



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

**Air Pollution Control Division**  
**9<sup>th</sup> Floor, L & C Annex, 401 Church Street, Nashville, TN 37243**

March 30, 2004

J.I. Palmer, Jr.  
Regional Administrator  
US EPA, Region IV  
Sam Nunn Atlanta Federal Center  
61 Forsythe Street, SW  
Atlanta, GA 30303

RE: Tennessee Early Action Compact Submittal for March 31, 2004 Milestone

Dear Mr. Palmer:

In accordance with the Early Action Compact (EAC) agreements, you will find enclosed air quality improvement plans for each of the seven (7) EAC Areas in Tennessee. The enclosed documentation is being submitted on behalf of each EAC area. This submittal is for the purpose of complying with the March 31, 2004 deadline to submit local air quality plans defining the measures to be taken to achieve compliance with the 8-hour ozone National Ambient Air Quality Standard no later than December 31, 2007.

Each local plan includes local measures that are specific and can be federally enforceable as either a part of the State Implementation Plan or Transportation Improvement Program no later than December 31, 2004. The documentation supporting each local plan and the modeling analysis are based on local controls demonstrating attainment of the 8-hour standard. The following information is enclosed:

- Chattanooga EAC Air Quality Improvement Plan  
for Hamilton, Marion, and Meigs Counties  
(Catoosa and Walker County, GA will make separate submittals)
- Knoxville EAC Air Quality Improvement Plan  
for Anderson, Blount, Jefferson, Loudon, Knox, Sevier, and Union  
Counties

- Nashville EAC Air Quality Improvement Plan for Cheatham, Davidson, Dickson, Robertson, Rutherford, Sumner, Williamson, and Wilson Counties
- Memphis EAC Air Quality Improvement Plan for Fayette, Tipton, and Shelby Counties (Desoto County, MS and Crittenden County, AR are to be submitted separately)
- Tri-Cities EAC Air Quality Improvement Plan for Carter, Hawkins, Sullivan, Unicoi, and Washington Counties
- Haywood County Air Quality Improvement Plan (Attainment)
- Putnam County Air Quality Improvement Plan (Attainment)
- Status of Statewide Measures
- Modeling Analysis Technical Support Documentation (TSD) (ATMOS TSD Final and Appendices A & B)
- Additional Technical Support Documentation (see CD)
  - Nashville EAC Report from UT 032204
  - TDOT VMT Emissions Growth 1999-2030
  - ATMOS Presentation 040212

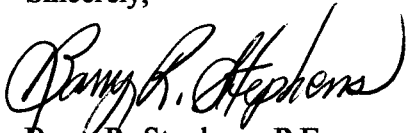
The 2001-2003 ozone monitoring data shows that both Haywood and Putman Counties have demonstrated attainment for the 8-hour ozone National Ambient Air Quality Standard. Haywood and Putnam Counties recognize the importance of air quality as it relates to the health and welfare of its citizens, and for this reason are volunteering to take additional measures. Their efforts at the local level are an attempt to target citizen behavior through education and outreach.

All of the Early Action Compact areas in Tennessee will be substantially impacted by forthcoming federal measures. The Regional impacts of low sulfur diesel fuel and Heavy-Duty Diesel Engine standards will have significant impacts on regional NO<sub>x</sub> and VOC emissions as well as an expected benefit from lowering the gasoline sulfur content beginning in 2004. The change in gasoline sulfur content is expected to make considerable emissions reductions from light and some heavy-duty gasoline powered vehicles. Following the implementation of these federal measures, some of the EAC areas in Tennessee with a minimal amount of local voluntary control measures should be able to achieve attainment of the 8-hour ozone standard by 2007.

J.I. Palmer, Jr.  
March 30, 2004  
Page 3

Due to time constraints, some documents may not have all of the local signatures. The documents have been signed, we have just not received the originals. They will be forwarded to EPA upon our receipt. I believe this submittal satisfies all requirements of the March 31, 2004 EAC milestone, but if more information is needed do not hesitate to contact me.

Sincerely,

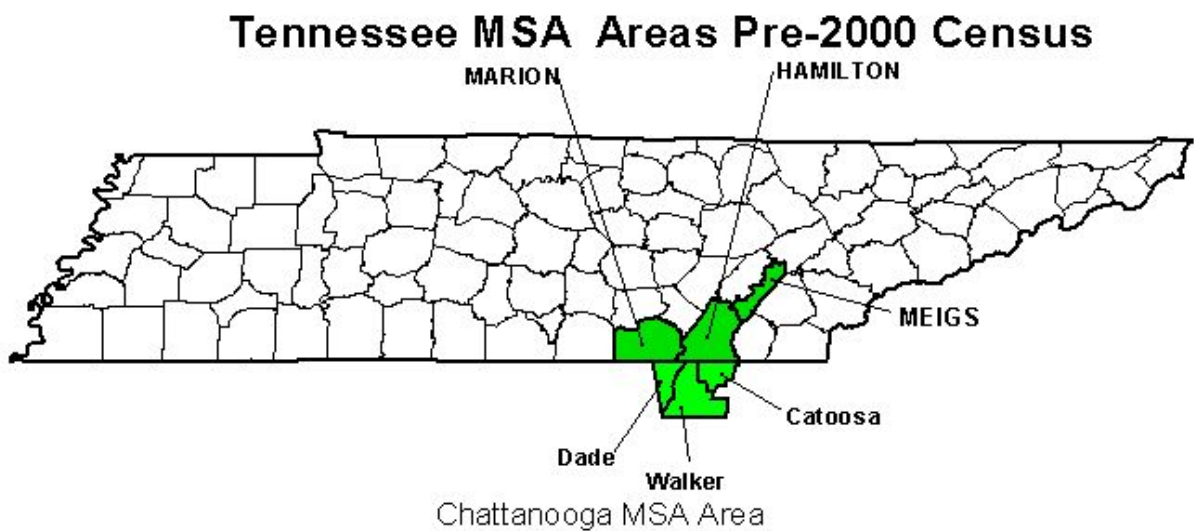
A handwritten signature in cursive script that reads "Barry R. Stephens".

Barry R. Stephens, P.E.  
Director  
Division of Air Pollution Control

cc: Kay Prince, Karen Borel, Dick Schutt, Clifford Beller, and Kenny Richardson  
at EPA Region IV  
Local Air Programs  
Tennessee Air Pollution Control Board  
EAC Signatories

# Chattanooga TN-GA MSA and Meigs County, TN

## Local Air Quality Improvement Plan



The Chattanooga TN-GA Metropolitan Statistical Area encompasses five counties in two states. It includes Hamilton and Marion counties in Tennessee as well as Catoosa, Dade, and Walker counties in Georgia. For purposes of comparison, Meigs County, TN will also be included in this discussion. In 2000, this MSA was listed as the 89th largest MSA within the United States.

# Hamilton County, Tennessee

## Geography/Topography

Hamilton County has a land area of 542.44 square miles and is located on the western fringe of the Valley and Ridge physiographic province of the East Grand Division of the State along the Interstate 24 corridor near the Georgia Stateline.

## Meteorological Information

Wind data from Chattanooga, TN for the period of record from 1988 through 1992 was determined to be representative for Hamilton County. The predominate wind direction and speed is from the south at 7 to 10 knots (see Figure 1 A). The mean high temperature for July is 89.8 F, while the mean low is 69.4 F. The mean July precipitation is 4.7 inches. The period of record for this data is from 1971 through 2000.

## Planning Authority

The authority for air quality planning for Hamilton County resides with the Chattanooga Hamilton County Air Pollution Control Bureau. Transportation planning for Hamilton County is performed by the Chattanooga Urban Area Metropolitan Planning Organization.

## Air Monitoring

For the 2001-2003 monitoring period, the ozone monitor (470650028-1) located at the Volunteer Army Ammunition Plant shows an 8-hour design value of .088 parts per million (ppm), and the ozone monitor (470651011-1) located on Ridgetrail Road, in Chattanooga shows an 8-hour design value of .087 ppm. Both monitors would be classified as nonattainment (see Table 1 A).

## Population

Based on projections to 2002 from the 2000 census data, there are 309,321 persons living in Hamilton County (see Table 1 C). This indicates a population density of 570.2 persons per square mile. The population of Hamilton County is approximately 9.7% rural with the remaining 90.3% living in incorporated areas. The largest cities in Hamilton County are Chattanooga and East Ridge (see Table 1 C).

Hamilton County's population from 1990 through 2000 increased by approximately 7.8% (285,571 to 307,896). The population is expected to decrease by .7% between 2000 and 2010 (see Table 1 B).

Based on the 2002 population data for the entire Chattanooga TN-GA MSA and Meigs County, Hamilton County represents approximately 64% of the total Chattanooga TN-GA MSA and Meigs County population (see Table 1 C).

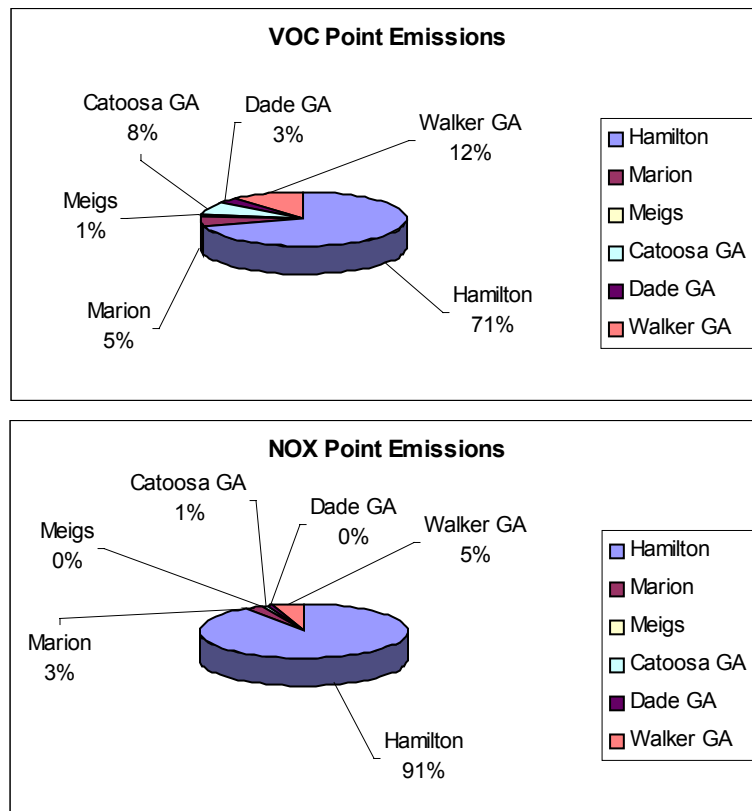
## Air Emissions

All air emission estimates were derived from EPA's 1999 National Emission Inventory (NEI) database.

Point source NOX emissions from Hamilton County were estimated at 18.42 ton/day in 1999 which represents approximately 91% of the 20.36 ton/day of overall NOX point source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

Point source VOC emissions from Hamilton County were estimated at 44.52 ton/day in 1999 which represents approximately 71% of the 62.65 ton/day of overall VOC point source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

### 1999 NEI Point Source Emissions (ton/day)



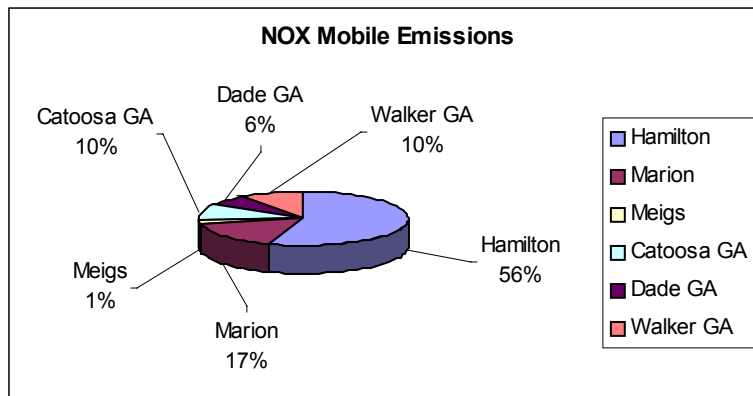
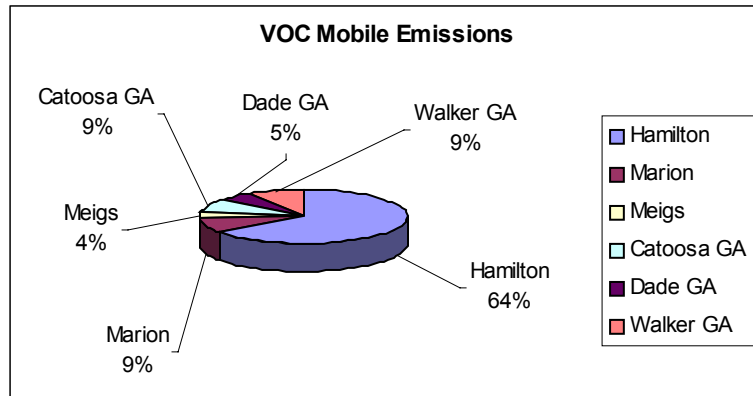
For NOX and VOC control, point sources located within Hamilton County are subject to Prevention of Significant Deterioration (PSD) requirements, Control Technology Guideline Reasonable Available Control Technology (CTG RACT) requirements, Maximum Achievable Control Technology (MACT) requirements

for Hazardous Air Pollutants (HAP), and New Source Performance Standards (NSPS).

Mobile source NOX emissions from Hamilton County were estimated at 55.36 ton/day in 1999 which represents approximately 56% of the 100.31 ton/day of overall NOX mobile source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

Mobile source VOC emissions from Hamilton County were estimated at 29.69 ton/day in 1999 which represents approximately 64% of the 45.94 ton/day of overall VOC mobile source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

### 1999 NEI Mobile Source Emissions (ton/day)

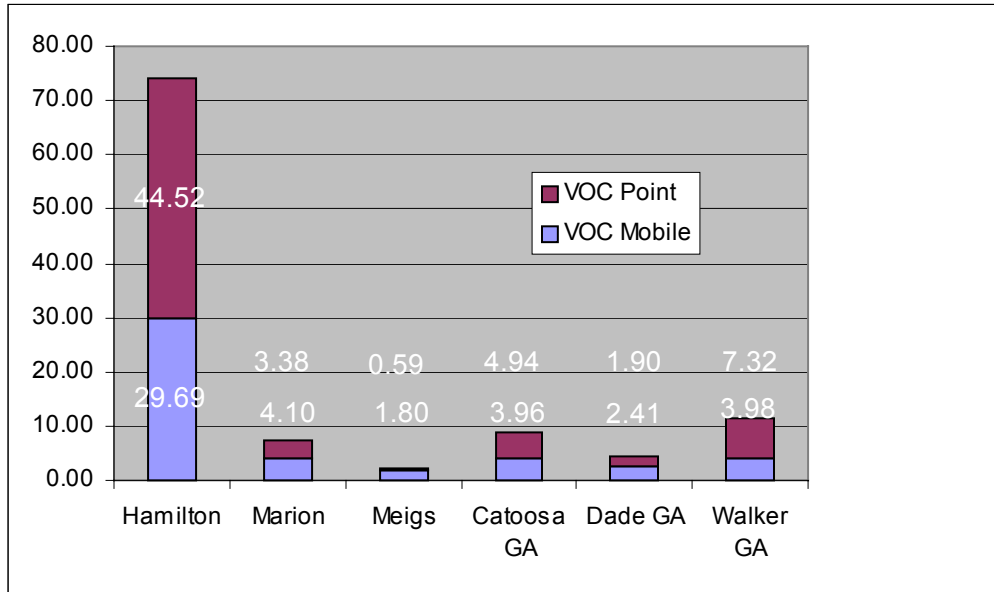




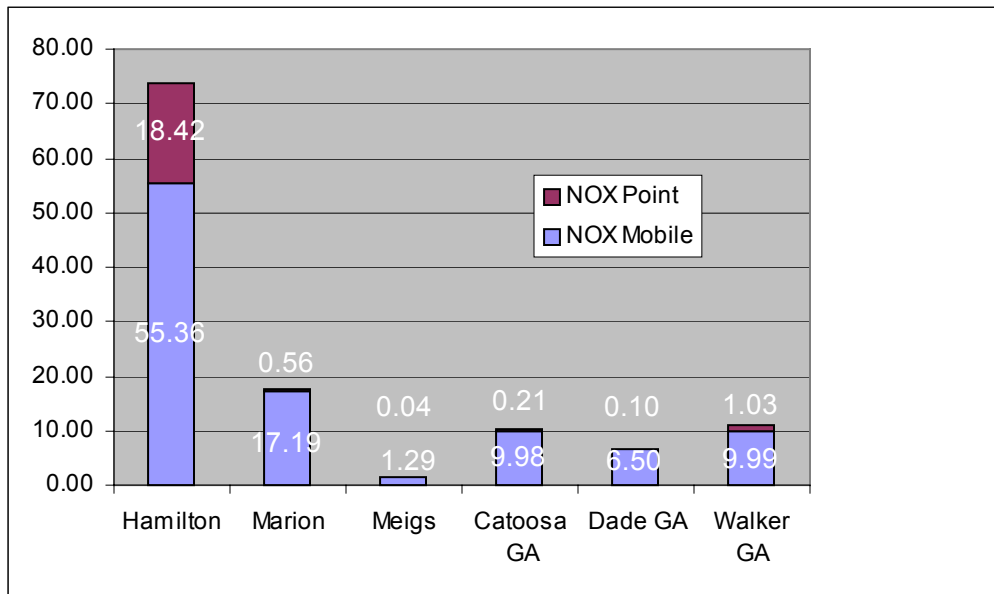
Commuting traffic from surrounding counties into Hamilton County is minimal. Commuting traffic from Hamilton County into surrounding counties is not significant.

| <b>Commuting Classifications</b> |             |
|----------------------------------|-------------|
| Not Significant                  | 0-10%       |
| Minimal                          | 11-30%      |
| High                             | 31-50%      |
| Significant                      | 51% or more |

### 1999 NEI VOC Contribution (ton/day)



### 1999 NEI NOX Contribution (ton/day)



## Summary

Local air pollution emission reductions for Hamilton County are listed in the Quantification of Control Measures Table. The local measures listed are to be implemented by the local government of Hamilton County. All local measures are to be implemented by ozone season of 2007, at the latest. The most desirable implementation is the soonest time possible (ideally ozone season of 2005). Local jurisdictions understand that measures are to be implemented on a schedule that concurs with the schedule in the attainment demonstration modeling.

For a Weight of Evidence Analysis, review the summary Attainment Demonstration for the Chattanooga Area and see the complete Weight of Evidence discussion presented in Chapter 8 of the Modeling Analysis Technical Support Documentation (TSD) for details.

Some voluntary measures were not included in the modeling demonstration. These measures will, it is expected, create even further reductions in the ozone level of the EAC. Effectiveness of these measures may not necessarily be quantifiable, however, given the concern for air quality in the region, any reduction is viewed as positive.

Please review the detailed attainment demonstration contained in the Modeling Analysis Technical Support Documentation, which includes specific information on the EAC's control measures and subsequent ozone design value. County level endorsement of their local control measures can be found in Attachment 1 at the end of this section.

Emission Reductions for the AS-4 EAC Attainment Strategy  
Quantification of Control Measures

| Control Measure by<br>Source Category      | Hamilton, TN |            |           |
|--|--------------|------------|-----------|
|  | NOx<br>TPD   | VOC<br>TPD | CO<br>TPD |
| <b>Area Sources</b>                        |              |            |           |
| Open Burning Ban -yard waste2B.            | 0.140        | 0.506      | 9.600     |
| Open Burning Ban - Land clearing2C.        | 0.440        | 1.102      | 6.320     |
| Stage I Controls at Gas Stations.          | 0.000        | 2.468      | 0.000     |
| <b>Nonroad Mobile</b>                      |              |            |           |
| Construction Equipment (10% New).          | 0.053        | 0.007      | 0.024     |
| <b>Onroad Mobile</b>                       |              |            |           |
| Cetane to Diesel (-3% NOx)(10% effective)  | 0.110        | 0.000      | 0.000     |
| Anti-idling Legis. (1% veh idle 5 min/day) | 0.004        | 0.004      | 0.027     |
| Transit (increase bus ridership 10%)       | 0.003        | 0.004      | 0.043     |
| Ozone Action Day (Reduce VMT 1%)           | 0.124        | 0.161      | 1.796     |

Please see Table 7-4d of the Modeling Analysis Technical Support Document for additional details and further discussion.

# Marion County, Tennessee

## Geography/Topography

Marion County has a land area of 498 square miles and is located on the western fringe of the Valley and Ridge physiographic province of the East Grand Division of the State along the Interstate 24 corridor near the Georgia Stateline.

## Meteorological Information

Wind data from Chattanooga, TN for the period of record from 1988 through 1992 was determined to be representative for Marion County. The predominate wind direction and speed is from the south at 7 to 10 knots (see Figure 1 A). The mean high temperature for July is 89.8 F, while the mean low is 69.4 F. The mean July precipitation is 4.7 inches. The period of record for this data is from 1971 through 2000.

## Planning Authority

The authority for air quality planning for Marion County resides with the Tennessee Department of Environment and Conservation. Transportation planning for Marion County is performed by the Tennessee Department of Transportation.

## Air Monitoring

Marion County does not have an ozone monitor.

## Population

Based on projections to 2002 from the 2000 census data, there are 27,654 persons living in Marion County (see Table 1 C). This indicates a population density of 55.5 persons per square mile. The population of Marion County is approximately 79.3% rural with the remaining 20.7% living in incorporated areas. The largest city in Marion County is South Pittsburg (see Table 1 C).

Marion County's population from 1990 through 2000 increased by approximately 11.7% (24,873 to 27,776). The population is expected to increase by 7.8% between 2000 and 2010 (see Table 1 B).

Based on the 2002 population data for the entire Chattanooga TN-GA MSA and Meigs County, Marion County represents approximately 6% of the total Chattanooga TN-GA MSA and Meigs County population (see Table 1 C).

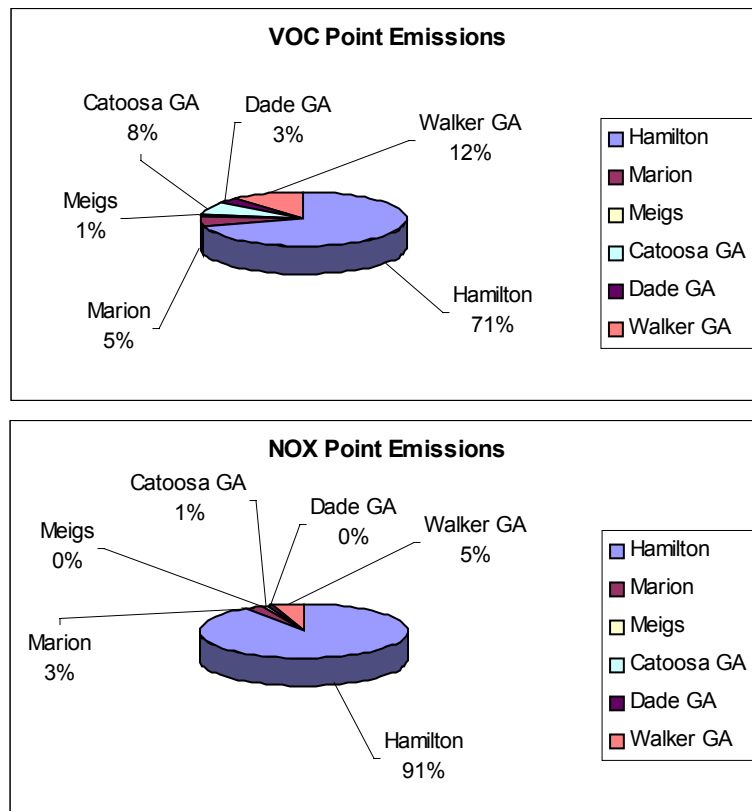
## Air Emissions

All air emission estimates were derived from EPA's 1999 National Emission Inventory (NEI) database.

Point source NOX emissions from Marion County were estimated at 0.56 ton/day in 1999 which represents approximately 3% of the 20.36 ton/day of overall NOX point source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

Point source VOC emissions from Marion County were estimated at 3.38 ton/day in 1999 which represents approximately 5% of the 62.65 ton/day of overall VOC point source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

### 1999 NEI Point Source Emissions (ton/day)



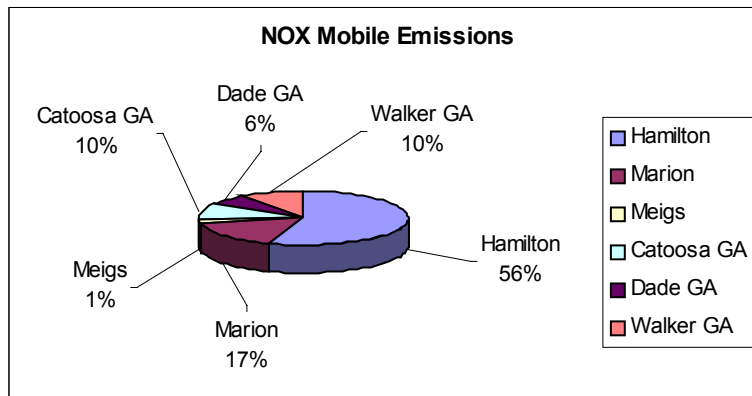
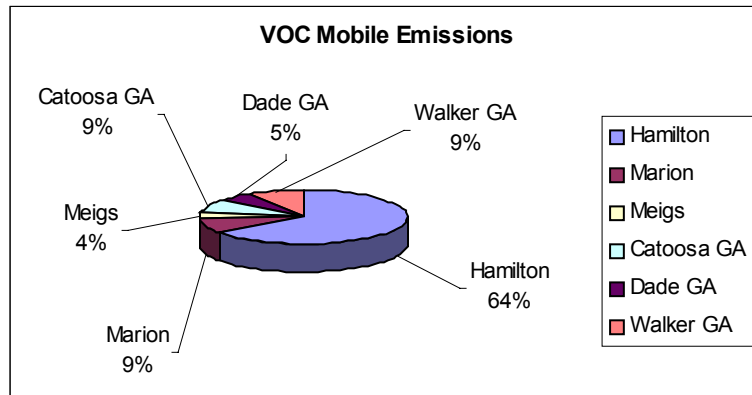
For NOX and VOC control, point sources located within Marion County are subject to Prevention of Significant Deterioration (PSD) requirements, Control Technology Guideline Reasonable Available Control Technology (CTG RACT) requirements, Maximum Achievable Control Technology (MACT) requirements

for Hazardous Air Pollutants (HAP), and New Source Performance Standards (NSPS).

Mobile source NOX emissions from Marion County were estimated at 17.19 ton/day in 1999 which represents approximately 17% of the 100.31 ton/day of overall NOX mobile source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

Mobile source VOC emissions from Marion County were estimated at 4.10 ton/day in 1999 which represents approximately 9% of the 45.94 ton/day of overall VOC mobile source emissions from the Chattanooga TN-GA MSA and Meigs County (see Table 1 D).

### 1999 NEI Mobile Source Emissions (ton/day)

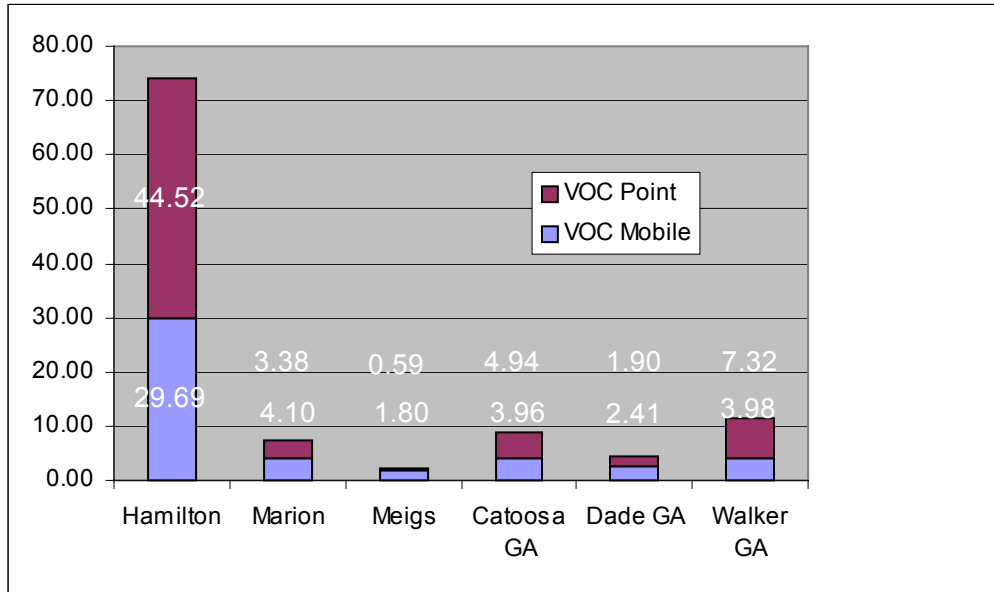


Commuting traffic from surrounding counties into Marion County is minimal.  
Commuting traffic from Marion County into surrounding counties is significant.

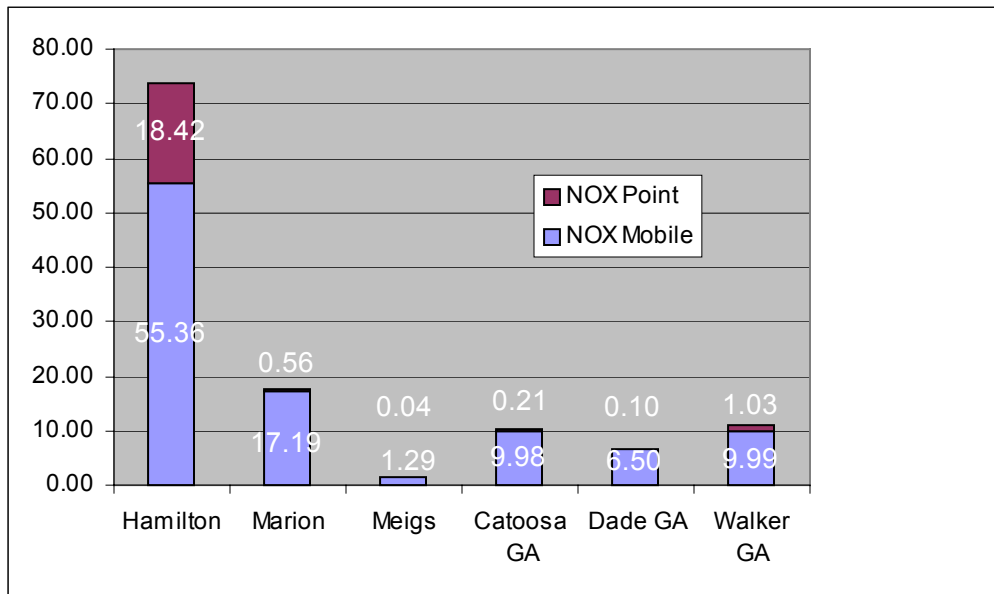
| <b>Commuting<br/>Classifications</b> |             |
|--------------------------------------|-------------|
| Not Significant                      | 0-10%       |
| Minimal                              | 11-30%      |
| High                                 | 31-50%      |
| Significant                          | 51% or more |



### 1999 NEI VOC Contribution (ton/day)



### 1999 NEI NOX Contribution (ton/day)



## Summary

Local air pollution emission reductions for Marion County are listed in the Quantification of Control Measures Table. The local measures listed are to be implemented by the local government of Marion County. All local measures are to be implemented by ozone season of 2007, at the latest. The most desirable implementation is the soonest time possible (ideally ozone season of 2005). Local jurisdictions understand that measures are to be implemented on a schedule that concurs with the schedule in the attainment demonstration modeling.

For a Weight of Evidence Analysis, review the summary Attainment Demonstration for the Chattanooga Area and see the complete Weight of Evidence discussion presented in Chapter 8 of the Modeling Analysis Technical Support Documentation (TSD) for details.

Some voluntary measures were not included in the modeling demonstration. These measures will, it is expected, create even further reductions in the ozone level of the EAC. Effectiveness of these measures may not necessarily be quantifiable, however, given the concern for air quality in the region, any reduction is viewed as positive.

Please review the detailed attainment demonstration contained in the Modeling Analysis Technical Support Documentation, which includes specific information on the EAC's control measures and subsequent ozone design value. County level endorsement of their local control measures can be found in Attachment 1 at the end of this section.

Emission Reductions for the AS-4 EAC Attainment Strategy  
Quantification of Control Measures

| Control Measure by<br>Source Category      | Marion, TN |            |           |
|--|------------|------------|-----------|
|  | NOx<br>TPD | VOC<br>TPD | CO<br>TPD |
| <b>Area Sources</b>                        |            |            |           |
| Open Burning Ban -yard waste2B.            | 0.000      | 0.000      | 0.000     |
| Open Burning Ban - Land clearing2C.        | 0.000      | 0.000      | 0.000     |
| Stage I Controls at Gas Stations.          | 0.000      | 0.485      | 0.000     |
| <b>Nonroad Mobile</b>                      |            |            |           |
| Construction Equipment (10% New).          | 0.008      | 0.001      | 0.004     |
| <b>Onroad Mobile</b>                       |            |            |           |
| Cetane to Diesel (-3% NOx)(10% effective)  | 0.039      | 0.000      | 0.000     |
| Anti-idling Legis. (1% veh idle 5 min/day) | 0.000      | 0.000      | 0.002     |
| Transit (increase bus ridership 10%)       | 0.000      | 0.000      | 0.000     |
| Ozone Action Day (Reduce VMT 1%)           | 0.024      | 0.032      | 0.353     |

Please see Table 7-4d on page 7-22 of the Modeling Analysis Technical Support Document for additional details and further discussion.

# Meigs County, Tennessee

## Geography/Topography

Meigs County has a land area of 195 square miles and is on the western fringe of the Valley and Ridge physiographic province of the East Grand Division of the State.

## Meteorological Information

Wind data from Chattanooga, TN for the period of record from 1988 through 1992 was determined to be representative for Meigs County. The predominate wind direction and speed is from the south at 7 to 10 knots (see Figure 1 A). The mean high temperature for July is 89.8 F, while the mean low is 69.4 F. The mean July precipitation is 4.7 inches. The period of record for this data is from 1971 through 2000.

## Planning Authority

The authority for air quality planning for Meigs County resides with the Tennessee Department of Environment and Conservation. Transportation planning for Meigs County is performed by the Tennessee Department of Transportation.

## Air Monitoring

For the 2001-2003 monitoring period, the ozone monitor 471210104 - 1 located in Meigs County shows an 8-hour design value of 0.088 parts per million (ppm) which would be classified as nonattainment (see Table 1 A).

## Population

Based on projections to 2002 from the 2000 census data, there are 11,310 persons living in Meigs County (see Table 1 C). This indicates a population density of 58 persons per square mile. The population of Meigs County is 100% rural. The largest cities in Meigs County are Decatur (see Table 1 C).

Meigs County's population from 1990 through 2000 increased by approximately 37% (8,092 to 11,086). The population is expected to increase by 4% between 2000 and 2010 (see Table 1 B).

Based on the 2002 population data for the entire Chattanooga MSA and Meigs County, Meigs County represents approximately 2% of the total Chattanooga MSA population (see Table 1 C).

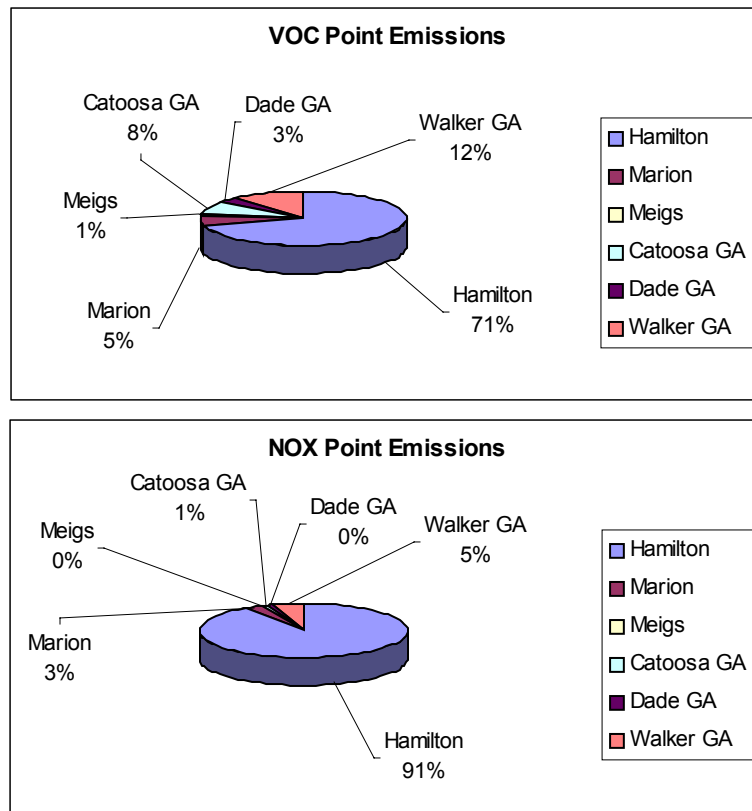
## Air Emissions

All air emission estimates were derived from EPA's 1999 National Emission Inventory (NEI) database.

Point source NOX emissions from Meigs County were estimated at 0.04 ton/day in 1999 which represents less than one percent of the 20.36 ton/day of overall NOX point source emissions from the Chattanooga MSA (see Table 1 D).

Point source VOC emissions from Meigs County were estimated at 0.59 ton/day in 1999 which represents approximately 1% of the 62.65 ton/day of overall VOC point source emissions from the Chattanooga MSA (see Table 1 D).

### 1999 NEI Point Source Emissions (ton/day)

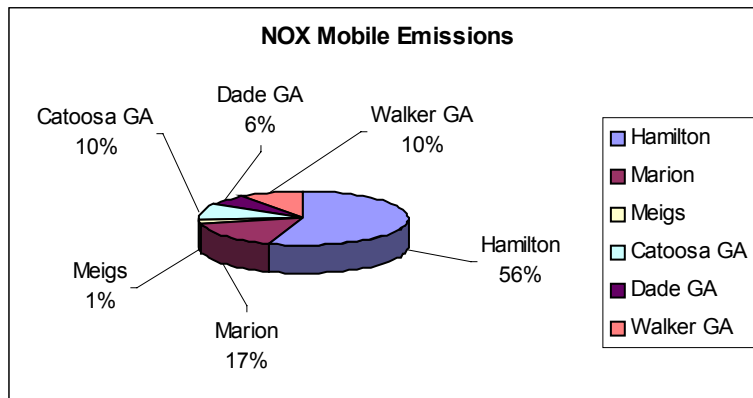
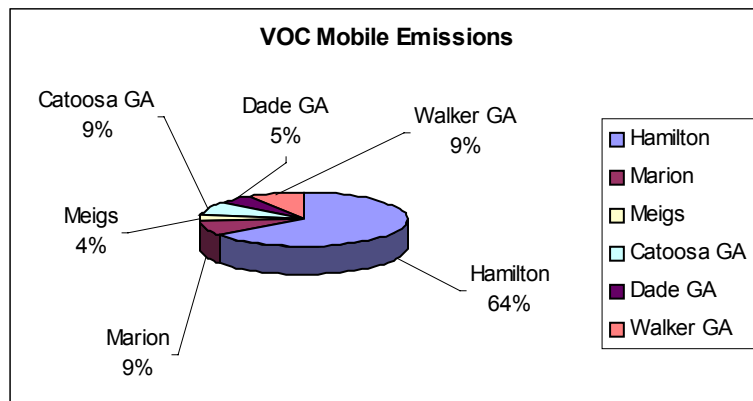


For NOX and VOC control, point sources located within Meigs County are subject to Prevention of Significant Deterioration (PSD) requirements, Control Technology Guideline Reasonable Available Control Technology (CTG RACT) requirements, Maximum Achievable Control Technology (MACT) requirements for Hazardous Air Pollutants (HAP), and New Source Performance Standards (NSPS).

Mobile source NOX emissions from Meigs County were estimated at 1.29 ton/day in 1999 which represents approximately 1% of the 100.31 ton/day of overall NOX mobile source emissions from the Chattanooga MSA (see Table 1 D).

Mobile source VOC emissions from Meigs County were estimated at 1.80 ton/day in 1999 which represents approximately 4% of the 45.94 ton/day of overall VOC mobile source emissions from the Chattanooga MSA (see Table 1 D).

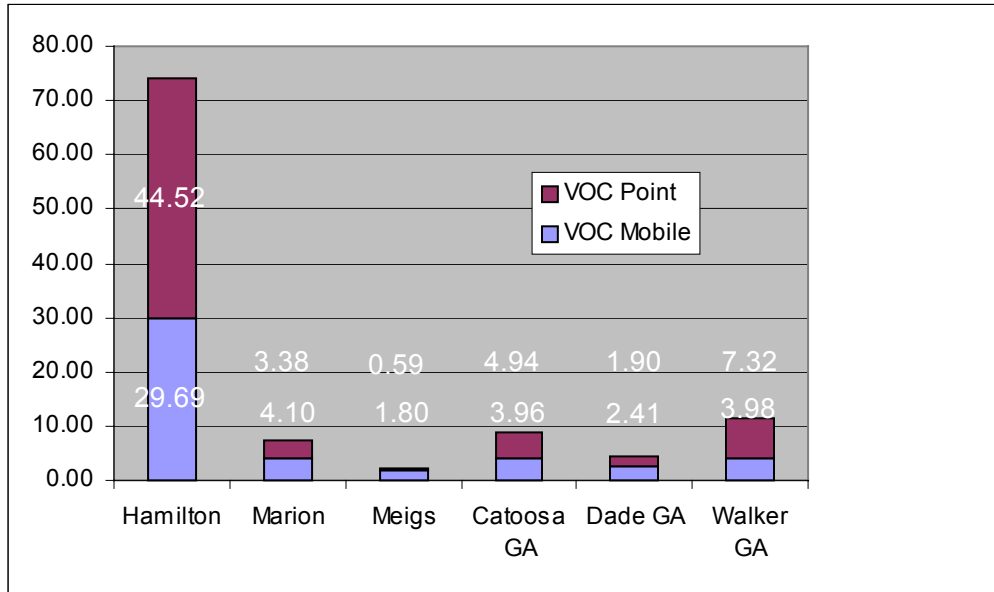
### 1999 NEI Mobile Source Emissions (ton/day)



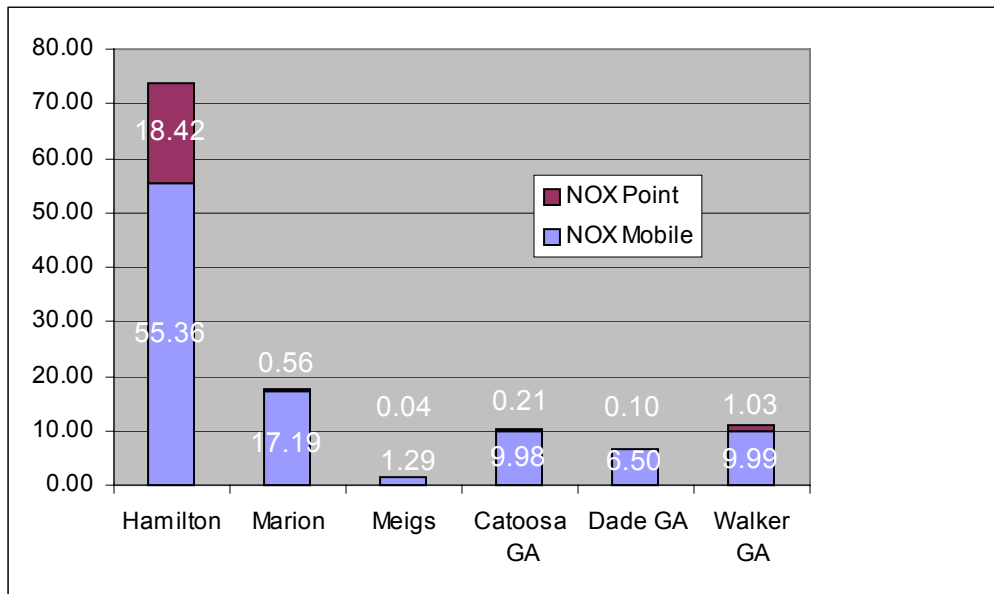
Commuting traffic from surrounding counties into Meigs County is minimal.  
Commuting traffic from Meigs County into surrounding counties is significant.

| <b>Commuting<br/>Classifications</b> |             |
|--------------------------------------|-------------|
| Not Significant                      | 0-10%       |
| Minimal                              | 11-30%      |
| High                                 | 31-50%      |
| Significant                          | 51% or more |

### 1999 NEI VOC Contribution (ton/day)



### 1999 NEI NOX Contribution (ton/day)





## Summary

Local air pollution emission reductions for Meigs County are listed in the Quantification of Control Measures Table. The local measures listed are to be implemented by the local government of Meigs County. All local measures are to be implemented by ozone season of 2007, at the latest. The most desirable implementation is the soonest time possible (ideally ozone season of 2005). Local jurisdictions understand that measures are to be implemented on a schedule that concurs with the schedule in the attainment demonstration modeling.

For a Weight of Evidence Analysis, review the summary Attainment Demonstration for the Chattanooga Area and see the complete Weight of Evidence discussion presented in Chapter 8 of the Modeling Analysis Technical Support Documentation (TSD) for details.

Some voluntary measures were not included in the modeling demonstration. These measures will, it is expected, create even further reductions in the ozone level of the EAC. Effectiveness of these measures may not necessarily be quantifiable, however, given the concern for air quality in the region, any reduction is viewed as positive.

Please review the detailed attainment demonstration contained in the Modeling Analysis Technical Support Documentation, which includes specific information on the EAC's control measures and subsequent ozone design value. County level endorsement of their local control measures can be found in Attachment 1 at the end of this section.

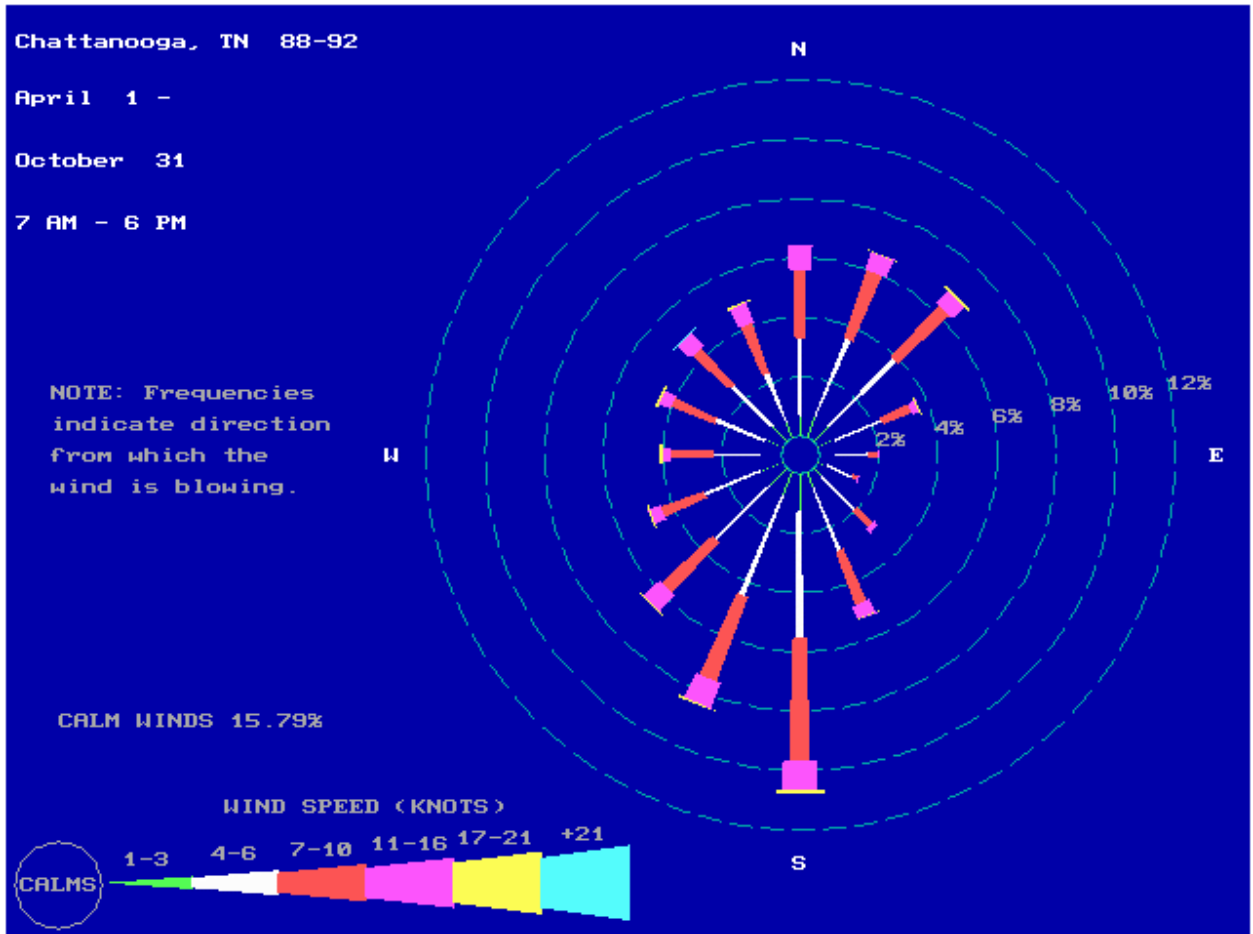
Emission Reductions for the AS-4 EAC Attainment Strategy  
Quantification of Control Measures

| Control Measure by<br>Source Category      | NOx<br>TPD | Meigs, TN  | CO<br>TPD |
|--|------------|------------|-----------|
|  |            | VOC<br>TPD |           |
| <b>Area Sources</b>                        |            |            |           |
| Open Burning Ban -yard waste2B.            | 0.000      | 0.000      | 0.000     |
| Open Burning Ban - Land clearing2C.        | 0.000      | 0.000      | 0.000     |
| Stage I Controls at Gas Stations.          | 0.000      | 0.058      | 0.000     |
| <b>Nonroad Mobile</b>                      |            |            |           |
| Construction Equipment (10% New).          | 0.001      | 0.001      | 0.005     |
| <b>Onroad Mobile</b>                       |            |            |           |
| Cetane to Diesel (-3% NOx)(10% effective)  | 0.000      | 0.000      | 0.000     |
| Anti-idling Legis. (1% veh idle 5 min/day) | 0.000      | 0.000      | 0.001     |
| Transit (increase bus ridership 10%)       | 0.000      | 0.000      | 0.000     |
| Ozone Action Day (Reduce VMT 1%)           | 0.003      | 0.004      | 0.042     |

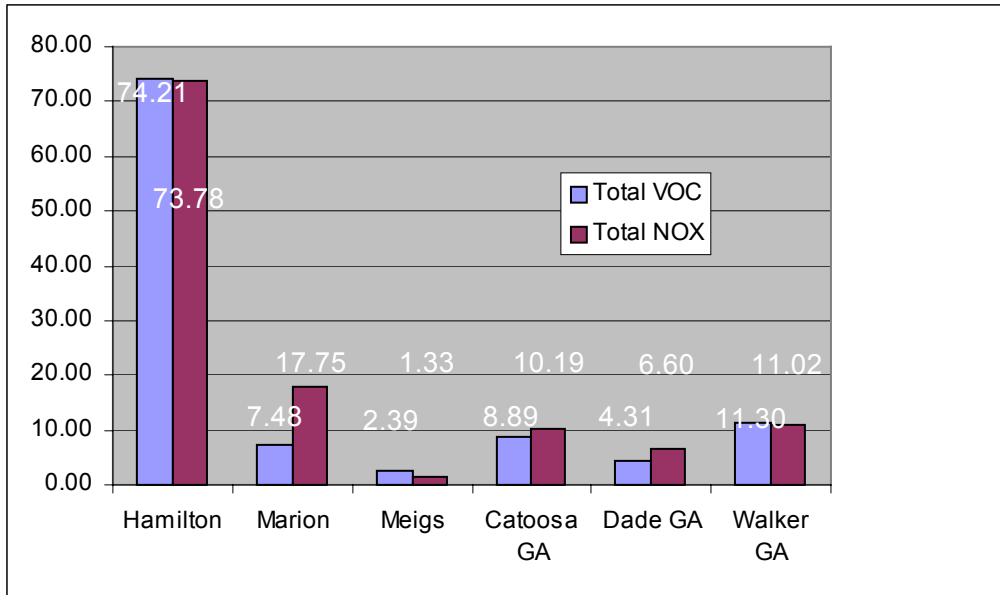
Please see Table 7-4d on page 7-22 of the Modeling Analysis Technical Support Document for additional details and further discussion.

# Chattanooga TN-GA MSA and Meigs County, TN

Figure 1 A  
Chattanooga TN-GA MSA and Meigs County  
Wind Rose



**Figure 1 B**  
**Chattanooga TN-GA MSA and Meigs County**  
**1999 NEI VOC and NOX Emissions**  
*(ton/day)*



**Table 1 A**  
**Chattanooga TN-GA MSA and Meigs County**  
**Ozone Design Values**  
*(ppm)*

| County   | Site Name                       | MONITOR ID    | 1999<br>2001<br>Design<br>Value<br>PPM | 2000<br>2002<br>Design<br>Value<br>PPM | 2001<br>2003<br>Design<br>Value<br>PPM |
|----------|---------------------------------|---------------|--|--|--|
| Hamilton | Volunteer Army Ammunition Plant | 470650028 - 1 | 0.092                                  | 0.092                                  | 0.088                                  |
| Hamilton | Ridgetrail Rd.                  | 470651011 - 1 | 0.092                                  | 0.093                                  | 0.087                                  |
| Meigs    | 8401 Highway 60                 | 471210104 - 1 |  | 0.093                                  | 0.088                                  |

**Table 1 B**  
**Chattanooga TN-GA MSA and Meigs County**  
**Population Growth Data**

| County                | Population<br>1990 | Population<br>2000 | PERCENT<br>CHANGE<br>1990 - 2000 | Population<br>2002 | Area in<br>Square Miles | 2002 Pop.<br>Density (Sq.<br>Mile) | Projection<br>2010 | % Growth<br>2000 - 2010 |
|-----------------------|--------------------|--------------------|----------------------------------|--------------------|-------------------------|------------------------------------|--------------------|-------------------------|
| <b>Tennessee</b>      |                    |                    |                                  |                    |                         |                                    |                    |                         |
| Hamilton              | 285,571            | 307,896            | 7.8                              | 309,321            | 542.44                  | 570.2                              | 305,767            | -0.7                    |
| Marion                | 24,873             | 27,776             | 11.7                             | 27,654             | 498.36                  | 55.5                               | 29,930             | 7.8                     |
| <b>Not in the MSA</b> |                    |                    |                                  |                    |                         |                                    |                    |                         |
| Meigs                 | 8,092              | 11,086             | 37.0                             | 11,310             | 194.86                  | 58.0                               | 11,549             | 4.2                     |
| <b>Georgia</b>        |                    |                    |                                  |                    |                         |                                    |                    |                         |
| Catoosa               | 42,464             | 53,282             | 25.5                             |                    |                         |                                    | 65,877             | 23.6                    |
| Dade                  | 13,147             | 15,154             | 15.3                             |                    |                         |                                    | 17,740             | 17.1                    |
| Walker                | 58,340             | 61,053             | 4.7                              |                    |                         |                                    | 65,195             | 6.8                     |
| <b>TOTALS</b>         | <b>432,487</b>     | <b>407,811</b>     |                                  | <b>348,285</b>     |                         |                                    | <b>496,058</b>     |                         |

**Table 1 C**  
**Chattanooga TN-GA MSA and Meigs County**  
**2002 Population Estimates**

| <b>Tennessee Counties</b> |           | <b>Population</b> |
|---------------------------|-----------|-------------------|
| Hamilton                  |           | <b>309,321</b>    |
| *Chattanooga              | (155,554) |                   |
| *East Ridge               | ( 20,640) |                   |
| Marion                    |           | <b>27,654</b>     |
| *South Pittsburg          | ( 3,295)  |                   |
| Meigs                     |           | <b>11,310</b>     |
| *Decatur                  | ( 1,395)  |                   |
| <b>TN TOTALS</b>          |           | <b>348,285</b>    |

| <b>Georgia Counties</b> |  | <b>Population</b> |
|-------------------------|--|-------------------|
| **Catoosa               |  | <b>55,197</b>     |
| **Dade                  |  | <b>15,508</b>     |
| **Walker                |  | <b>61,884</b>     |
| <b>GA TOTALS</b>        |  | <b>132,589</b>    |

|                           |                |
|---------------------------|----------------|
| <b>TN &amp; GA TOTALS</b> | <b>480,874</b> |
|---------------------------|----------------|

\* Based on 2000 Census Data

\*\* Based on 2001 Census Data

**Table 1 D**  
**Chattanooga TN-GA MSA and Meigs County**  
**1999 NEI VOC and NOX Emissions**  
*(ton/day)*

| <b>County</b> | <b>Mobile</b> | <b>VOC</b>   |               | <b>Mobile</b> | <b>NOX</b>   |               |
|---------------|---------------|--------------|---------------|---------------|--------------|---------------|
|               |               | <b>Point</b> | <b>Total</b>  |               | <b>Point</b> | <b>Total</b>  |
| Hamilton      | 29.69         | 44.52        | 74.21         | 55.36         | 18.42        | 73.78         |
| Marion        | 4.10          | 3.38         | 7.48          | 17.19         | 0.56         | 17.75         |
| Meigs         | 1.80          | 0.59         | 2.39          | 1.29          | 0.04         | 1.33          |
| Catoosa GA    | 3.96          | 4.94         | 8.89          | 9.98          | 0.21         | 10.19         |
| Dade GA       | 2.41          | 1.90         | 4.31          | 6.50          | 0.10         | 6.60          |
| Walker GA     | 3.98          | 7.32         | 11.30         | 9.99          | 1.03         | 11.02         |
| <b>TOTAL</b>  | <b>45.94</b>  | <b>62.65</b> | <b>108.58</b> | <b>100.31</b> | <b>20.36</b> | <b>120.67</b> |

## Summary Attainment Demonstration for the Chattanooga Area

The attainment and screening tests and additional corroborative analyses indicate that the Chattanooga EAC area will be in attainment of the 8-hour ozone standard by 2007. Good modeling results and good representation of typical 8-hour ozone conducive meteorological conditions by the simulation periods provide a sound basis for the application of the model-based tests. Variations in the selection of days or the radius of influence assumptions employed in the application of the attainment test do not alter the outcome of the modeled attainment test, but do suggest an even greater response for higher ozone days than when all days are considered. There is one location within a subdomain encompassing the Chattanooga EAC area for which high ozone concentrations (greater than any near a monitor) are consistently simulated. When the attainment test is applied for this location using the maximum design value for any site in the subregion, it is passed. The values of the simulated ozone exposure metrics indicate a significant reduction in 8-hour ozone for the 2007 AS-4 control measures simulation - approximately 60 to 75 percent for each of the exposure metrics. The amount of excess ozone is reduced by a somewhat greater percentage than the incidence (number of hours) of high ozone.

Estimates of modeling system noise also suggest that, relative to the 2007 baseline simulation, the simulated ozone reductions associated with the AS-4 control measures are meaningful within the context of the simulation—that is, the measures are expected to result in meaningful further ozone reductions by 2007, compared to the baseline values. In addition, the oxidant tagging results (as presented in Section 7 of this document) indicate that 8-hour ozone concentrations in the Chattanooga area are influenced by emissions from the Atlanta area as well as other areas outside of the ATMOS fine grid. Thus, any regional ozone reductions that are not accounted for in the ATMOS modeling inventory (such as that from EACs being developed for Augusta, Macon, and other areas in northern Georgia) will contribute positively to lower ozone in the Chattanooga region.

All three of the monitoring sites in the Chattanooga area have future-year estimated design values for 8-hour ozone that are less than or equal to 85 ppb if the 2000-2002 design value is used and less than or equal to 81 ppb if the 2001-2003 design value is used. Analysis of the effects of meteorology on the design value provides an estimate of a meteorologically adjusted design value for both 2000-2002 and 2001-2003 that is equal to 86 ppb. Use of a meteorologically adjusted DV of 86 ppb is consistent with the outcome of the attainment test based on the use of the 2001-2003 DV and gives an EDV of 79 ppb. Meteorologically adjusted trends indicate a value of 83 ppb, assuming that the emissions changes between 2003 and 2007 will be, on average, the same as that for 1996-2003.

Regional- and national-scale modeling by the Georgia Department of Natural Resources, Environmental Protection Division (GEPD) and the U.S. EPA, gives even lower future-year EDVs for the Chattanooga area. The GEPD EDV for 2007 for Chattanooga is 81 ppb, while that for the Clear Skies Initiative is 79 ppb. These other studies use coarser

grid resolution, but may be more specific in incorporating regional (e.g., for Atlanta) and national measures. Therefore, these results further support a finding of attainment.

Finally, it is important to note that the future-year emissions estimates for Chattanooga do not fully reflect the reduced number of permitted non-major industrial sources (approximately 12 percent) and the loss in manufacturing jobs (approximately 13 percent) that has occurred in the Chattanooga area during the past several years (1999-2002). Overall, these factors would tend to lower the future-year emissions and further support a finding of attainment.

Please see the complete Weight Of Evidence discussion presented in Chapter 8 of the Modeling Analysis Technical Support Document (TSD) for details.



## **Letters of Support and Resolutions**



## Chattanooga-Hamilton County Air Pollution Control Bureau

March 25, 2004

RECEIVED

Barry Stephens  
Director  
Tennessee Air Pollution Control Division  
401 Church Street  
L&C Annex 9<sup>th</sup> Floor  
Nashville, Tennessee 37243-0435

Dear Mr. Stephens:

This is our submission of the local plan to achieve and maintain the 8-hour ozone standard within the Hamilton-County portion of the Chattanooga, Tennessee - North Georgia MSA Early Action Compact Area and describes the local measures that will be adopted in Hamilton County, Tennessee, by March 31, 2004. The modeling analysis will be submitted to the State and the United States Environmental Agency by our modeling contractor.

The local control measures being implemented in Hamilton County and Chattanooga are the following:

1. **Stage 1 Vapor recovery.** Hamilton County has amended the Hamilton County Air Pollution Control Regulations to adopt Stage 1 Vapor Recovery. The resolution was approved on March 16, 2004, and will be implemented by March 1, 2005.

The City of Chattanooga has amended the Chattanooga Air Pollution Control Ordinance to adopt Stage 1 Vapor Recovery. The resolution was approved on first reading on March 23, 2004. Second and third readings are scheduled for March 30, 2004, with implementation by March 1, 2005. Implementation of Stage 1 Vapor Recovery is required by March 1 2005.

Copies of the resolution from the Hamilton County Commission and the Ordinance which passed on first reading by the Chattanooga City Council are attached.

2. **Open Burning Restrictions.** Under the existing air pollution control regulations, open burning is restricted to "days of low pollution potential." As specified in the attached resolutions of the Hamilton County Commission and the Chattanooga

City Council, open burning will be restricted on Ozone Action Days effective May 15, 2004.

3. **Ozone Action Days Program.** The program is being instituted using existing local authority. Planning has been completed. The program will be initiated by May 15, 2004. Early start-up of this program is being implemented to allow additional time to develop public awareness and to develop community support in order to maximize the benefits from the program by March 1 2005. The attached resolutions of the Hamilton County Commission and the Chattanooga City Council show the commitment of local government to support this program.
4. **Bike Trails and Bike Racks at Worksites.** The program was adopted by the Metro Planning Organization as the Chattanooga Urban Area Bicycle Facilities Master Plan in June of 2002. Bike racks are in place, bike lanes are marked and bike racks are installed on Chattanooga Area Regional Transit Agency buses. Bicycle use appears to be growing based on tracking. The League of American Bicyclists has designated Chattanooga as a bicycle friendly community (Bronze Award) in October 2003. This program was not included in the modeling analysis.
5. **Cetane to Diesel.** This program encourages the use of cetane additives.
6. **Anti-Idling Program.** Existing air pollution control regulations limit idling of diesel engines to five consecutive minutes. This program will educate drivers of the advantages and requirements of minimizing idling and increase enforcement efforts.
7. **Increased Bus Rider-ship.** Chattanooga Area Regional Transit Authority has been on a campaign to increase rider-ship since 1998. From fiscal year 1998 to fiscal year 2000 rider-ship has increased from 2,994,087 to 3,226,009. Through our Ozone Action Days program, we will further promote mass transit use.

In addition to the measures that have been adopted by the governing bodies, the resolutions of the Hamilton County Commission and the Chattanooga City Council support the following state efforts.

1. Statewide Stage 1 Vapor Recovery
2. Statewide Anti-Idling rules
3. Statewide Vehicle tampering rules
4. State wide NO<sub>x</sub> RACT rules

The attainment demonstration and the modeling analysis have been completed under contract by Systems Applications International, Inc. This document is being submitted to the State and to EPA by Systems Applications International, Inc., in fulfillment of our commitments under the Early Action Compact.

Very Truly yours,

*Robert H. Colby - by permission*

Robert H. Colby  
Director

Cc: Kay Prince, U.S. EPA - Region IV  
CERTIFIED MAIL 7002 3150 0004 3231 6498  
Return Receipt Requested

## RESUBMITTAL LETTER FOR CHATTANOOGA (Updated)

March 29, 2004

Barry Stephens, Director  
Tennessee Air Pollution Control Division  
401 Church Street  
L&C Annex 9<sup>th</sup> Floor  
Nashville, Tennessee 37243-0435

Dear Mr. Stephens:

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In addition to the measures that have been adopted by the governing bodies, the resolutions of the Hamilton County Commission and the Chattanooga City Council support the following state efforts.

1. Statewide Stage 1 Vapor Recovery
2. Statewide Anti-Idling rules
3. Statewide Vehicle tampering rules
4. State wide NO<sub>x</sub> RACT rules

The attainment demonstration and the modeling analysis have been completed under contract by Systems Applications International, Inc. This document is being submitted to the State and to EPA by Systems Applications International, Inc., in fulfillment of our commitments under the Early Action Compact.

Very truly yours,

Robert H. Colby  
Director

cc: Kay Prince, U.S. EPA - Region IV  
CERTIFIED MAIL 7002 3150 0004 3231 6498  
Return Receipt Requested



## Hamilton County Board of Commissioners

# RESOLUTION

No. 304-41

**A RESOLUTION TO SUPPORT THE 8-HOUR OZONE EARLY ACTION COMPACT AMONG VARIOUS COUNTIES IN THE CHATTANOOGA, TENNESSEE-NORTH GEORGIA METROPOLITAN STATISTICAL AREA AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.**

WHEREAS, it is the declared public policy of this county to achieve and maintain such levels of air quality as will protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, and foster the comfort and convenience of the people; and

WHEREAS, air pollution is nationally a cause for concern and because Hamilton County is committed to improving the quality of life for its citizens; and

WHEREAS, Hamilton County is participating in an Early Action Compact, with two other Southeast Tennessee counties, two Georgia counties, and the United States Environmental Protection Agency, working together to improve air quality in the region; and

WHEREAS, The Tennessee Air Pollution Control Board is responsible for state-wide air pollution control issues; Hamilton County supports the efforts of the Board to improve air quality.

**NOW, THEREFORE, BE IT RESOLVED BY THIS COUNTY LEGISLATIVE BODY, IN SESSION ASSEMBLED:**

- Work in partnership with the Early Action Compact counties of Marion and Meigs in Tennessee, and Walker and Catoosa in Georgia to implement measures which reduce, directly and indirectly, air pollutant levels.
- Adopt Stage 1 vapor recovery regulations within Hamilton County to become effective before March 1, 2005.



IN AREAS REGULATED BY THE STATE OF TENNESSEE, BE IT FURTHER RESOLVE THAT HAMILTON COUNTY, TENNESSEE, WILL:

- Support statewide Stage 1 vapor controls at gas stations.
- Support statewide Anti-idling Legislation.
- Support the statewide enforcement of vehicle tampering. Vehicles are considered to be tampered with if the emission control devices (catalytic converters) have been altered or removed.
- Support statewide Reasonably Achievable Control Technology (RACT) rules for NOx should the State Air Pollution Control Board adopts them. The rules would require the installation of low NOx combustion controls such as low NOx burners and fuel additives at industrial facilities emitting 50 tons per year or more of NOx.

IN VOLUNTARY PROGRAM AREAS, BE IT FURTHER RESOLVED THAT:

- Hamilton County, through the Air Pollution Control Bureau, will not allow open burning on ozone action days effective May 15, 2004.
- Hamilton County will participate in the Ozone Action Day Program currently being developed and to be implemented no later than May 15, 2004. This program centers on public education about the sources, causes and solutions to air pollution.

BE IT FURTHER RESOLVED THAT THIS RESOLUTION TAKE EFFECT FROM AND AFTER ITS PASSAGE, THE PUBLIC WELFARE REQUIRING IT.

Hamilton County, Chattanooga, TN  
A CERTIFIED TRUE COPY  
This 24th day of March, 2004  
W. F. (BILL) KNOWLES, County Clerk  
By Debbie Rollins, Deputy Clerk

Approved:

Rejected:

Approved:

Vetoed:

CERTIFICATION OF ACTION

W. F. Knowles  
County Clerk

Clair Dancy  
County Executive

March 17, 2004

Date

RESOLUTION NO. 24054

A RESOLUTION IN SUPPORT OF THE 8-HOUR OZONE EARLY ACTION COMPACT AMONG VARIOUS COUNTIES IN THE CHATTANOOGA, TENNESSEE-NORTH GEORGIA METROPOLITAN STATISTICAL AREA AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

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WHEREAS, It is the declared public policy of this City to achieve and maintain such levels of air quality as will protect human health and safety, and to the greatest degree practicable, prevent injury to plant life, animal life and property, and to foster the comfort and convenience of the people; and

WHEREAS, Air pollution is nationally a cause for concern and the City of Chattanooga is committed to improving the quality of life for its citizens; and

WHEREAS, Chattanooga and Hamilton County are participating in an Early Action Compact with two (2) other Southeast Tennessee counties, two (2) Georgia counties and the United States Environmental Protection Agency, working together to improve air quality in the region; and

WHEREAS, The Tennessee Air Pollution Control Board is responsible for State-wide air pollution control issue, the City of Chattanooga supports the efforts of the State Air Pollution Control Board to improve air quality;

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, TENNESSEE, That the City of Chattanooga be and is hereby authorized to work in partnership with the Early Action Compact counties of Hamilton, Marion and Meigs in

Tennessee, and Walker and Catoosa in Georgia to implement measures which reduce, directly and indirectly, air pollutant levels.

BE IT FURTHER RESOLVED, That the Stage 1 vapor recovery regulations within the City of Chattanooga be and are hereby adopted and shall become effective before March 1, 2005.

BE IT FURTHER RESOLVED, That the City of Chattanooga will support the following in areas regulated by the State of Tennessee:

1. Statewide Stage 1 vapor controls at gas stations.
2. Statewide Anti-idling legislation.
3. Statewide enforcement of regulations regarding vehicle tampering.

Vehicles are considered to be tampered with if the emission control devices (catalytic converters) have been altered or removed.

4. Statewide Reasonably Achievable Control Technology (RACT) rules of general applicability for NOx should the State Air Pollution Control Board adopt them. The rules would require the installation of low NOx combustion controls such as low NOx burners and fuel additives at industrial facilities emitting 50 tons per year or more of NOx.

BE IT FURTHER RESOLVED, That the City of Chattanooga will support the following voluntary programs:

1. Hamilton County, through the Air Pollution Control Bureau, will not allow open burning on ozone action days, effective May 15, 2004.
2. Hamilton County will participate in the Ozone Action Day Program currently being developed and to be implemented no later than May 15, 2004. This program

centers on public education about the sources, causes and solutions to air pollution.

ADOPTED: March 23, 2004

KR/pm

March 17, 2004

STATE OF TENNESSEE

DATE (Month, Day, Year)

Hamilton County

# Hamilton County Board of Commissioners

## RESOLUTION

No. 304-40

A RESOLUTION TO AMEND THE REGULATION KNOWN AS "THE HAMILTON COUNTY AIR POLLUTION CONTROL REGULATIONS" BY PROVIDING FOR THE ADOPTION OF NEW REGULATIONS GOVERNING GASOLINE DISPENSING FACILITIES.

WHEREAS, it is the declared public policy of this county to achieve and maintain such levels of air quality as will protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people; and,

WHEREAS, local regulation of air quality is the most efficient means toward that end; and,

WHEREAS, in order to achieve air quality levels under the 8-hour ozone early action compact with the United States Environmental Protection Agency;

NOW THEREFORE, BE IT RESOLVED BY THIS COUNTY LEGISLATIVE BODY IN SESSION ASSEMBLED:

That the Hamilton County Air Pollution Control Regulations, be amended as is hereinafter set forth.

BE IT FURTHER RESOLVED THAT THIS RESOLUTION TAKE EFFECT FROM AND AFTER ITS PASSAGE, THE PUBLIC WELFARE REQUIRING IT.

Hamilton County, Chattanooga, TN  
A CERTIFIED TRUE COPY  
This 24th day of March, 2004  
W. F. (BILL) KNOWLES, County Clerk  
By Debbie R. [Signature], Deputy Clerk

Approved:  [Signature] CERTIFICATION OF ACTION  
Rejected:   
County Clerk  
Approved:  [Signature] County Executive  
Vetoed:  March 17, 2004 Date



SECTION 41

Rule 25.10. Gasoline dispensing facilities – stage I vapor recovery.

- (1) For the purpose of this rule, the following definitions apply:
- a. *Coaxial system* means the delivery of the product to the stationary storage tank and the recovery of vapors from the stationary storage tanks occurs through a single coaxial fill tube, which is a tube within a tube. Product is delivered through the inner tube, and vapor is recovered through the annular space between the walls of the inner tube and outer tube.
  - b. *Delivery vessel* means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.
  - c. *Dual point system* means the delivery of the product to the stationary storage tank and the recovery of vapors from the stationary storage tank occurs through two separate openings in the storage tank and two separate hoses between the tank truck and the stationary storage tank.
  - d. *Gasoline* means any petroleum distillate having a Reid vapor pressure of 4.0 psia or greater.
  - e. *Gasoline dispensing facility* means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.
  - f. *Gasoline service station* means any gasoline dispensing facility where gasoline is sold to the motoring public from stationary storage tanks.
  - g. *Line* means any pipe suitable for transferring gasoline.
  - h. *Operator* means any person who leases, operates, controls, or supervises a facility at which gasoline is dispensed.
  - i. *Owner* means any person who has legal or equitable title to the gasoline storage tank at a facility.
  - j. *Poppeted vapor recovery adaptor* means a vapor recovery adaptor that automatically and immediately closes itself when the vapor return line is disconnected and maintains a tight seal when the vapor return line is not connected.
  - k. *Stationary storage tank* means a gasoline storage container that is a permanent fixture.

1. *Submerged fill pipe* means any fill pipe with a discharge opening which is entirely submerged when the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid, or which is entirely submerged when the level of the liquid is:

1. Six inches above the bottom of the tank if the tank does not have a vapor recovery adaptor; or
2. Twelve inches above the bottom of the tank if the tank has a vapor recovery adaptor.

If the opening of the submerged fill pipe is cut at a slant, the distance is measured from the top of the slanted cut to the bottom of the tank.

m. *Throughput* means the amount of gasoline dispensed at a facility.

(2) **Applicability.** This rule applies to all gasoline dispensing facilities and gasoline service stations and to delivery vessels delivering gasoline to a gasoline dispensing facility or gasoline service station; and this rule applies to all persons owning, occupying, operating or using a gasoline distribution facility or gasoline service station.

(3) **Exemptions.** This rule does not apply to:

- a. Transfers made to storage tanks at gasoline dispensing facilities or gasoline service stations equipped with floating roofs or their equivalent;
- b. Stationary tanks with a capacity of not more than 2,000 gallons which were in place before July 1, 1979, if the tanks are equipped with a permanent or portable submerged fill pipe;
- c. Stationary storage tanks with a capacity of not more than 550 gallons which were installed after June 30, 1979, if the tanks are equipped with a permanent or portable submerged fill pipe;
- d. Stationary storage tanks at a gasoline dispensing facility or gasoline service station where the combined annual throughput of gasoline at the facility or station does not exceed 50,000 gallons, if the tanks are equipped with a permanent submerged fill pipe; and
- e. Any tanks used exclusively to test fuel dispensing meters.

(4) No person may cause, suffer, allow or permit the transfer of gasoline from any delivery vessel into any stationary storage tank unless they comply with the following:

- a. The stationary storage tank is equipped with a submerged fill pipe and the vapors displaced from the tank during filling are controlled by a vapor control system as described in Paragraph (8) of this rule;
  - b. The vapor control system is in good working order and is connected and operating with a vapor tight connection;
  - c. The vapor control system is properly maintained and any damaged or malfunctioning components or elements of design have been repaired, replaced or modified;
  - d. Gauges, meters, or other specified testing devices are maintained in proper working order;
  - e. All loading lines and vapor lines of delivery vessels and vapor collection systems are equipped with fittings which are leak tight and vapor tight; and
  - f. All hatches on the delivery vessel are kept closed and securely fastened.
- (5) The following records shall be maintained for not less than two years and the same shall be made available for inspection and copy by representative or designees of the Bureau:
- a. The scheduled date for maintenance or the date that a malfunction was detected;
  - b. The date the maintenance was performed or the malfunction corrected; and
  - c. The date the component or element of design of the control system was repaired, replaced, or modified.
- (6) The premises of any gasoline dispensing facility or gasoline service station shall be available for inspection by representatives or designees of the Bureau at any time the facility or station is in operation.
- (7) The process of transfer of gasoline from any delivery vessel into any stationary storage tank shall be subject to observation and inspection or investigation by representatives or designees of the Bureau.
- (8) The vapor control system required by Paragraph (4) of this rule shall include one or more of the following:
- a. A vapor-tight line from the stationary storage tank to the delivery vessel and:
    - 1. For a coaxial vapor recovery system, either a popped or unpopped vapor recovery adaptor; or



2. For a dual point vapor recovery system, a popped vapor recovery adaptor; or
- b. A refrigeration-condensation system or equivalent designed to recover at least 90 percent by weight of the organic compounds in the displaced vapor.
- (9) If an unpopped vapor recovery adaptor is used pursuant to Part (8)a.1. of this rule, the tank liquid fill connection shall remain covered either with a vapor-tight cap or a vapor return line except when the vapor return line is being connected or disconnected.
- (10) If an unpopped vapor recovery adaptor is used pursuant to Part (8)a.1. of this rule, the unpopped vapor recovery adaptor shall be replaced with a popped vapor recovery adaptor when the tank is replaced or upgraded.
- (11) Where vapor lines from the storage tanks are manifolded, popped vapor recovery adaptors shall be used. No more than one tank is to be loaded at a time if the manifold vapor lines have a nominal pipe size of less than 3 inches. If the manifold vapor lines have a nominal pipe size of 3 inches or larger, then two tanks at a time may be loaded.
- (12) Vent lines on stationary storage tanks shall have pressure release valves or restrictors.
- (13) The vapor-laden delivery vessel:
- a. Shall be designed and maintained to be vapor-tight during loading and unloading operations and during transport with the exception of normal pressure/vacuum venting as required by regulations of the Department of Transportation; and
- b. If it is refilled in Hamilton County, Tennessee, shall be refilled only at:
1. Bulk gasoline plants complying with Rule 25.8 of this section; or
  2. Bulk gasoline terminals complying with Rule 25.9 of this section.
- (14) It shall be the responsibility of owners, occupiers and operators of gasoline dispensing facilities and gasoline service stations to assure compliance with this rule and to disallow the transfer from any delivery vessel that does not comply with those requirements of this rule applicable to delivery vessels. It shall be the responsibility of owners, operators and drivers of delivery vessels to assure compliance with this rule and to refuse to transfer from any delivery vessel that does not comply with those requirements of this rule applicable to delivery vessels.

1ST READING  
2ND READING  
3RD READING  
INDEX NO.

3-23-04

ORDINANCE NO. \_\_\_\_\_

AN ORDINANCE TO AMEND PART II, CHATTANOOGA CITY CODE, CHAPTER 4, ARTICLE II, SECTION 4-41, RELATIVE TO AIR POLLUTION RULES, REGULATIONS, CRITERIA AND STANDARDS, BY ADDING RULE 25.10 RELATIVE TO GASOLINE DISPENSING FACILITIES.

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SECTION 1. BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, TENNESSEE, That Part II, Chattanooga City Code, Chapter 4, Article II, Section 4-41, be and is hereby amended by adding thereto the following:

*Rule 25-10. Gasoline dispensing facilities - stage I vapor recovery.*

- (1) For the purpose of this rule, the following definitions will apply:
  - a. *Coaxial system* means the delivery of the product to the stationary storage tank and the recovery of vapors from the stationary storage tanks occurs through a single coaxial fill tube, which is a tube within a tube. Produce is delivered through the inner tube and vapor is recovered through the annular space between the walls of the inner tube and outer tube.
  - b. *Delivery vessel* means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.
  - c. *Dual point system* means the delivery of the product to the stationary storage tank and the recovery of vapors from the stationary storage tank occurs through two separate openings in the storage tank and two separate hoses between the tank truck and the stationary storage tank.
  - d. *Gasoline* means any petroleum distillate having a Reid vapor pressure of 4.0 psia or greater.
  - e. *Gasoline dispensing facility* means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.
  - f. *Gasoline service station* means any gasoline dispensing facility where gasoline is sold to the motoring public from stationary storage tanks.

1ST READING

3-23-04

2ND READING

3RD READING

INDEX NO.

ORDINANCE NO. \_\_\_\_\_

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SECTION 1. BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, TENNESSEE, That Part II, Chattanooga City Code, Chapter 4, Article II, Section 4-41, be and is hereby amended by adding thereto the following:

*Rule 25-10. Gasoline dispensing facilities - stage I vapor recovery.*

- (1) For the purpose of this rule, the following definitions will apply:
  - a. *Coaxial system* means the delivery of the product to the stationary storage tank and the recovery of vapors from the stationary storage tanks occurs through a single coaxial fill tube, which is a tube within a tube. Produce is delivered through the inner tube and vapor is recovered through the annular space between the walls of the inner tube and outer tube.
  - b. *Delivery vessel* means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.
  - c. *Dual point system* means the delivery of the product to the stationary storage tank and the recovery of vapors from the stationary storage tank occurs through two separate openings in the storage tank and two separate hoses between the tank truck and the stationary storage tank.
  - d. *Gasoline* means any petroleum distillate having a Reid vapor pressure of 4.0 psia or greater.
  - e. *Gasoline dispensing facility* means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.
  - f. *Gasoline service station* means any gasoline dispensing facility where gasoline is sold to the motoring public from stationary storage tanks.

- g. *Line* means any pipe suitable for transferring gasoline.
- h. *Operator* means any person who leases, operates, controls or supervises a facility at which gasoline is dispensed.
- i. *Owner* means any person who has legal or equitable title to the gasoline storage tank at a facility.
- j. *Poppeted vapor recovery adaptor* means a vapor recovery adaptor that automatically and immediately closes itself when the vapor return line is disconnected and maintains a tight seal when the vapor return line is not connected.
- k. *Stationary storage tank* means a gasoline storage container that is a permanent fixture.
- l. *Submerged fill pipe* means any fill pipe with a discharge opening which is entirely submerged when the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid, or which is entirely submerged when the level of liquid is:
  - 1. Six inches above the bottom of the tank if the tank does not have a vapor recovery adaptor; or
  - 2. Twelve inches above the bottom of the tank if the tank has a vapor recovery adaptor.

If the opening of the submerged fill pipe is cut at a slant, the distance is measured from the top of the slanted cut to the bottom of the tank.

- m. *Throughput* means the amount of gasoline dispenses at a facility.
- (2) **Applicability.** This rule applies to all gasoline dispensing facilities and gasoline service stations and to delivery vessels delivering gasoline to a gasoline dispensing facility or gasoline service station; and this rule applies to all persons owning, occupying, operating or using a gasoline distribution facility or gasoline service station.
- (3) **Exemptions.** This rule does not apply to:
- a. Transfers made to storage tanks at gasoline dispensing facilities or gasoline service stations equipped with floating roofs or their equivalent;
  - b. Stationary tanks with a capacity of not more than 2,000 gallons which

were in place before July 1, 1979, if the tanks are equipped with a permanent or portable submerged fill pipe;

- c. Stationary storage tanks with a capacity of not more than 550 gallons which were installed after June 30, 1979, if the tanks are equipped with a permanent or portable submerged fill pipe;
- d. Stationary storage tanks at a gasoline dispensing facility or gasoline service station where the combined annual throughput of gasoline at the facility or station does not exceed 50,000 gallons, if the tanks are equipped with a permanent submerged fill pipe; and
- e. Any tanks used exclusively to test fuel dispensing meters.

(4) No person may cause, suffer, allow or permit the transfer of gasoline from any delivery vessel into any stationary storage tank unless they comply with the following:

- a. The stationary storage tank is equipped with a submerged fill pipe and the vapors displaced from the tank during filling are controlled by a vapor control system as described in Paragraph (8) of this rule;
- b. The vapor control system is in good working order and is connected and operating with a vapor tight connection;
- c. The vapor control system is properly maintained and any damaged or malfunctioning components or elements of design have been repaired, replaced or modified;
- d. Gauges, meters or other specified testing devices are maintained in proper working order;
- e. All loading lines and vapor lines of delivery vessels and vapor collection systems are equipped with fittings which are leak tight and vapor tight; and
- f. All hatches on the delivery vessel are kept closed and securely fastened.

(5) The following records shall be maintained for not less than two years and the same shall be made available for inspection and copy by representative or designees of the Bureau:

- a. The scheduled date for maintenance or the date that a malfunction was detected;

b. The date the maintenance was performed or the malfunction corrected; and

c. The date the component or element of design of the control system was repaired, replaced or modified.

(6) The premises of any gasoline dispensing facility or gasoline service station shall be available for inspection by representatives or designees of the Bureau at any time the facility or station is in operation.

(7) The process of transfer of gasoline from any delivery vessel into any stationary storage tank shall be subject to observation and inspection or investigation by representatives or designees of the Bureau.

(8) The vapor control system required by Paragraph (4) of this rule shall include one or more of the following:

a. A vapor-tight line from the stationary storage tank to the delivery vessel and;

1. For a coaxial vapor recovery system, either a poppeted or unpoppeted vapor recovery adaptor; or

2. For a dual point vapor recovery system, a poppeted vapor recovery adaptor; or

b. A refrigeration-condensation system or equivalent designed to recover at least 90 percent by weight of the organic compounds in the displaced vapor.

(9) If an unpoppeted vapor recovery adaptor is used pursuant to Part (8)a.1 of this rule, the tank liquid fill connection shall remain covered either with a vapor-tight cap or a vapor return line except when the vapor return line is being connected or disconnected.

(10) If an unpoppeted vapor recovery adaptor is used pursuant to Part (8)a.1 of this rule, the unpoppeted vapor recovery adaptor shall be replaced with a poppeted vapor recovery adaptor when the tank is replaced or upgraded.

(11) Where vapor lines from the storage tanks are manifolded, poppeted vapor recovery adaptors shall be used. No more than one tank is to be loaded at a time if the manifold vapor lines have a nominal pipe size of less than 3 inches. If the manifold vapor lines have a nominal pipe size of 3 inches or larger, then two tanks at a time may be loaded.

(12) Vent lines on stationary storage tanks shall have pressure release valves or restrictors.

(13) The vapor-laden delivery vessel:

a. Shall be designed and maintained to be vapor-tight during loading and unloading operations and during transport with the exception of normal pressure/vacuum venting as required by regulations of the Department of Transportation; and

b. If it is refilled in Hamilton County, Tennessee, shall be refilled only at:

1. Bulk gasoline plants complying with Rule 25.8 of this section; and
2. Bulk gasoline terminals complying with Rule 25.9 of this section.

(14) It shall be the responsibility of owners, occupiers and operators of gasoline dispensing facilities and gasoline service stations to assure compliance with this rule and to disallow the transfer from any delivery vessel that does not comply with those requirements of this rule applicable to delivery vessels. It shall be the responsibility of owners, operators and drivers of delivery vessels to assure compliance with this rule and to refuse to transfer from any delivery vessel that does not comply with those requirements of this rule applicable to delivery vessels.

SECTION 2. BE IT FURTHER ORDAINED, That this Ordinance shall take effect two (2) weeks from and after its passage, as provided by law.

PASSED on Third and Final Reading

\_\_\_\_\_, 2004.

\_\_\_\_\_  
CHAIRPERSON

APPROVED: \_\_\_\_\_ DISAPPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_, 2004

\_\_\_\_\_  
MAYOR

Reviewed By: \_\_\_\_\_  
*David Eichenthal*

KR/pm

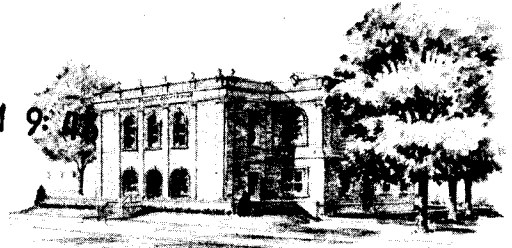


022

# Howell Moss

COUNTY EXECUTIVE, MARION COUNTY  
P.O. BOX 789  
JASPER, TENNESSEE 37347  
(423) 942-2552  
FAX (423) 942-1327

2004 MAR 15 AM 9:46



March 11, 2004

Mr. Barry Stephens, P.E.  
Director  
Air Pollution Control Division  
9<sup>th</sup> Floor, L&C Annex  
401 Church Street  
Nashville, Tn 37219

Dear Mr. Stephens:

I am enclosing Marion County's proposed plan to you at this time. I am sure you are aware that I have very limited knowledge or experience in these such matters. I would appreciate you reviewing our plan and advising me if this is something that might be acceptable. If any changes should me made, please feel free to do so and return to me.

Thank you very much for your help and advise. Again, if you should have any questions or comments, please feel free to phone me at the above stated number.

Sincerely,

Howell Moss  
Marion County Mayor

Talked w/ Mayor Moss 3/17  
He will be revising his list

| Source Category                 | Control Measure Description   | Pollutant     | S=Stationary<br>M=Mobile<br>C=Combination | R=Regulatory<br>V=Voluntary | L=Local<br>S=State<br>Wide |
|---------------------------------|---|---------------|---|-----------------------------|----------------------------|
| On-Road HDDV and Buses          | Encourage accelerated replacement with newer lower emitting vehicles  | NOx,VOC<br>CO | M   | V                           | L                          |
| On and Off Road Diesel Vehicles | Encourage accelerated replacement with newer lower emitting vehicles  | NOx,VOC<br>CO | M<br>M                                    | V<br>V                      | L<br>L                     |
| Fleet Vehicles                  | Propose accelerated replacement with newer lower emitting vehicles or with vehicles using cleaner fuels               | NOx,VOC<br>CO | M   | V                           | L                          |
| On-road Vehicles                | Traffic signalization/synchronization   | NOx,VOC<br>CO | M   | V                           | L                          |
| All categories                  | Air Quality Action Day (AQAD)   | NOx,VOC<br>CO | C   | V                           | L                          |
| On-road HDDV trucks             | Support reducing speed limit on ozone action days(or for the ozone season)  | NOx           | M   | V                           | L                          |
| On-road vehicles                | Area Wide rideshare incentives  | NOx,VOC<br>CO | M   | V                           | L                          |
| Trip Reductions                 | Employer-based trip reduction plans   | NOx,VOC       | M   | V                           | L                          |
| All                             | Student outreach through education systems; educate future drivers on the impact of motor vehicles on the environment | NOx,VOC       | M   | V                           | L                          |
| Gasoline refueling stations     | Stage 1 controls at gasoline stations   | VOC           | S   | R                           | L                          |



TN. DIV. OF AIR POLLUTION CONTROL

VLL

KEN JONES  
County Executive

NATIONAL REGISTER OF HISTORIC PLACES ID: 14

TAMI ELLIOTT  
Administrative Assistant

MEIGS COUNTY, TENNESSEE  
OFFICE OF COUNTY EXECUTIVE  
P.O. BOX 156  
DECATUR, TENNESSEE 37322

RECEIVED

March 22, 2004

Commissioner Betsy Child  
Tennessee Department of  
Environment & Conservation  
L & C Tower 21<sup>st</sup> Floor  
401 Church Street  
Nashville, TN 37243-1531

Dear Commissioner Child:

Here with, please review Meigs County's response to your Department recommendation to E.P.A. of our non-attainment of ozone levels. As you are aware, Meigs County is one of the monitored locations in the state, although that monitor is situated in the most Southeastern corner of the county.

Meigs County is a very small, almost entirely rural location, and is home to only about 2 (two) % of the MSA as a whole. There are no four-lane highways, no railroad tracks, no coal-fired furnace, and practically no other NOX or VOC sources in the county. There are no industrial point sources in the county.

The primary weather patterns for this area move from Southwest to Northwest, and since the monitor is located some 30 (thirty) feet from Hamilton County and some 120 (one hundred twenty) feet from Bradley County, we feel that Meigs County is not being monitored. There is 35 (thirty five) miles of Meigs County to the North of this monitor.

Certainly, we do not want Meigs County to be held captive just because the monitor is located on Meigs County soil.

That being said, we can look at Local control measures.

1. Meigs County will accelerate replacement of vehicles, (both large and small, both gasoline and diesel engines) with new, lower emitting vehicles. As funds allow.
2. Meigs County would be open to the idea of retrofitting existing vehicles, if funding could be made available.

Points 1 and 2 would include all county owned vehicles, Sheriff Department, Highway Department, Fire & Rescue, Ambulance, on and off road vehicles.

3. Meigs County will certainly encourage Student outreach through education as to the impact of motor vehicles on the environment.

cc: [illegible]



**KEN JONES**  
County Executive

NATIONAL REGISTER OF HISTORIC PLACES

**TAMI ELLIOTT**  
Administrative Assistant

**MEIGS COUNTY, TENNESSEE**  
OFFICE OF COUNTY EXECUTIVE  
P.O. BOX 156  
DECATUR, TENNESSEE 37322

4. Meigs County will support an Air Quality Action Day.
5. Meigs County will encourage our State and Federal Government to require all oil companies to implement more stringent regulation on fueling stations such as stage I and stage II controls.

In conclusion, the Clean Air Act requires an area be designated non-attainment if it has a monitor. Meigs County feels that this is the only reason for our designation. We have nothing in our county that produces NOX or VOC sources. This designation would impose an unfair burden on Meigs County, especially effect in economic growth. We feel that Meigs County should be fully excluded from this designation.

Thanking you in advance for any assistance you might give us. Please call if you need further information.

Sincerely,

**Ken Jones**  
Meigs County Mayor

KJ/tae

**Cc:** Governor Phil Bredeson  
Barry R. Stephens  
Senator Bill Frist  
Senator Lamar Alexander  
Congressman Zach Wamp  
State Senator Jeff Miller  
State Representative Chris Newton  
Decatur Mayor Calvin Rockhoff