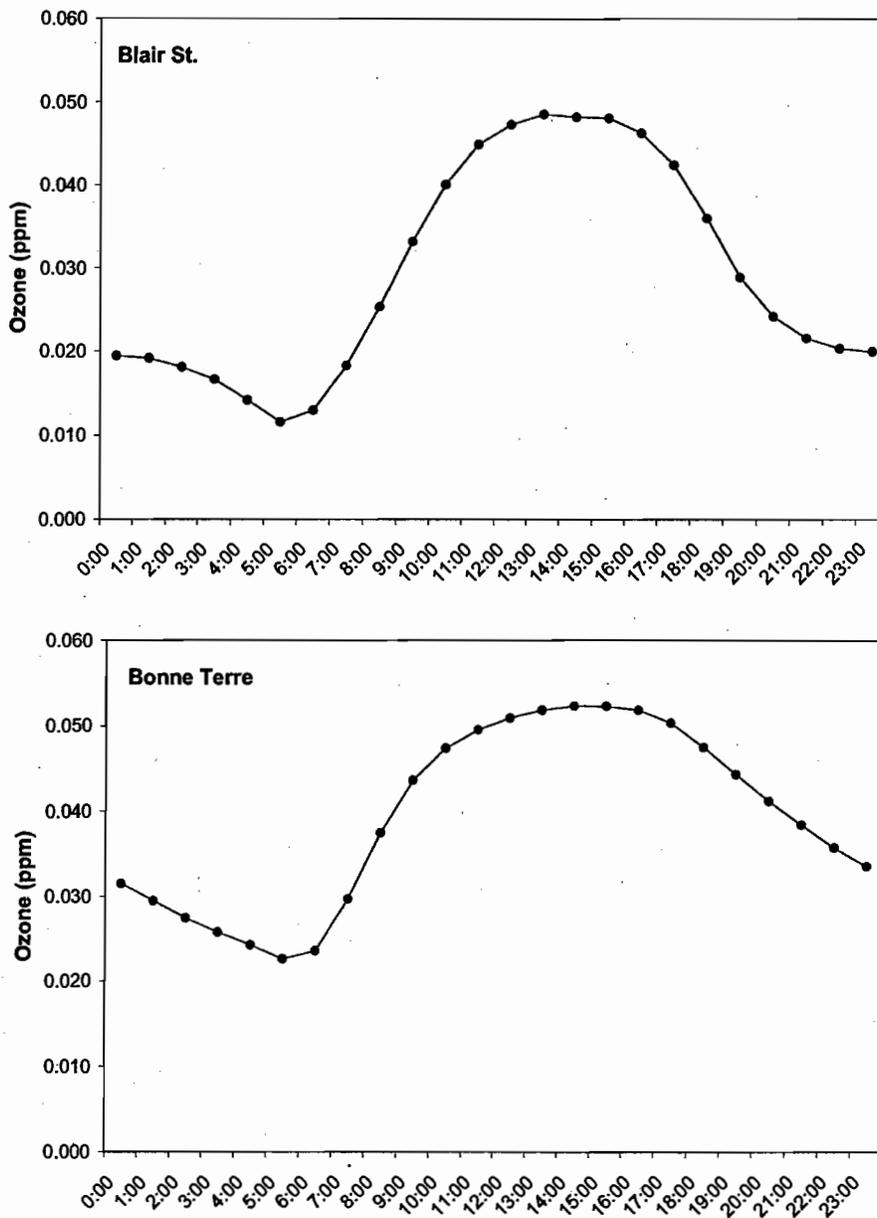


### **INTERSITE OZONE COMPARISONS**

Plots were created of the average diurnal behavior at Orchard Farm, Blair, Arnold, Bonne Terre and Farrar, two of which are shown in Figure 7. Hourly ozone concentrations for three ozone seasons (April 1 – October 31, 2005-2007) were used to create the plot. Sites nearby the urban core (Orchard Farm, Blair, and Arnold) show a smooth bell-shaped curve. Sites furthest from the urban core, in Bonne Terre and Farrar, indicate a flatter curve that decreases more slowly in the afternoon and has an overnight average concentration higher than sites near the urban core. This behavior is indicative of a less reactive atmosphere away from the urban core that does not oxidize and deplete as much ozone as the urban core. Thus afternoon ozone concentrations fall more slowly and don't fall as low overnight. An indication that this hypothesis is correct is that on days when the monitor at Bonne Terre measures a higher ozone peak it also measures a lower nighttime valley. This more reactive atmosphere produces more ozone during the peak production time of day and depletes more ozone afterward. The Bonne Terre monitor behaves more like the city monitors at these times, but not on average.

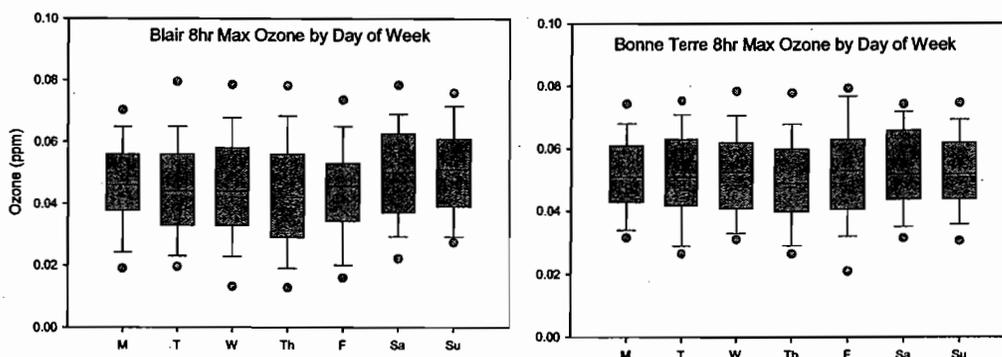
The effect of a more reactive atmosphere depleting ozone is called titration. Oxidants present in the atmosphere, such as  $\text{NO}_x$ , can scavenge ozone as they use the oxygen atoms for their own reactions. The result is a lower ozone measurement, even though the sum total of pollutants in the atmosphere is higher.

**Figure 7.** 2005-2007 Hourly Averaged Ozone at Blair (top) and Bonne Terre (bottom).



This effect is also observed when one looks at 8hr maximum ozone concentrations by day of week. As shown in Figure 8, Blair St. ozone concentrations are higher on the weekends when traffic emissions are lower and less ozone is depleted. At Bonne Terre, all days of the week have similar 8hr ozone distributions, showing that this site lacks the ozone titration effect.

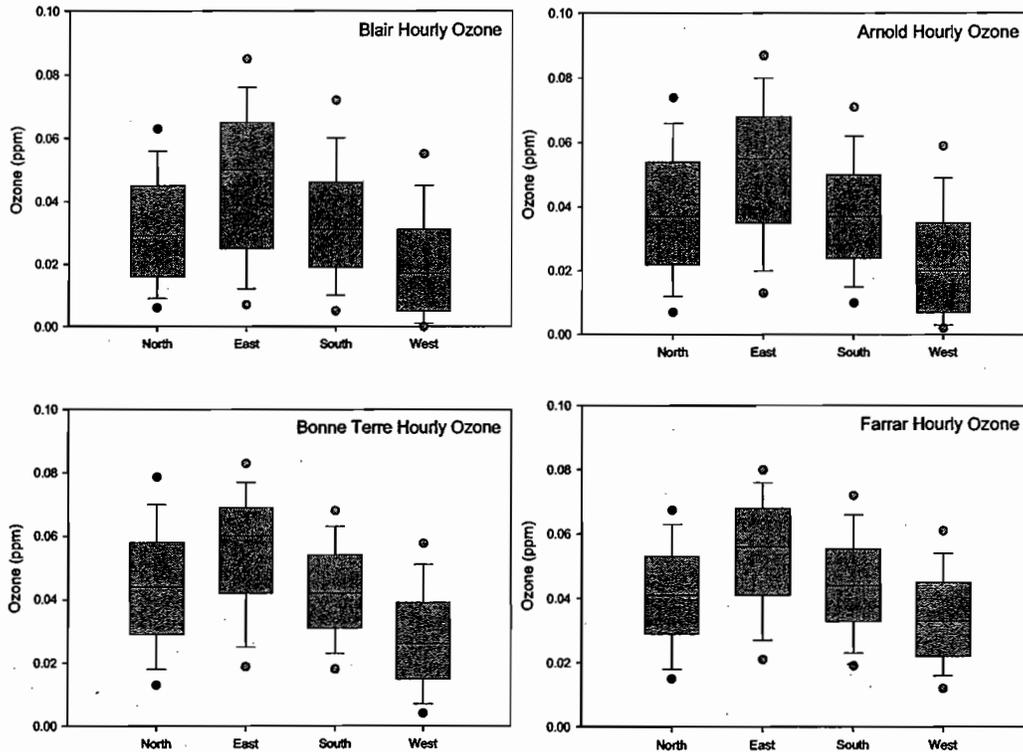
**Figure 8.** 8 hour Ozone Distributions by Day of Week at Blair (left) and Bonne Terre (right).



### ***NORTH-SOUTH OZONE GRADIENT***

Information about a north-south ozone gradient in eastern Missouri can be gathered by looking at the behavior of ozone under north-south transport regimes. Hourly ozone was segregated by hourly wind direction and put into bins by quadrant. These plots are shown in Figure 9. All sites (Blair, Arnold, Bonne Terre and Farrar) have their highest ozone distributions from the eastern quadrant. All sites have the lowest distribution when winds are from the west, with north and south in the middle. The northerly and southerly distributions at all sites are nearly identical. At Blair St. the lower end of the north and south distributions is the same, while the upper end of the distributions is slightly higher with winds from the south. At both Arnold and Bonne Terre the mean ozone concentrations from north and south are the same, but both lowest and highest ozone concentrations are measured from the north (more spread in the distribution). The fact that on a southerly wind ozone is higher at Arnold than Blair indicates that there must be some transport of ozone and/or precursors from the south, since with this wind direction the impact could not be from St. Louis.

**Figure 9. Box plots Showing the Hourly Ozone Distribution at Four Sites in Eastern Missouri Under Different Wind Conditions**



**OZONE AND WIND SPEED**

At Bonne Terre, days with 8 hour maximum ozone exceeding the new NAAQS of 0.075 ppm occur from low up to moderate wind speeds, indicating the combination of local production and transport. This is shown in Figure 10. Notice that even at the highest wind speeds ozone is elevated. While it does not exceed the NAAQS, one expects measured concentrations at such high wind speeds to be low due to atmospheric mixing. A trajectory analysis shows a consistent influence of southerly transport on this subset of high wind speed days (Figure 11).

Figure 10. Bonne Terre 8-hr ozone concentrations versus wind speed.

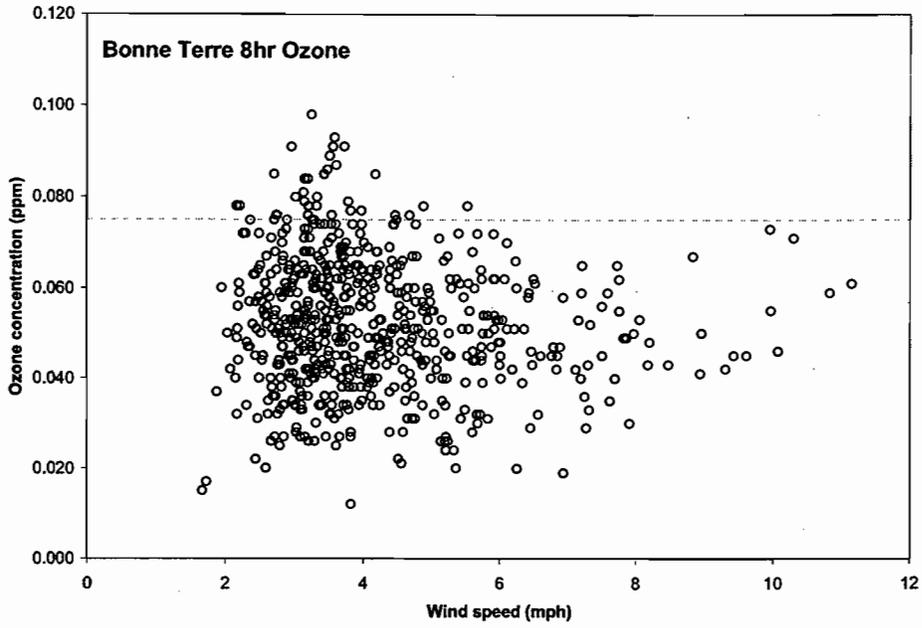
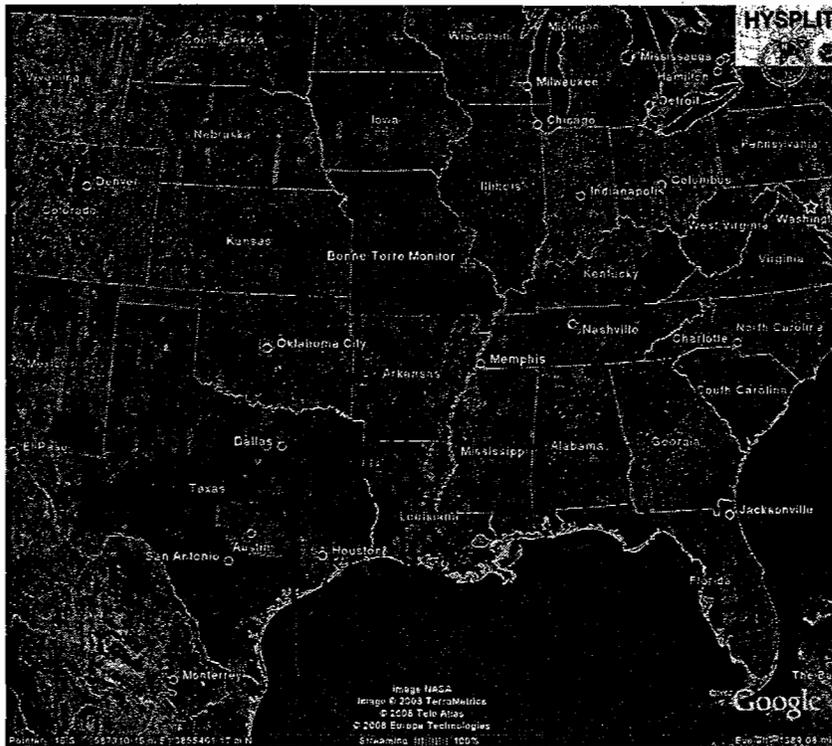


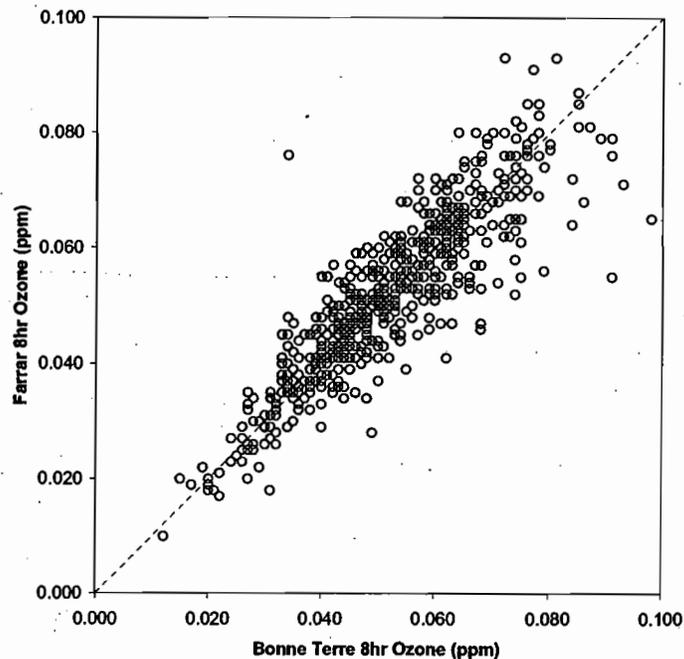
Figure 11. 24-hr Back Trajectories Ending at the Bonne Terre Monitor on High Wind Speed and Elevated Ozone Days.



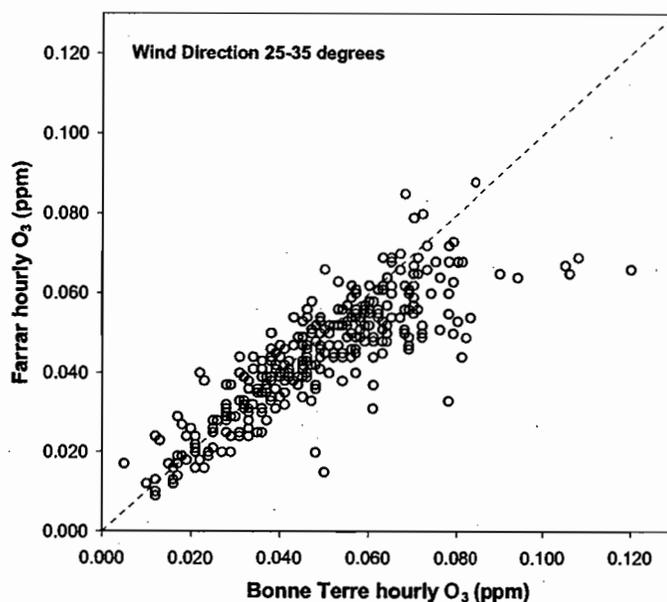
### **BONNE TERRE – FARRAR COMPARISONS**

The 8-hour daily maximum ozone concentrations at Bonne Terre and Farrar were put into a scatter plot and compared. While in general the scatter is along the 1:1 line (both sites measuring very similar ozone) there are some days where the sites differed significantly. It is more often the case that Bonne Terre is higher than Farrar. This is shown in Figure 12. An analysis of this subset of days indicates that 8hr ozone at Bonne Terre is significantly greater than at Farrar when winds are from the north or northeast. Many of these days have a number of hours with winds from around 30°. Figure 13 shows hourly ozone at these two sites when winds are from 25-35°. Clearly Bonne Terre is impacted by this wind direction more so than Farrar.

**Figure 12.** Scatter Plot of 8-hr Ozone at Bonne Terre and Farrar, 2005-2007.



**Figure 13.** Scatter Plot of Hourly Ozone Concentrations at Bonne Terre and Farrar When Winds Are Between 25 and 35°.



When 8hr ozone is higher at Farrar than Bonne Terre it is of a smaller magnitude (than when Bonne Terre is higher) and no clear pattern emerges. Rather it is often a day with winds from the southwest, south or southeast. If this is regional transport it is unclear why Farrar would be impacted more strongly than Bonne Terre; however sources that may cause this effect have not been identified.

#### **SUMMARY**

While it is difficult to draw extensive conclusions from these observational data analyses, one can learn several things from the above discussion. First of all, while ozone concentrations at Blair and Arnold increase under southerly winds, the same occurs at Bonne Terre and Farrar. Without background sites to the south of Ste. Genevieve and Perry Counties to quantify regional transport, all that can be concluded is that a potentially significant regional contribution exists to the south. The increase at St. Louis area monitors under southerly winds cannot be specifically attributed to Ste. Genevieve and Perry Counties.

Secondly, several analyses indicate transport into Ste. Genevieve and Perry Counties contributing to elevated ozone concentrations at the Bonne Terre and Farrar monitors. Both CPF plots and back trajectories indicate high ozone levels originating in areas to the south and east of the monitors, particularly the Ohio River Valley. This transport is especially evident in the subset of days with high wind speeds as well as high ozone. Trajectories ending on these days show a consistently fast flow transporting air masses (and their constituents) from the Gulf Coast into Ste. Genevieve and Perry Counties.

### **2.3.8 Geography**

Geographical features, by themselves are not a major influence on ozone levels in the St. Louis region or in Ste. Genevieve and Perry Counties.

### **2.3.9 Jurisdictional Boundaries**

Ste. Genevieve and Perry Counties are not in the St. Louis CMSA or the previous nonattainment area for the one-hour ozone NAAQS.

Jurisdictional boundaries do not support the inclusion of Ste. Genevieve or Perry Counties in the St. Louis eight-hour NA. Emissions of ozone precursors (Nitrogen Oxides [NO<sub>x</sub>] and Volatile Organic Compounds [VOC]) are low in these counties when compared to the emissions for the existing ozone nonattainment area.

It should also be noted that the Southeast Missouri Regional Planning Commission (SEMORPC) requested that this report be prepared because they represent Ste. Genevieve and Perry Counties (as well as other southeast Missouri counties). Regional planning for the existing ozone nonattainment area is the responsibility of the East West Gateway Council of Governments (EWGCOG). This existing jurisdictional linkage sets Ste. Genevieve and Perry Counties apart from the counties that presently comprise the St. Louis ozone nonattainment area.

The SEMORPC is presently in the process of setting up an Air Quality Advisory Committee similar to that established by the EWGCOG. This committee, as a part of the SEMORPC, will be well suited to deal with air quality planning issues in Southeast Missouri.

### **2.3.10 Level of Control**

The counties in the present St. Louis eight-hour ozone NA are subject to the broad set of regulatory requirements that were put in place to achieve the previous eight-hour ozone NAAQS. Within Ste. Genevieve and Perry Counties, major new sources or major modifications permitted since 1975 have been subject to Best Available Control Technology (BACT) emission limitations for ozone precursors. BACT represents the best or highest level of emission control (taking into account economic, environmental, and energy considerations), determined on a case-by-case basis, for each major new source or modification. BACT represents a more stringent level of control than Reasonably Available Control Technology (RACT) limits applied to existing sources in the existing nonattainment area. Future major new source construction and all modifications to existing sources in the counties will be subject to the more restrictive BACT limits. Thus the existing and future levels of control for ozone precursors support the exclusion of Ste. Genevieve and Perry Counties from being designated as a nonattainment area.

### 2.3.11 Regional Emission Reductions

The DNR has adopted NO<sub>x</sub> emissions control requirements for Electric Generating Units (EGUs) located outside of the proposed eight-hour ozone NA. There are no EGUs affected by this requirement in Ste. Genevieve or Perry Counties; however, this regional requirement demonstrates how the DNR can put in place requirements on existing sources outside of the St. Louis ozone NA if it is shown that that is necessary to bring about attainment of the NAAQS.

The ability of the DNR to adopt regional emission reductions, if necessary, is consistent with not including Ste. Genevieve County in the St. Louis eight-hour ozone NA.

### 2.3.12 Summary of Evaluation Factors

**Table 6: Summary of Evaluation Factors and Applicability**

Factor	Perry County	Ste. Genevieve County
1. Emissions and air quality in adjacent areas	Does not support inclusion	Does not support inclusion
2. Population and degree of urbanization	Does not support inclusion	Does not support inclusion
3. Monitoring data	Does not support inclusion	Does not support inclusion
4. Location of emission sources	Does not support inclusion	Does not support inclusion
5. Traffic and commuting patterns	Does not support inclusion	Does not support inclusion
6. Expected growth	Does not support inclusion	Does not support inclusion
7. Meteorology	Meteorology patterns are variable and do not fully support inclusion	Meteorology patterns are variable and do not fully support inclusion
8. Geography / topography	Does not support inclusion	Does not support inclusion
9. Jurisdictional boundaries	Does not support inclusion	Does not support inclusion
10. Level of control	Does not support inclusion	Does not support inclusion
11. Regional emission reductions	Does not support inclusion	Does not support inclusion

### **3 CONCLUSION**

Evaluation of the eleven factors outlined in EPA's guidance concerning the definition of the eight-hour ozone NA leads to the recommendation proposed by the DNR.

The recommendation for the NA boundary as it relates to Ste. Genevieve and Perry Counties is clear and summarized in the following section.

#### **3.1 Recommended Status of Ste. Genevieve and Perry Counties**

Based on evaluation of the eleven criteria contained in EPA's guidance memorandum concerning boundaries for the eight-hour ozone NA, Ste. Genevieve and Perry Counties should not be a part of the NA.

Further, the potential for future growth due to major new sources or modifications should have no bearing on Missouri's recommendation to EPA regarding the NA boundary. Major new sources and modifications must be well controlled as a result of DNR's New Source Review Program in order to receive a permit - better controlled than existing sources.

#### **3.2 Basis for Recommendation**

For DNR to recommend that Ste. Genevieve or Perry Counties be part of the eight-hour ozone NA, the collective evaluation of the eleven factors outlined in EPA's guidance memorandum should point to adding these counties. As shown in the analysis above, this is not the case. In fact, only one of the eleven evaluation criteria even partially supports the inclusion of Ste. Genevieve or Perry Counties in the NA.