Air Quality Modeling Technical Support Document for the

NOx SIP Call

U.S. Environmental Protection Agency
Office of Air and Radiation
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1. Note: (a) there is no electronic version of Appendix A and (b) the cover pages for Appendices B - M are included at the end of the electronic version of this document and the actual data for these appendices are in separate electronic files.

I. Scope and Content of this Document

In the development of the NOx SIP Call, EPA performed a number of air quality analyses to support the multi-factor approach to identify amounts of NOx emissions that contribute significantly to nonattainment in downwind areas. These analyses include subregional and State-by-State modeling to (a) quantify the air quality contributions from emissions in upwind States to both 1-hour and 8-hour nonattainment, as well as 8-hour maintenance, in downwind areas, and (b) determine whether these contributions are significant.[1] In addition, modeling analyses were performed to assess the benefits of alternative regional NOx control strategies and, in particular, to confirm that the emissions considered to significantly contribute, taken as a whole, have a meaningful impact on nonattainment in downwind areas. All of the emissions data and model predictions from the model runs described in this document can be obtained electronically from the EPA Regional Modeling Center ftp site (ftp://www.epa.gov/pub/scram001/modelingcenter/).

This report was prepared to document the technical procedures and findings for the State-by-State modeling of contributions and the air quality assessment of alternative NOx controls. The EPA's analyses and findings from the subregional modeling are described in the November 7, 1997 NOx SIP Call Notice of Proposed Rulemaking. Also, an initial assessment of the proposed Statewide NOx budgets was provided in the May 11, 1998 Supplemental Notice of Proposed Rulemaking.

The Technical Support Document is structured in the following way. Section II contains an overview of the air quality modeling systems, episodes, and emissions inventories used for these analyses. In Section III there is a discussion of (a) the 2007 Base Case scenario which serves as the baseline for both the evaluation of contributions and the assessment of strategies, (b) the development of 1-hour and 8-hour "nonattainment" receptor areas which are used for defining downwind ozone problem areas, and (c) an overview of the "metrics" (i.e., measures of ozone) used to analyze and interpret modeling results. The evaluation of the significance of upwind to downwind contributions is provided in Section IV. This includes a description of the

[1] Even though the actual finding of significant contribution applies only to the portion of a State's emissions for which EPA has identified highly cost-effective controls, for ease of discussion, the term "significant" (or like terms) is used in this document to characterize the emissions of each upwind State that make a large and/or frequent contribution to nonattainment in downwind areas.

State-by-State modeling scenarios, source areas, and metrics, as well as the methodology used for evaluating the significance of individual upwind to downwind linkages and the findings for this evaluation. Finally, Section V describes the strategy scenarios, metrics, analysis of results, and the findings for the assessment of alternative regional NOx strategies.

II. Technical Approach

II.A. Description of Models

The EPA performed air quality modeling to (a) confirm the proposed approach for determining significant contribution, and (b) evaluate the relative benefits of regional NOx strategies. The additional modeling for the assessment of contributions consisted of State-by-State zero-out modeling using UAM-V[2] and State-by-State source apportionment modeling using the CAMx[3] Anthropogenic Precursor Culpability Assessment (APCA) technique. The modeling for the assessment of regional strategies consisted of a series of model runs using UAM-V. These models are described below.

II.A.1. UAM-V and CAMx

The UAM-V and CAMx models are both three-dimensional photochemical air quality grid models designed for integrated assessment of photochemical air pollution over regional and urban scales. The basis of the two models is a set of species mass continuity equations to represent the relevant processes that affect photochemical air quality, including both the biogenic and anthropogenic emissions of NOx and VOC, the spatial and temporal variations of winds, atmospheric stability and the level of mixing, the chemical reactions involving VOC, NOx, and other important species, the diurnal variations of solar insolation and temperature, the loss of ozone and ozone precursors by dry and wet deposition, and the ambient background of ozone, VOC, NO_x, and other important species.

Both the UAM-V and CAMx models are suitable for evaluating the air quality effects of emission control scenarios because they accounts for spatial and temporal variations as well as differences in the reactivity of emissions. This is achieved by first replicating historical ozone episodes to establish a base year simulation. Model inputs are prepared from observed meteorological data, emissions data, and air quality data for the episode days. The model is then applied with these inputs, and the results are evaluated to determine model performance. Once the model results have been evaluated and

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[2] Variable Grid Urban Airshed Model

[3] Comprehensive Air Quality Model with Extensions

determined to perform within prescribed levels, the same base year meteorological inputs for each episode are combined with *modified* or *projected* emission inventories to simulate a projected future base case and alternative emission strategies.

The UAM-V model used in the NOx SIP call modeling analysis is an updated version (Version 1.24). It incorporates the Carbon-Bond IV (CB-IV) chemical mechanism (Gery et al., 1989) with updated isoprene and radical-radical reactions (Whitten et al., 1996). Features of the UAM-V modeling system include variable vertical grid structure, two-way nested grid, plume-in-grid treatment, etc. A detailed description of the UAM-V modeling system is provided in the user's guide (SAI, 1995).

The EPA used CAMx Version 1.13 which has incorporated the updated CB4-IV mechanism for the NOx SIP call applications. The major differences between the CAMx and the UAM-V include the treatment of plume-in-grid, the numerical methods for solving chemistry and vertical diffusion, and the calculations of species dry deposition (ENVIRON, 1997a). However, as described in the model performance subsection below, EPA and several modeling comparison studies (STI, 1997b; AGL, 1998) have found that the CAMx gives comparable results to the UAM-V. A key feature of the CAMx is that it has included a source apportionment technique to assess the contributions of multiple source regions and categories to specific receptor areas (ENVIRON, 1997b). A detailed description of the CAMx modeling system is given in the user's guide (ENVIRON, 1997a).

II.A.2. CAMx Source Apportionment Technique

The EPA used the CAMx source apportionment technique as part of the modeling analysis to evaluate the downwind contributions of emissions in upwind States. The source apportionment technique in the CAMx was developed to provide modelers with a means of estimating the contributions of many different source areas/categories to ozone formation in *one single model run*. This is achieved by using multiple tracer species to track the fate of ozone precursor emission (VOC & NOx) and the ozone formation caused by these emissions within a CAMx simulation. The methodology is designed so that all ozone and precursor concentrations are attributed to the selected source areas/categories at all times. Thus, for all receptor locations and times, the ozone, VOC, and NOx concentrations predicted by the CAMx are attributed to the source areas/categories. In the CAMx source apportionment modeling for the NOx SIP call analysis, the source groupings are based on a single State or multiple States and the receptor groupings is based on either a single State or an ozone nonattainment area as described in Sections III and IV. The EPA used the Anthropogenic Precursor Culpability Assessment (APCA) as the source apportionment technique for the NOx SIP call modeling. The key feature of APCA is that it allocates the ozone production to the manmade precursor emissions either through reactions among various manmade sources and/or through reactions between manmade emissions and biogenic emissions. A technical detail of the CAMx source apportionment technique and APCA is given in the ENVIRON's report (ENVIRON, 1997c).

II.B. Episodes

For purposes of evaluating air quality impacts, EPA modeled all of the episodes that were used by OTAG. These episodes, and the reasons for selecting them, as described in the OTAG Final Report (OTAG, 1997), are as follows:

July 1–11, 1988[4]

- Surface ozone concentrations indicated a large area of high ozone concentrations across the Midwest, Northeast, and Southeast regions.
- Synoptic weather conditions showed a large area of high pressure building over the northern Great Lakes on July 1 and moving gradually east so that much of the eastern United States was covered by high pressure for the next 6 or 7 days. Temperatures exceeded 90˚F for several days in the Midwest, Northeast, and Southeast regions. These conditions allowed pollutant concentrations to build up to high levels. (Although warm temperatures persisted for the remainder of the episode, spotty showers associated with a weak stationary front across the Midwest and Northeast regions kept ozone levels down in portions of the eastern United States.)
- Progression of high ozone concentrations and synoptic weather conditions suggested interstate and interregional transport.

July 13–21, 1991

- Surface ozone concentrations indicated a large area of high ozone concentrations across the Midwest and Northeast regions.

[4] The full July 1988 episode extended from July 1 through July 15. However, the OTAG strategies were simulated for the July 1-11, 1988 period.

- Synoptic weather conditions showed a large area of high pressure building over the central plains on July 13 and moving gradually east so that much of the eastern United States was covered by high pressure for the next 6 or 7 days. Temperatures exceeded 90˚F for several days in the Midwest and Northeast regions. These conditions allowed pollutant concentrations to build up to high levels.
- Progression of high ozone concentrations and synoptic weather conditions suggested interstate and interregional transport.

July 20–30, 1993

- Surface ozone concentrations indicated a large area of high ozone concentrations across the Southeast region.
- Synoptic weather conditions showed a stationary front separating the north (the Midwest and Northeast regions) and the south. The Southeast and Southwest regions were covered by a hot, tropical air mass. Temperatures exceeded 100˚F every day in the Southeast region. Combined with light wind speeds, these conditions allowed pollutant concentrations to build up to high levels. A cold front started to move across the central United States during the middle of the episode. The tropical air mass was pulled up ahead of this front, leading to high ozone concentrations for a day or two in the southern portion of the Midwest and Northeast regions.
- Progression of high ozone concentrations and synoptic weather conditions suggested interstate and intraregional transport and, to some degree, interregional transport, in the Southeast region.

July 7–18, 1995

- Surface ozone concentrations indicated a large area of high ozone concentrations across the Midwest, Northeast, and Southeast regions.
- Synoptic weather conditions showed an area of high pressure building over the northern plains on July 7 and moving gradually east so that much of the eastern United States was covered by high pressure for the next 6 to 7 days. Temperatures exceeded 100˚F for several days in the Midwest and Northeast regions. These conditions allowed pollutant concentrations to build up to high levels.
- Progression of high ozone concentrations and synoptic weather conditions

suggested interstate and interregional transport.

Each episode included a 2–3 day "ramp-up" period to initialize the model. The ramp-up days were July 1-3, 1988, July 13-15, 1991, July 20-21, 1993, and July 7-9, 1995. Predictions for the ramp-up periods were not used in any portion of this analysis.

II.C. Model Setup

The EPA used the OTAG modeling domain. This domain is shown in Figure A-1 in Appendix A and includes portions or all of 37 states and the District of Columbia and parts of three Canadian provinces, Ontario, Quebec, and New Brunswick. The EPA also used the OTAG configurations for:

- Initial conditions/boundary conditions;
- Meteorological data;
- Grid configurations;
- Fine grid/coarse grid definition; and
- Vertical layer structure.

These elements of the modeling are described in the OTAG Final Report (OTAG, 1997).

II.D. Base Year Emissions

For the modeling performed in support of the SIP call, EPA relied heavily on the 1995 emissions projections developed during the OTAG process.[5] The Base Year was comprised of a combination of 1995 and 1996, and was intended to be used as representative of the 1994-1996 time period, rather than a specific year. For highway, nonroad, and stationary area sources, the OTAG 1995 emissions were used. For non-electricity generating unit (EGU) point sources, the OTAG 1995 emissions were used, with some small changes to reflect corrections to Source Classification Codes (SCC) for certain sources. For the EGU sector, a complete set of 1996 base year data were developed, using EPA's Acid Rain Data Base as a starting point. The development of the EGU and non-EGU point source data is described in the March 23, 1998, technical

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[5] The OTAG 1995 emissions are based on the 1990 base year emissions projected to 1995 considering growth and Clean Air Act controls between 1990 and 1995.

support document titled "Development of Modeling Inventory and Budgets for the Ozone Transport SIP Call" (EPA, 1998a).

The models used require gridded, hourly, speciated emissions of ozone precursors (VOC, NOx, and CO). The starting point for this is a typical summer weekday inventory, a typical summer Saturday inventory, and a typical summer Sunday inventory for nonroad, stationary area, and point sources and day specific inventories for highway sources. For highway, nonroad, stationary area, and non-EGU point sources, these inventories were derived using the same temporal allocation factors that OTAG used. For the EGU sector, a slightly different approach was used. Seasonal emissions were obtained from continuous emissions monitoring (CEM) data and other sources, as described in the Inventory Development TSD (EPA, 1998a). Seasonal emissions were converted to typical July day emissions using the July share of total summer generation. This approach is described in a December 1996 report titled "Forecast of Average Daily NOx Emissions in July by Electric Generation Units Using OTAG 2007 Base Case and the Integrated Planning Model (IPM)" (EPA, 1996). The typical summer weekday, Saturday, and Sunday inventories were derived using EMS-95 with revised temporal allocation factors developed by LADCO based on the CEM data. The revisions to EMS-95 developed by LADCO are available on the Regional Modeling Center ftp site (ftp://www.epa.gov/pub/scram001/modelingcenter/emissions/ems95_program_files/).

II.E. Model Performance

II.E.1. UAM-V

As part of OTAG, an objective evaluation of model predictions was conducted for each of the four OTAG episodes in order to determine the performance of the modeling system for representing regional ozone concentration levels. This evaluation focused on a number of statistical metrics comparing predicted ozone to ground-level ozone measurements (STI, 1997a). The results indicate generally good agreement between simulated and observed values. Most importantly, areas of predicted high ozone correspond to areas of observed high ozone. However, a few relatively minor concerns were found, such as:

- a tendency to underestimate concentrations in the North and overestimate concentrations in the South;
- concentrations at night are somewhat underestimated relative to daytime

predictions;

- low observed concentrations tend to be overestimated and higher observed values tend to be underestimated; and
- concentrations at the start of the episode tend to be underestimated with a tendency for concentrations at the end of the episode to be overestimated.

The success of the model for predicting pollutant concentrations aloft is also important from a transport perspective. During the day, when the atmosphere is "well mixed," ground-level ozone values can serve as a good measure of both local formation and transport. However, at night, ozone is depleted in a very shallow layer near the ground due to deposition and nighttime chemical reactions. Thus, during the overnight and early morning, ground-level measurements and predictions do not adequately reflect pollutant transport. Aircraft-measured pollutant data and model predictions during these periods indicate moderate to high levels of ozone aloft which can then mix down during the day and further elevate ground-level concentrations. A limited amount of measured data aloft are available from non-OTAG field studies for several of the days in the 1991 and 1995 episodes. In general, the model tends to underestimate ozone aloft. This suggests that the model may somewhat underestimate the amount of ozone transport aloft, especially overnight into the early morning hours. Thus, the contribution of upwind source regions to ozone levels in downwind areas may actually be greater than estimated by the model.

II.E.2. CAMx

The CAMx has been used as a modeling tool in a number of regional modeling analyses. In several modeling comparative studies, the model performance of the CAMx has been evaluated against the observations together with that of the UAM-V (STI, 1997b; AGL, 1998). In general, these comparative studies have found that the performance of the CAMx for ozone was similar to the performance of the UAM-V model. As part of the NOx SIP call modeling analysis, EPA has also compared the two models in terms of the predictions of ozone and its precursors for the 1995 episode with the Base Year emissions. The discussion of these model comparison studies between the CAMx and UAM-V are given below.

STI (1997b) reported a comparison study of model performance based on the July

16-21, 1991 and July 10-18, 1995 OTAG episodes. STI concluded that the performance of the CAMx for ozone in general was similar to the performance of the UAM-V model in both OTAG episodes. Minor differences exist between the model predictions in specific subregions and for specific days. Overall, the STI's report (STI, 1997b) showed that for the 1995 episode, the differences between the predictions of the two models are larger than those for the 1991 episode. The CAMx performed slightly better on average in 1995 since it had lower mean normalized error than UAM-V; however, the UAM-V model performed slightly better on predicting the 1-hour ozone maxima in the 1995 episode.

AGL (1998) presented a summary of model performance evaluation from applications of the UAM-V and CAMx models using the July 1991 and July 1995 OTAG data sets. Both that ground-level ozone and ozone aloft predicted by the two models were compared to the observed surface and aircraft data. AGL concluded that the comparative evaluations in both OTAG and SIP modeling studies reveal that the CAMx model performance and responsiveness to emissions change scenarios are generally equivalent to that of UAM-V. In the comparison work based on the NARSTO-NE and LMOS aircraft data, AGL found that both the UAM-V and CAMx models tend to underestimate the average aloft ozone concentration. The implication is that the two models may somewhat underestimate the amount of ozone transport aloft.

As part of the SIP call modeling analysis, EPA's comparison of the CAMx and UAM-V models includes the model predictions of ozone and its precursors for the July 1995 episode with the Base Year emissions as discussed in Section II.D. The standard OTAG statistical measures, as described in STI's report (STI, 1997a) were used to evaluate the model performance for the entire domain and four OTAG subregions. In the comparison of the model performance, EPA's findings are in general consistent with the findings by the two comparative studies described above (STI, 1997b; AGL, 1998). Overall, the UAM-V and CAMx show comparable model performance against the observed data. Other than the findings given by the two reports above, EPA found that both models tend to underpredict the mean ozone concentration above 80 and 120 ppb. In addition, CAMx tends to predict higher ozone than the UAM-V, especially in the high ozone hours, by 2 to 5 ppb domainwide. Another finding is that on domainwide average, the UAM-V tends to predict lower nitric acid (HNO3) and NOx but higher formaldehyde (FORM) and VOC than the CAMx.

II.E.3. State-by-State vs. Source Apportionment Modeling

The model performance comparisons discussed above show that the UAM-V and CAMx models are technically equivalent based on various statistical measures. However, it is also important to consider that the zero-out modeling is different from the source apportionment modeling for evaluating upwind contributions to downwind receptors. This is due to the fact that the source apportionment technique directly estimates the contributions of upwind sources to receptor areas, while the zero-out modeling indirectly quantifies the contributions by the differences of two model runs (i.e., Base Case vs. zero-out). This will lead to some differences in magnitude and frequency of contributions for individual upwind to downwind linkages. In general, EPA found that the source apportionment modeling tends to show greater magnitude of contributions than the zero-out modeling for individual linkages. EPA acknowledged that both modeling techniques have their usefulness, but they also have their limitations. However, currently there is no technical evidence showing that one technique is clearly superior to the other for evaluating contributions to ozone from various emission sources.

III. Building Blocks for Analysis of Model Results

III.A. 2007 Base Case

The 1995 (1996) Base Year inventory was projected to 2007 and certain controls were applied, resulting in the 2007 Base Case inventory. The Base Case emissions reflect Clean Air Act mandated controls as well as certain Federal measures that EPA has promulgated or expects to promulgate. The control measures included in the Base Case for each source sector are listed in Table III.A-1. For highway, nonroad, and stationary area sources, the OTAG projections were used. These projections reflect "level 0" controls for highway and "level 1" controls for stationary area and nonroad. For non-EGU point sources, the methods for projecting the inventory from 1995 to 2007 are described in the March 23, 1998 Inventory Development TSD (EPA, 1998a). The emissions for EGUs were obtained from simulations of IPM which projected 1996 electric generation to 2007 based on economic assumptions, unit specific capacity, and the requirements in Title I and Title IV of the CAA. A description of the IPM Base Case simulation is contained in the regulatory Impact Analysis (RIA) for the NOx SIP Call (EPA, 1998b). Table III.A-2 compares the Base Year NOx and VOC emissions to the Base Case emissions. Across the entire modeling domain, the 2007 Base Case NOx emissions are 1% less than the

1995 (1996) Base Year emissions and the Base Case VOC emissions are 19% less than the Base Year.

Table III.A-1 . 2007 SIP Call Base Case Controls.

Utilities	- Title IV Controls [phase 1 & 2] - 250 Ton PSD and NSPS - RACT & NSR in non-waived NAAs
Non-Utility Point	- NOx RACT on major sources in non-waived NAAs - 250 Ton PSD and NSPS - NSR in non-waived NAAs - CTG & Non-CTG VOC RACT at major sources in NAAs & OTR - New Source LAER
Stationary Area	- Two Phases of VOC Consumer and Commercial Products & One Phase of Architectural Coatings controls - VOC Stage 1 & 2 Petroleum Distribution Controls in NAAs - VOC Autobody, Degreasing & Dry Cleaning controls in NAAs
Nonroad Mobile	- Fed Phase II Small Eng. Stds - Fed Marine Eng. Stds. - Fed Nonroad Heavy-Duty (>=50 hp) Engine Stds - Phase 1 - Fed RFG II (statutory and opt-in areas) - 9.0 RVP maximum elsewhere in OTAG domain - Fed Locomotive Stds (not including rebuilds) - Fed Nonroad Diesel Engine Stds - Phases 2 & 3
Highway Vehicles	- National LEV - Fed RFG II (statutory and opt-in areas) - 9.0 RVP maximum elsewhere in OTAG domain - High Enhanced I/M (serious and above NAAs) - Low Enhanced I/M for rest of OTR - Basic I/M (mandated NAAs) - Clean Fuel Fleets (mandated NAAs) - On-board vapor recovery - HDV 2 gm std
Rate of Progress Requirements	- Effectively, ROP through 1999

Table III.A-2. Comparison of Base Year and Base Case Emissions. (Tons of NOx per day).

	NOx			VOC		
State	**1995/1996 Base Year**	**2007 Base Case**	**Percent Change**	**1995/1996 Base Year**	**2007 Base Case**	**Percent Change**
Alabama	1749.12	1670.4	-5%	1256.48	1069.88	-15%
Arkansas	703.4	784.95	12%	696.61	642.35	-8%
Connecticut	415.53	335.08	-19%	539.73	362.92	-33%
Delaware	190.11	216.63	14%	173.13	112.00	-35%
District of Columbia	44.56	47.78	7%	46.54	29.47	-37%
Florida	2294.59	2581.56	13%	2059.30	2159.75	5%
Georgia	1787.42	1678.92	-6%	1611.14	1271.17	-21%
Illinois	2807.16	2420.66	-14%	2855.25	2207.15	-23%
Indiana	2326.04	2374.66	2%	1818.65	1357.78	-25%
Iowa	772.27	810.77	5%	838.79	727.87	-13%
Kansas	1037.63	1052.92	1%	836.72	741.28	-11%
Kentucky	2003.94	1874.05	-6%	1289.56	1056.28	-18%
Louisiana	2291.12	2199.24	-4%	1331.13	1018.33	-23%
Maine	207.59	214.72	3%	267.98	210.30	-22%
Maryland	893.95	799.94	-11%	723.70	481.74	-33%
Massachusetts	708.98	653.42	-8%	912.08	614.90	-33%
Michigan	1784.23	1880.21	5%	1718.90	1517.21	-12%
Minnesota	842.88	872.94	4%	1283.74	1099.10	-14%
Mississippi	1002.78	1049.08	5%	1015.30	925.80	-9%
Missouri	1359.43	1273.04	-6%	1345.80	1187.32	-12%
Nebraska	406.52	380.28	-6%	463.58	406.71	-12%
New Hampshire	212.05	233.79	10%	185.15	115.21	-38%
New Jersey	959.94	829.64	-14%	1237.31	918.04	-26%
New York	1723.79	1506.19	-13%	2256.26	1371.90	-39%
North Carolina	2025.65	1629.55	-20%	1851.78	1488.56	-20%
North Dakota	46.78	53.29	14%	61.41	58.62	-5%
Ohio	3287.34	2803.99	-15%	2312.06	1624.64	-30%
Oklahoma	1135.57	1327.88	17%	859.70	808.52	-6%
Pennsylvania	2466.91	2404.91	-3%	1887.25	1318.95	-30%
Rhode Island	99.97	87.12	-13%	153.19	100.34	-34%
South Carolina	1118.96	1224.89	9%	1072.81	1013.32	-6%
South Dakota	124	136.75	10%	168.69	156.91	-7%
Tennessee	2303.89	2086.41	-9%	1941.06	1778.17	-8%
Texas	4522.62	4283.65	-5%	3777.24	2667.47	-29%
Vermont	75.29	78.05	4%	98.40	70.77	-28%
Virginia	1529.68	1599.42	5%	1540.16	1366.85	-11%
West Virginia	1461.35	1128.77	-23%	621.81	418.38	-33%
Wisconsin	1010.97	1008.43	0%	1121.05	854.88	-24%
Total	49365.42	48915.89	-1%	46224.44	37337.84	-19%

The Base Case was used as a baseline for the SIP call air quality modeling. For the UAM-V modeling, the Base Case serves as a point of reference to which the zero-out and strategy runs were compared. In the source apportionment modeling, the Base Case was used to quantify the downwind impacts of upwind source areas by tracking the formation, chemical transformation, depletion, and transport of ozone formed from Base Case emissions.

III.B. Receptor Areas

The EPA analyzed the modeling results using several types of nonattainment receptors. Nonattainment receptors for the 1-hour analysis include those grid cells that (a) are associated with counties designated as nonattainment for the 1-hour NAAQS[6] and (b) have 1-hour Base Case model predictions >=125 ppb. These grid cells are referred to as "designated plus modeled" nonattainment receptors. Table III.B-1 lists the 1-hour nonattainment areas that were considered in this analysis, along with the State(s) in which the nonattainment area is located. The counties designated nonattainment for the 1-hour NAAQS are shown in Figure A-2 in Appendix A. Grid cells were linked to a specific nonattainment area if any part of the grid cell covered any portion of a county in a nonattainment area. In cases where a grid cell covered two or more nonattainment areas, the grid was tied to the nonattainment area that contained the largest portion of the area of the grid cell. For intrastate nonattainment areas that were close to the border of an adjacent State, grids which would have been tied to the nonattainment area using the preceding rule were excluded if the largest portion of the grid was in an adjacent State. The grids that were used as "designated plus modeled" receptor areas are shown in Figures A-3a and A-3b in Appendix A. Using these receptors, the metrics were calculated for each 1-hour nonattainment area as well as for each State. To calculate the metrics by State, all of the 1-hour nonattainment receptors in that State were pooled together. Only those grids that were within the State boundaries were included. Where a grid covered more than one State, that grid was tied to the State that contained the largest portion of the area of the grid cell.

[6] For the purposes of the evaluation of contributions, EPA is using the phrase "designated counties" to refer to those counties for which the 1-hour standard still applies. Therefore, EPA used these counties in the evaluation of significant contribution to downwind nonattainment areas for the 1-hour NAAQS.

Table III.B-1. 1-Hour Nonattainment Areas Evaluated.

Nonattainment Area	State(s)
Atlanta	Georgia
Baltimore	Maryland
Birmingham	Alabama
Boston/Portsmouth[1]	Massachusetts, New Hampshire
Chicago/Milwaukee[2]	Illinois, Indiana, Wisconsin
Cincinnati	Kentucky, Ohio
Greater Connecticut	Connecticut
Louisville	Indiana, Kentucky
Memphis	Mississippi, Tennessee
New York City	Connecticut, New Jersey, New York
Philadelphia	Delaware, Maryland, New Jersey, Pennsylvania
Pittsburgh	Pennsylvania
Portland	Maine
Rhode Island	Rhode Island
Southwestern Michigan[3]	Michigan
St. Louis	Illinois, Missouri
Washington, DC[7]	District of Columbia, Maryland, Virginia
Western Massachusetts	Massachusetts

1. For the purposes of this analysis EPA has combined the Greater Boston nonattainment area which includes portions of Massachusetts and New Hampshire, with the Portsmouth, New Hampshire nonattainment area into a single downwind nonattainment receptor area.
2. For the purposes of this analysis EPA has combined the 1-hour nonattainment counties that are along the shoreline of Lake Michigan in the States of Illinois, Indiana, and Wisconsin into a single downwind nonattainment receptor area.
3. For the purposes of this analysis EPA has combined the 1-hour nonattainment counties that are along the shoreline of Lake Michigan in the State of Michigan into a single downwind nonattainment receptor area.

In addition to the nonattainment areas listed in Table III.B-1, EPA also evaluated the contributions of upwind States to ozone concentrations over Lake Michigan because modeled air quality over the lake can be indicative, under certain weather conditions, of air

[7] Washington, DC is used to refer to the entire nontattainment area. In some tables, the nonattainment area is also referred to as "Metro DC." The District of Columbia is used to refer to the District itself, not including the Maryland and Virginia portions of the metropolitan area.

quality in portions of the States surrounding the lake. High measured ozone concentrations in portions of Illinois, Indiana, Michigan, and Wisconsin near the shoreline of Lake Michigan are often associated with weather conditions which cause ozone precursor pollutants to be blown offshore over the lake during the morning, where they can form high ozone concentrations which then return onshore during "lake breeze" wind flows in the afternoon. Because the size of the grid cells used in the OTAG modeling is relatively large compared to the spatial scale of the lake breeze, the high ozone concentrations predicted over the lake may not be blown back onshore in the model. Since high concentrations do, in reality, impact air quality along the shoreline of one or more of these States, the EPA believes that it is appropriate to use predicted contributions to ozone over Lake Michigan as a surrogate for contributions to any one of the surrounding States (i.e., Illinois, Indiana, Michigan, and Wisconsin).

For the 8-hour analysis, nonattainment receptors are those grid cells that (a) are associated with counties currently violating the 8-hour NAAQS (based on 1994-1996 data) and (b) have 8-hour Base Case model predictions >=85 ppb. These grid cells are referred to as "violating plus modeled" nonattainment receptors. The counties that are violating the 8-hour standard are shown in Figure A-4 in Appendix A. Grids were linked to specific States in the same way as for the 1-hour NAAQS. The grids that were used as “violating plus modeled” receptors are shown in Figures A-5a and A-5b in Appendix A. The metrics for the 8-hour contribution analyses were calculated on a State-by-State basis by pooling together the "violating plus modeled" receptors in a State.

III.C. Metrics

The EPA selected several metrics in order to evaluate downwind contributions from emissions in upwind States. The metrics were designed to provide information on the three fundamental factors for evaluating whether emissions in an upwind State make large and/or frequent contributions to downwind nonattainment. These factors are (a) the magnitude of the contribution, (b) the frequency of the contribution, and (c) the relative amount of the contribution. The magnitude of contribution factor refers to the actual amount of “ppbs” of ozone contributed by emissions in the upwind State to nonattainment in the downwind area. The frequency of the contribution refers to how often the contributions occur and how extensive the contributions are in terms of the number of grids in the downwind area that are affected by emissions in the upwind State. The relative amount of the contribution is used to compare the total "ppb" contributed by the upwind State to the total "ppb" of nonattainment in the downwind area.

As indicated in Section II above, two modeling techniques (i.e., UAM-V zero-out and CAMx source apportionment) were used for the State-by-State evaluation of contributions. The EPA developed metrics for both modeling techniques for each of the three factors. However, because of the differences between the two techniques, as described in Section II, some of the metrics used for the UAM-V modeling and the CAMx modeling are different. The specific UAM-V and CAMx metrics and how they relate to the three factors used for the evaluation of contributions are described below in Section IV.B.

The UAM-V metrics developed as part of the evaluation of contributions are also relevant to the assessment of alternative regional NOx control strategies. As noted in Section II of this document, EPA performed the strategy assessment modeling using UAM-V only. A description of how EPA used these metrics to evaluate alternative NOx control strategies is contained in Section V of this document.

IV. Evaluation of Contributions

This section documents the State-by-State air quality modeling performed by EPA to determine whether emissions in specific upwind States make a significant contribution to downwind nonattainment. The UAM-V and CAMx model runs and the metrics calculated from the predictions of each model run which were used to quantify the contributions are described in Section IV.A. A description of the methodology for evaluating individual upwind State-to-downwind area linkages is provided in Section IV.B. along with an example of the evaluation for the New York City nonattainment area. Section IV.C provides the results of the analysis.

IV. A. State-by-State Model Runs

The EPA performed State-by-State zero-out modeling using UAM-V and State-by-State source apportionment modeling using the CAMx APCA technique to quantify the contributions of emissions in upwind States on nonattainment downwind. Each modeling technique (i.e., zero-out and source apportionment) provides a different technical approach to quantifying the downwind impact of emissions in upwind States. The zero-out modeling analysis provides an estimate of downwind impacts by comparing the model predictions from a Base Case run to the predictions from a run in which the Base Case manmade emissions are removed from a specific State. In contrast, the source apportionment modeling quantifies downwind impacts by tracking formation, chemical transformation, depletion, and transport of ozone formed from emissions in an upwind source area and the impacts that ozone has on nonattainment in downwind areas.

The UAM-V and CAMx State-by-State model runs are described below along with the metrics calculated using the predictions of each of these modeling technique. The methodology for using these metrics in the evaluation of contributions is described in Section IV.B.

IV.A.1. UAM-V State-by-State Modeling

In the UAM-V zero-out model runs all manmade emissions in a given upwind State were removed from the Base Case scenario. Each zero-out scenario was run for all 4 episodes and the ozone predictions in downwind States were then compared to those from the Base Case run in order to quantify the downwind impacts of emissions from the upwind State (i.e., the State in which the manmade emissions were removed). The EPA performed zero-out runs for the following set of States:

- Alabama, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin.

IV.A.2. UAM-V Metrics

The EPA quantified the contributions predicted by the UAM-V State-by-State modeling using the four metrics described below.

UAM-V Metric 1: Exceedences. This metric is the total number of predicted concentrations exceeding the NAAQS (i.e. 1-hour values >=125 ppb and 8-hour values >=85 ppb) within the downwind area. In calculating this metric, EPA summed the number of occurrences of values above the applicable standard (i.e., 1-hour or 8-hour) for all nonattainment receptors within the downwind area. For example, in Downwind Area #1 there are five 1-hour "designated plus modeled" nonattainment receptors. For this downwind area, the Base Case value for Metric 1 is calculated by first counting the number of days, across all four episodes, that had 1-hour daily maximum values >=125 ppb at each of the five receptors. The result is the total number of exceedences at each receptor over all days in all four episodes. Finally, the total number of exceedences at each receptor is summed across all five receptors to produce the total number of exceedences in Downwind Area #1, which is the value for Metric 1 for this area.

UAM-V Metric 2: Ozone Reduced -- ppb. This metric shows the magnitude and frequency of the "ppb" impacts from each upwind State on ozone concentrations in each downwind area. These impacts are quantified by calculating the difference in ozone concentrations between the zero-out run and the Base Case. The results are then tabulated in terms of the number of "impacts" within six concentration ranges: >=2 to 5 ppb, >=5 to 10, >=10 to 15, >=15 to 20, >=20 to 25, and > =25 ppb. The impacts for 1-hour daily maximum values and 8-hour daily maximum values are determined by tallying the total "number of days and grid cells" >=125 ppb or >=85 ppb that receive contributions within the concentration ranges. In the analysis of contributions, as described below, the data from Metric 2 are used in conjunction with Metric 1 to determine the percent of the exceedences in the downwind area that receive contributions of > 2 ppb, > 5 ppb, > 10, ppb, etc. The maximum "ppb" impact within the downwind area is also calculated as part of Metric 2.

Metric 3: Total ppb Reduced. This metric quantifies the total ppb contributed in the downwind area from an upwind State, not including that portion of the contribution that occurs below the level of the NAAQS. For 1-hour concentrations, Metric 3 is calculated by taking the difference between the Base Case predictions in each nonattainment receptor and either (a) the corresponding value in the zero-out run, or (b) 125 ppb, whichever is greater (i.e., 125 ppb or the prediction in the zero-out run). The Base Case vs zero-out differences are summed over all days and across all nonattainment receptors in the downwind area. The calculation of this metric is illustrated by the following example. If the Base Case 1-hour daily maximum ozone prediction is 150 ppb and the corresponding value from the zero-out run is 130 ppb, then the difference used in this metric is 20 ppb. However, if the value from the zero-out run is 115 ppb, then the difference used in this metric is 25 ppb (i.e., 150 ppb - 125 ppb, because 115 ppb is less than 125 ppb). The equation used for calculating this metric is provided in Appendix B.

To analyze the contributions using Metric 3, the values of this metric are compared to the total amount of ozone above the NAAQS (i.e., 125 ppb, 1-hour or 85 ppb, 8-hour) in the Base Case. This baseline measure of the "total amount of nonattainment" (i.e., the total "ppb" of ozone that is above the NAAQS) is calculated by summing the "ppb" values in the Base Case that are above the level of the NAAQS. The total contribution from an upwind State to a particular downwind area calculated by Metric 3 is expressed in relation to the amount that the downwind area is in nonattainment. For example, if Upwind State #1 contributes a total of 50 ppb >=125 ppb to Downwind Area #2 and the total Base Case ozone >=125 ppb in Downwind Area #2 is 500 ppb, then the contribution from Upwind State #1 (i.e., 50 ppb) to Downwind Area #2 is equivalent to 10 percent of Downwind Area #2's nonattainment problem (i.e., 50 ppb divided by 500 ppb, times 100). The equation used to calculate the baseline for this metric is given in Appendix B.

Metric 4: "Population-Weighted Total ppb Reduced." This metric is similar to the "Total ppb Reduced" metric except that the calculated contributions are weighted by (i.e., multiplied by) population. In calculating this metric, the "ppb" contributions are determined for each nonattainment receptor, then summed across all nonattainment receptors in a particular downwind area. During this calculation, the population in the nonattainment receptor is multiplied by the total contribution in that receptor (i.e., grid cell) and then this value is added to the corresponding values for the other receptors in the downwind area. The equation used to calculate this metric is provided in Appendix B.

The Population-Weighted Total ppb > NAAQS in the 2007 Base Case serves as a baseline for evaluating the "Population-weighted Total ppb Reduced." This metric is similar to the "Total ppb > NAAQS" except that the amount above the NAAQS is weighted by the population in the grid cell. The equation used to calculate the baseline metric is provided in Appendix B.

IV.A.3. CAMx State-by-State Source Apportionment Modeling

In the CAMx modeling, the source apportionment technique was used to calculate the contributions from upwind States to ozone concentrations above the NAAQS in downwind areas. Due to computational constraints, it was not possible for EPA to treat each State in the OTAG region as a separate source area. Several of the smaller States in the Northeast were grouped together as were seven States in the far western portion of the region. The following States were treated as individual source areas:

- Alabama, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

The following States were grouped together:

- Connecticut and Rhode Island were combined; Maryland, Delaware and the District of Columbia were combined; New Hampshire and Vermont were combined; and Arkansas was combined with the portions of Oklahoma, Kansas, Minnesota, Nebraska, North Dakota, and South Dakota that lie within the OTAG region.

A map showing these source areas is provided Figure A-6 in Appendix A.

IV.A.4. CAMx Metrics

The contributions from each of the CAMx source areas to downwind nonattainment were evaluated using the four metrics described below. CAMx source apportionment technique calculates a "ppb" contribution from each source area to hourly ozone in each receptor grid cell. For this analysis, EPA only included contributions to concentrations above the level of the 1-hour and 8-hour NAAQS. The following approach to treating 1-hour and 8-hour concentrations in calculating the four metrics was based on recommendations to EPA by Environ, the developers of CAMx. For 1-hour concentrations the metrics were calculated based on contributions to all hourly predictions >=125 ppb. For 8-hour concentrations, the metrics were calculated using every 8-hour period in a day with an average concentration >=85 ppb. In order to provide a link to the way 1-hour and 8-hour concentrations were treated for the zero-out runs, EPA also calculated the CAMx metrics for 1-hour daily maximum values >=125 ppb and 8-hour daily maximum values >=85 ppb.[8]

Metric 1: Exceedences. This metric is calculated by tabulating the total number of predicted concentrations exceeding the NAAQS (i.e. 1-hour values >=125 ppb and 8-hour values >=85 ppb) within each downwind area.

Metric 2: Ozone Contributed -- ppb. This metric is calculated by tabulating the number of "ppb" contributions from upwind States to downwind nonattainment receptors. Contributions are tabulated in terms of the frequency of impacts calculated by the source apportionment technique for six concentration ranges: >=2 to 5 ppb, >=5 to 10, >=10 to 15, >=15 to 20, >=20 to 25, and >=25 ppb. In the analysis of contributions, the data from Metric 2 are used in conjunction with Metric 1 to determine the percent of the exceedences in the downwind area that receive contributions of > 2 ppb, 5 ppb, >10 ppb, etc.   The maximum 1-hour and 8-hour ozone contributed by each upwind source areas to a downwind nonattainment receptor area is also calculated as part of Metric 2.

Metric 3: Highest Daily Average Contribution. This metric is the highest daily average ozone "ppb" contribution from each upwind source area to each downwind nonattainment receptor area over all days modeled in all four episodes. The following example illustrates how this metric is calculated for 1-hour ozone concentrations. Similar

[8] The CAMx metrics calculated with 1-hour and 8-hour daily maximum concentrations are provided in the docket. These data indicate contributions similar to (i.e., generally within 1 ppb or 1 percent) those based on the hourly data for nearly all of the linkages. To the extent that there are any differences, these differences are not large enough to alter EPA's findings for any of the linkages.

procedures are followed for calculating this metric for 8-hour concentrations. First, the hourly "ppb" contributions from a particular upwind source area to each nonattainment receptor in a downwind area are summed across all receptors in the downwind area. This total daily contribution is then divided by the number of hours and grid cells >=125 ppb in the downwind area to determine the daily average "ppb" contribution. This calculation is performed on a day by day basis for each day in the 4 episodes. After the average contributions are calculated for each day, the highest daily average value across all episodes is selected for analysis. In addition, the highest daily average contribution is expressed as a percent of the downwind area's average ozone >=125 ppb. That is, the highest daily average "ppb" contribution is divided by the average of the ozone concentrations >=125 ppb on that day (i.e., the day on which the highest average ppb contribution occurred). For example, if the highest daily average contribution from an upwind State to nonattainment downwind is 15 ppb and the average of the hourly ozone values >=125 ppb on this day in the downwind area is 150 ppb, then the 15 ppb contribution, expressed as a percent, is 10 percent.

Metric 4: Percent of Total Manmade Ozone Contribution. This metric represents the total contribution from emissions in an upwind State relative to the total ozone for all hours above the NAAQS in the downwind area. This metric, which is referred to as the "average contribution," is calculated for each episode as well as for all four episodes combined. The following example is used to illustrate how this metric is calculated for a single episode for a particular downwind area. In step 1, all predicted Base Case hourly values >=125 ppb in the downwind area are summed over all nonattainment receptors and all days in an episode. In step 2, the "ppb" contributions from a source area to this downwind area are summed over all nonattainment receptors in the downwind area and all days in the episode to yield a total ppb contribution. The total contribution calculated in Step 2 is then divided by the total ozone >=125 ppb in the downwind area to produce the fraction of ozone >=125 ppb in the downwind area that is due to emissions from the upwind source area. This fraction is multiplied by 100 to express the result as a percent.

IV.B. Methodology for Evaluating Contributions

The results of the State-by-State UAM-V and CAMx modeling were analyzed in order to determine which upwind States contribute significantly to nonattainment in specific downwind areas for both the 1-hour and 8-hour NAAQS. Both UAM-V and CAMx modeling results area available for fifteen States (i.e., Alabama, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin). For an additional eight States (i.e., Connecticut, Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, and Rhode Island), only CAMx modeling is available. Also, as noted previously, Connecticut and Rhode Island were combined as a single source area, and Maryland, the District of Columbia, and Delaware were also combined as a single source area. Because the NOx emissions and/or NOx emissions density[9] is large in each jurisdiction within both of these combined source areas, EPA believes that the downwind contributions from these combined source areas can be attributed to each jurisdiction within the source area.

The overall methodology used by EPA for evaluating the significance of individual upwind-to-downwind linkages includes three components. The first component, as described in Section IV.B.1, is a review of the extent of the nonattainment problem in the downwind area using ambient design values and model predictions of future ozone concentrations after the application of (a) Clean Air Act controls, (b) additional local NOx reductions, and (c) regional NOx reductions (local plus upwind). The second component, as described in Section IV.B.2., is an analysis of the overall nature of the contributions to nonattainment in the downwind area which includes a comparison of the contribution from local emissions versus the contributions from emissions in upwind States. The third component is the interpretation of the three contribution factors (i.e., magnitude, frequency, and relative amount of contribution) using the UAM-V and CAMx metrics to determine which linkages are significant and which ones are not. Section IV.B.3. includes a description of the approach followed by EPA to make this determination. Section IV.B.4. provides an example analysis of EPA's methodology for evaluating contributions to 1-hour nonattainment in the New York City nonattainment area to illustrate each component in this process. The results of EPA's evaluation for each upwind-to-downwind linkage is summarized in Section IV.C. along with one of the significant 1-hour and 8-hour linkages for each upwind State as examples of this evaluation. The detailed results for all linkages are provided in Appendix C for 1-hour nonattainment and Appendix D for 8-hour nonattainment.

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[9] 2007 Base Case NOx emission densities (tons/day-sq.mi.x100): Connecticut, 5933; Delaware, 7461; District of Columbia, 63130; Maryland, 6421; Rhode Island, 5379.

IV.B.1. Extent of the Ozone Problem in the Downwind Area

For each downwind area, EPA examined the extent of the downwind nonattainment problem using several pieces of information, including ambient design values and estimates of future air quality using model predictions. The ambient design values for the 1-hour and 8-hour standards were used to indicate the severity of the current ozone problem in each downwind area. The 1-hour and 8-hour design values were calculated using 1994-1996 ambient air quality monitoring data. The 1-hour values were determined by calculating the 4^{th} highest 1-hour daily maximum concentration over the three year period at each monitor in each county in the nonattainment area, then selecting the highest value from among all counties in the nonattainment area to represent the 1-hour design value for that area. The 8-hour design values were determined by calculating the average 4^{th} highest 8-hour daily maximum concentration over the three year period at each monitor in each county in each State, then selecting the highest value in the State to represent the 8-hour design value for that State. The 1-hour design values are shown in Table IV.B-1 and the 8-hour design values are shown in Table IV.B-2.

In addition to current air quality, EPA considered the extent of the future ozone problem in each area using air quality modeling results for three scenarios. These scenarios were (a) the 2007 Base Case which includes Clean Air Act controls and additional Federal control measures, (b) the application of additional local NOx controls, and (c) the application of regional NOx controls (i.e., local plus upwind controls). The local control cases are the "downwind" control runs in the transport assessment described in Section V, below. The regional control case is the 0.15 trading case that is also described in Section V. The values in these tables represent totals across all days in the 4 episodes, excluding ramp-up days. The extent of the future ozone problem is expressed in terms of (a) the percent of days across all episodes during which at least 1 grid cell in the downwind area is predicted to have an exceedence in the Base Case and (b) the percent of Base Case exceedences which remain above the NAAQS after the application of NOx reductions in the two control scenarios. Table IV.B-1 contains the data for the 1-hour NAAQS and Table IV.B-2 contains the data for the 8-hour NAAQS.

Table IV.B-1. Extent of 1-Hour Nonattainment Problem

Nonattainment Area	1994-1996 Ambient Design Value	Percent of Base Case Days with Predicted Exceedences	Percent of Residual Exceedences After Local Controls[1]	Percent of Residual Exceedences After Regional Controls (0.15t)[2]
Atlanta	147	55%	70%	64%
Baltimore	151	48%	75%	52%
Birmingham	132	52%	NA	61%
Boston	130	35%	82%	73%
Chicago/Milwaukee	146	3%	88%	88%
Cincinnati	128	10%	NA	67%
Connecticut	149	29%	82%	65%
Lake Michigan	--	29%	71%	64%
Louisville	132	19%	NA	46%
Memphis	128	39%	NA	52%
Metro DC	134	48%	88%	75%
New York City	144	39%	84%	73%
Philadelphia	139	39%	62%	50%
Pittsburgh	133	3%	40%	0%
Portland, ME	126	10%	NA	33%
Rhode Island	133	13%	84%	37%
Southwest Michigan	142	6%	NA	27%
St. Louis	136	10%	NA	36%
W. Massachusetts	129	10%	57%	43%

1. The percent of residual exceedences is the number of exceedences in the local control case divided by the number of exceedences in the Base Case. For Chicago/Milwaukee and Lake Michigan, the local control case is 0.15nt applied to Illinois, Indiana, and Wisconsin; for Atlanta, it is 0.15nt applied to Georgia; for the Northeast nonattainment areas it is 0.15nt applied to Delaware, the District of Columbia, Connecticut, Maryland, Massachusetts, New Jersey, New York, Pennsylvania and Rhode Island. NA means that a local control case was not performed for that area.
2. The percent of residual exceedences is the number of exceedences in the 0.15t case divided by the number of exceedences in the Base Case.

Table IV.B-2. Extent of 8-Hour Nonattainment Problem

State	1994-1996 Ambient Design Value	Percent of Base Case Days with Predicted Exceedences	Percent of Residual Exceedences After Local Controls[1]	Percent of Residual Exceedences After Regional Controls (0.15t)[2]
Alabama	96	74%	NA	61%
Arkansas	93	32%	NA	70%
Connecticut	101	55%	94%	85%
District of Columbia	93	35%	100%	91%
Delaware	98	65%	77%	46%
Florida	85	29%	NA	97%
Georgia	105	71%	85%	73%
Illinois	91	61%	76%	57%
Indiana	102	68%	71%	34%
Kentucky	95	81%	NA	33%
Louisiana	94	39%	NA	96%
Massachusetts	96	65%	90%	83%
Maryland	105	90%	88%	67%
Maine	94	35%	NA	76%
Michigan	101	42%	NA	47%
Missouri	104	55%	NA	50%
Mississippi	88	32%	NA	87%
North Carolina	94	77%	NA	39%
New Hampshire	94	39%	NA	92%
New Jersey	103	81%	83%	67%
New York	97	71%	93%	86%
Ohio	100	71%	NA	28%
Oklahoma	91	35%	NA	96%
Pennsylvania	103	81%	68%	27%
Rhode Island	94	29%	90%	65%
South Carolina	88	58%	NA	48%
Tennessee	99	84%	NA	56%
Texas	116	52%	NA	98%
Virginia	93	77%	NA	58%
Wisconsin	97	13%	74%	56%
West Virginia	92	68%	NA	27%

1. The percent of residual exceedences is the number of exceedences in the local control case divided by the number of exceedences in the Base Case. For Illinois, Indiana and Wisconsin, the local control case is 0.15nt applied to Illinois, Indiana, and Wisconsin; For Georgia, it is 0.15nt applied to Georgia; For the Northeast States it is 0.15nt applied to Delaware, the District of Columbia, Connecticut, Maryland, Massachusetts, New Jersey, New York, Pennsylvania and Rhode Island. NA means that a local control case was not performed For that area.
2. The percent of residual exceedences is the number of exceedences in the 0.15t case divided by the number of exceedences in the Base Case.

The data in Table IV.B-1 indicate a residual 1-hour nonattainment problem in each of these areas in 2007 after the application of Clean Air Act controls plus other Federal measures in the Base Case. For example, for eight of the areas listed (i.e., Atlanta, Baltimore, Birmingham, Boston, Memphis, New York City, Washington, DC, and Philadelphia), the modeling indicates that more than a third of the days modeled have an exceedence within the area. In addition, for those areas which were covered by one of the "downwind" control scenarios, the modeling indicates that there would be exceedences after additional NOx controls are applied locally. Also, even though the regional NOx strategy is predicted to provide substantial reductions in the number of exceedences in all areas, there may still be residual 1-hour nonattainment in some areas. Concerning 8-hour ozone levels, 31 of the 37 States in the OTAG domain have ambient design values >= 85 ppb, as indicated in Table IV.B-2. Of these 31 States, 21 are predicted to have one third or more of the exceedences eliminated by the regional NOx strategy. However, even with the reductions in nonattainment resulting from this strategy, there may be some areas within these States that still show a residual 8-hour problem.[10]

IV.B.2. Nature of Contributions

The second component of the evaluation examines the relative amount of contribution from local emissions versus the amount from emissions in upwind States. For this analysis, EPA used the data from CAMx Metric 4 (i.e., the average percent contribution to nonattainment in the downwind area). Specifically, the four-episode average percent contributions from (a) "local" emissions (i.e., emissions from the State or States in which the downwind area is located), (b) all upwind emissions combined (i.e., the sum of the contributions from manmade emissions in all upwind States, combined), and (c) individual upwind States was tabulated. In addition to the four-episode average contribution, EPA also examined the highest single-episode average contribution from each upwind State. This information was used to determine whether upwind emissions are an important part of the downwind areas' nonattainment problem. In general, the data indicate that, although a substantial portion of the 1-hour nonattainment problem in many of the downwind areas is due to local emissions, a substantial portion of the

[10] Although there may be residual nonattainment in some portions of these States, air quality modeling based on OTAG run 5 , which is similar to the regional strategy, indicate that the strategy will likely result in attainment of the 8-hour NAAQS in the vast majority of areas currently monitoring violations of the 8-hour NAAQS.

nonattainment problem is also due to emissions from upwind States. For example, in 11 of the areas 45 percent or more of the total manmade ozone >= 125 ppb comes from the collective contribution from emissions in upwind States. In addition, for most upwind-State-to-downwind-area linkages there is no single upwind State that makes up all of the upwind contribution. Rather, the total contribution for all upwind States combined is comprised of individual contributions from a number of upwind States that are relatively similar in magnitude such that there is no "bright line" which distinguishes between the contributions from most of the individual upwind States.

IV.B.3. Approach to Determining Significant Contributions

As described above in Section III.C., EPA determined whether each individual upwind State significantly contributes to nonattainment in a particular downwind area using the UAM-V and CAMx metrics to evaluate three aspects, or factors of the contribution. These factors include the magnitude, frequency, and relative amount of the contribution. The specific UAM-V and CAMx metrics which correspond to each of the factors are identified in Table IV.B-3. As indicated in the table, there is at least one metric from each modeling technique that corresponds to each of the three factors.

Table IV.B-3. Metrics Associated with Each Contribution Factor.

Factor:	UAM-V	CAMx
Magnitude of Contribution	Maximum "ppb" contribution (Metric 2)	Maximum "ppb" Contribution (Metric 2); and Highest Daily Average Contribution (Metric 3)
Frequency of Contribution	Number and percent of exceedences with contributions in various concentration ranges (Metric 1 and 2)	Number and percent of exceedences with contributions in various concentration ranges (Metric 1 and 2)
Relative Amount of Contribution	Total "ppb" contribution relative to the total "ppb" that the downwind area is above the NAAQS (Metric 3); and Total population-weighted "ppb" contribution relative to the total population-weighted "ppb" that the downwind area is above the NAAQS (Metric 3)	Four-episode average percent contribution from the upwind State to nonattainment in the downwind area (Metric 4); and Highest single-episode average percent contribution from the upwind State to nonattainment in the downwind area (Metric 4)

It should be noted that the relative contributions of individual upwind States to a particular downwind area add up to 100 percent for the CAMx 4-episode average percent contribution. However, this is not the case for the CAMx highest single-episode average percent contribution since the value from one upwind State can occur in a different episode than the value from another upwind State to the same downwind area. In addition, it should be noted that UAM-V Metrics 3 and 4 are used in combination to express the total contribution above the NAAQS relative to the total amount that the downwind area is above the NAAQS. The values for each of these metrics also do not add up to 100 percent when considering the contributions from multiple upwind States to an individual downwind area.

The EPA compiled the UAM-V and CAMx metrics by downwind area in order to evaluate the contributions to downwind nonattainment. The data on 1-hour and 8-hour contributions were compiled and analyzed separately. These data are provided in Appendix F through Appendix K for each upwind-to-downwind linkage. The contribution data were reviewed to determine how large of a contribution a particular upwind State makes to nonattainment in each downwind area in terms of both the magnitude of the contribution, and the relative amount of the total contribution. The data were also examined to determine how frequently the contributions occur.

The first step in evaluating this information was to screen out linkages for which the contributions were very low. This initial screening was based on a maximum "ppb" contribution of < 2 ppb from either UAM-V or CAMx and/or a four-episode average percent contribution < 1 percent, based on CAMx Metric 4. Any upwind State that did not pass both of these screening criteria for a particular downwind area was considered not to make a significant contribution to that downwind area. These criteria were chosen because they appear to distinguish between contributions which may be significant and those that definitely are not[11]. However, the screening criteria were not used as the basis for finding that a particular linkage was significant. The finding of significance for linkages that passed the initial screening criteria was based on EPA's technical assessment of the values for the three factors. Each upwind State that had large and/or frequent contributions to the downwind area, based on these factors, is considered as contributing significantly to nonattainment in the downwind area. The EPA believes that each of the factors provides an independent legitimate measure of contribution. However there had to be at least two different factors that indicate large and/or frequent contributions in order for the linkage to be significant. In this regard, the finding of a significant contribution for

[11] Also, OTAG selected 2 ppb as a minimum value for evaluating it's modeling results.

an individual linkage was not based on any single factor.

For many of the individual linkages the factors yield a consistent result (i.e., either large and/or frequent contributions or small and/or infrequent contributions). In some cases, however, not all of the factors are consistent. For upwind-downwind linkages in which some of the factors indicate high and/or frequent contributions while other factors do not, EPA considered the overall number and magnitude of those factors that indicate large and/or frequent contributions compared to those factors that do not. Based on an assessment of all the factors in such cases, EPA determined that the upwind State contributes significantly to nonattainment in the downwind area if, on balance, the factors indicate large and/or frequent contributions from the upwind State to the downwind area.

IV.B.4 Example Analysis of Contributions

The evaluation of the contributions to 1-hour nonattainment in New York City is presented as an example to illustrate the process EPA followed in determining which upwind States significantly contribute to downwind nonattainment. The first component of the analysis includes a description of the extent of the 1-hour nonattainment problem in New York City based on ambient measurements and model predictions of the benefits of Clean Air Act controls in the 2007 Base Case, as well as the benefits of NOx controls in the Northeast only and throughout the 23 jurisdictions.[12] The second part of the analysis includes a discussion of the relative contributions of local versus upwind emissions and the evaluation of the significance of individual upwind States to 1-hour nonattainment in New York City using all of the UAM-V and CAMx metrics.

IV.B.4.a. Extent of 1-Hour Nonattainment in New York City

The New York City nonattainment area, which consists of portions of New York, New Jersey, and Connecticut, is designated as a severe nonattainment area under the 1-hour NAAQS. The ambient 1-hour design value in New York City, based on 1994 through 1996 monitoring data is 144 ppb. During the four OTAG episodes, 39 percent of the days are predicted to have 1-hour exceedences in 2007 after the implementation of all Clear Air Act controls and Federal measures. The addition of regional NOx controls applied in the Northeast, including New York will reduce the predicted number of exceedences (i.e., 1-

[12] The regional strategy modeling is described in Section V, below.

hour daily maximum values >=125 ppb) by 16 percent. Extending these controls throughout the rest of the upwind States provides an overall reduction in exceedences of 27 percent from the Base Case. However, even with these benefits, the modeling indicates that there may still be a residual 1-hour nonattainment problem in New York City after the application of regional NOx controls.

IV.B.4.b. Upwind Contributions to 1-Hour Nonattainment in New York City

In the assessment of contributions to New York City, EPA examined the local versus upwind contributions to 1-hour nonattainment in this area, as shown in Table IV.B-4. On average, across all four episodes, 45 percent of the nonattainment problem in New York City is due to emissions from States upwind of New York, New Jersey, and Connecticut[13]. However, no single State stands out as contributing most of the total upwind contribution. The biggest single contributor is Pennsylvania (18%) followed by Maryland/Washington, DC/Delaware (5%). The total contribution from all Northeast States is 23%. An similar amount (22%) of the total contribution is due to emissions in those States outside the Northeast. The data in Table IV.B-4 indicate that 19% of the 22% is fairly evenly divided among ten States, whose contributions range from 1% (6 States) to 4% (Ohio and Virginia). The remaining 3% (1.e., 19% vs 22%) is from States that each contribute less than 1%, on average. The highest single-episode contributions from States upwind of the Northeast range from 1% (Tennessee) to 8% (Virginia). In general, the contribution data in Table IV.B-4 indicate that a substantial amount of New York City's nonattainment problem is due to the collective contribution from emissions in a number of upwind States both within and outside the Northeast.

The extent of New York City's nonattainment problem and the nature of the contributions from upwind States were considered in determining whether the values of the metrics indicate large and/or frequent contributions for individual upwind States. Specifically, the additional controls beyond the local and upwind NOx reductions which are part of the regional NOx strategy may be needed to solve New York City's 1-hour nonattainment problem. Also, the total contribution from all upwind States is large and there is no single State or small number of States which comprise this total upwind portion. In this regard, the contributions to New York City from some States may not appear to be individually "high" amounts. However, (as described below) these contributions, when considered together with the contributions from other States (i.e., the

[13] Based on CAMx Metric 1.

collective contribution) produce a large total contribution to nonattainment in New York City.

The EPA evaluated the magnitude, frequency, and relative amount of contribution from emissions in individual upwind States to determine which States contribute significantly to 1-hour nonattainment in New York City. The UAM-V and CAMx metrics which quantify each upwind States' contribution to New York City for each of the three factors are provided Table IV.B-5 and IV.B-6 and described below. Examination of the values for these metrics indicates that the upwind States can be divided into three general groups, based on the magnitude, frequency, and relative amount of contribution. The first group contains those upwind States for which the UAM-V and CAMx metrics all clearly indicate a significant contribution to 1-hour nonattainment in New York City. The second group contains those States for which the CAMx and UAM-V metrics are not quite as consistent, but overall the metrics indicate a significant contribution to 1-hour nonattainment in New York City[14]. The third group contains those States for which the CAMx and UAM-V metrics clearly indicate that the impacts do not make a significant contribution to New York City.

[14] For New York City, each of the "Group 2" States were found to make a significant contribution. However, this was not the case for all of the Group 2 linkages in other nonattainment areas. For example, the contribution from Kentucky to Philadelphia and the contribution from Tennessee to Baltimore were Group 2 situations in which EPA determined that the contributions were not significant.

Table IV.B-4. Percent Contribution from Upwind States to 1-Hour Nonattainment in New York City.

Downwind Area: **New York City**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	55	NA[4]
Total Amount from all "Upwind" States	45	NA
Contributions from Individual Upwind States		
PA	18	19
MD/DC/DE	5	6
OH	4	6
VA	4	8
WV	3	7
IL	2	3
IN	1	2
KY	1	3
MI	1	4
MO	1	2
NC	1	2
TN	1	1
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for each episode individually. These values do not add up to 100 percent.
3. Total contribution from the State(s) in which the Nonattainment area is located.
4. Not applicable.

Table IV.B-5. Contributions to 1-Hour Nonattainment in New York City: UAM-V Metrics

Downwind Nonattainment Area: New York City UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) = 418									
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	1%	0	0%	0	0%	0	0%	0.4
GA	0%	1%	0	0%	0	0%	0	0%	0.4
IL	3%	5%	12	3%	0	0%	0	0%	2.9
IN	3%	4%	15	4%	0	0%	0	0%	2.7
KY	2%	2%	16	4%	0	0%	0	0%	2.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	3%	5%	14	3%	0	0%	0	0%	3.2
MO	1%	1%	0	0%	0	0%	0	0%	0.7
NC	3%	4%	7	2%	0	0%	0	0%	3.6
OH	8%	8%	117	28%	1	0%	0	0%	5.4
SC	1%	1%	0	0%	0	0%	0	0%	1.1
TN	1%	1%	0	0%	0	0%	0	0%	0.5
VA	11%	12%	161	39%	36	9%	0	0%	10
WI	1%	2%	0	0%	0	0%	0	0%	1.4
WV	9%	10%	117	28%	38	9%	3	1%	11.3

Table IV.B-6. Contributions to 1-Hour Nonattainment in New York City: CAMx Metrics

Downwind Nonattainment Area : New_York_City ; CAMX Source Apportionment Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base Case: Total Number of Exceedences (grids-hours) = 1924

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.6
CT/RI	1%	2	2%	211	10%	117	6%	52	2%	30.2
FL	0%	2	2%	95	4%	0	0%	0	0%	3.9
GA	0%	1	1%	2	0%	0	0%	0	0%	2.8
IA	0%	1	1%	0	0%	0	0%	0	0%	1.9
IL	2%	6	5%	718	37%	392	20%	0	0%	8.8
IN	1%	4	3%	667	34%	71	3%	0	0%	6.4
KY	1%	7	5%	314	16%	227	11%	0	0%	9.7
LA	0%	0	0%	0	0%	0	0%	0	0%	1.6
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	5%	15	12%	1310	68%	734	38%	275	14%	50.5
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	5	4%	782	40%	26	1%	0	0%	7.6
MO	1%	3	2%	164	8%	0	0%	0	0%	3.4
MS	0%	0	0%	0	0%	0	0%	0	0%	0.7
NC	1%	6	5%	469	24%	124	6%	3	0%	11.1
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	38%	56	43%	1924	100%	1923	99%	1921	99%	82.0
NY	16%	42	33%	1454	75%	1285	66%	1134	58%	67.7
OH	4%	9	7%	1223	63%	938	48%	136	7%	14.9
PA	18%	25	19%	1917	99%	1885	97%	1763	91%	53.0
SC	0%	2	2%	96	4%	0	0%	0	0%	2.9
TN	1%	2	2%	250	12%	0	0%	0	0%	4.6
TX	0%	2	2%	1	0%	0	0%	0	0%	2.1
VA	4%	11	9%	1059	55%	696	36%	214	11%	25.1
WI	0%	2	2%	143	7%	0	0%	0	0%	3.2
WV	3%	10	8%	971	50%	532	27%	133	6%	14.6
West	0%	4	3%	18	0%	0	0%	0	0%	4.7
Canada	1%	6	5%	434	22%	312	16%	0	0%	9.1

Group 1 Upwind States:

The CAMx and UAM-V metrics all clearly indicate that emissions from Maryland/Washington, DC/Delaware, Ohio, Pennsylvania, Virginia, and West Virginia make large and/or frequent contributions to 1-hour nonattainment in New York City. For Pennsylvania the magnitude of contribution, as indicated by the highest daily average contribution (CAMx Metric 3), is 25 ppb and the relative amount of contribution is 18 percent (CAMx Metric 4). For the other upwind areas, the magnitude of the contributions range from 9 ppb to 15 ppb (CAMx Metric 3, highest daily average contributions) with contributions in the range of 5 ppb to 10 ppb -- from Ohio, Virginia, and West Virginia (UAM-V Metric 2, maximum "ppb" contribution). In terms of the frequency of the contribution, 7% to 11% of the total number of grid-hours >=125 ppb in New York City receive contributions of 10 ppb from each of these States (CAMx Metric 1 and 2). Also, the relative amounts of the contribution are in the range of 6% to 8% (CAMx Metric 4, highest single-episode average percent contribution) and the total contribution from each of three States (i.e., Ohio, Virginia, and West Virginia) is large compared to the total amount of nonattainment, ranging from 8% to 11% (UAM-V Metric 3).

Group 2 Upwind States:

The CAMx and UAM-V metrics are somewhat less consistent on the extent of contributions from each of 5 States: Kentucky, Illinois, Indiana, Michigan, and North Carolina. None of the metrics for either model indicate extremely low or extremely high contributions. Rather, for these States most of the metrics indicate relatively high contributions while a few metrics indicate relatively low contributions. The rationale used by EPA for evaluating the contributions from these States involved comparing and contrasting each piece of data for these States on an individual "upwind State-by-upwind State" basis and as a group (i.e., for all 5 States, together) in order to weigh the relative magnitude and frequency of the contributions for making a determination of significance.

UAM-V Metrics -- For each of these 5 States the "weakest" factor is the magnitude contribution (UAM-V Metric 2) in that the highest contributions are in the range of 2 to 5 ppb. The other UAM-V Metrics, however, indicate that the contributions from each State are of a larger frequency and relative amount. Specifically, four of these States (Kentucky, Indiana, Illinois, and Michigan) each contribute 2 to 5 ppb to as many as 3% to 4% of the exceedences in New York City (UAM-V Metrics 1 and 2). While North Carolina contributes to somewhat fewer exceedences (2%), this slight weakness is out-weighed by the relative amount of contribution (UAM-V Metrics 3 and 4) which indicate that the total contribution from North Carolina alone is equivalent to 3% of the total "ppb" >=125 ppb and 4% of the population-weighted "ppb" >=125 ppb in New York City. For Indiana, Illinois, and Michigan the relative amount of contribution (UAM-V Metrics 3 and 4) are also relatively high and range from 3% to 5%. The relative amount of contribution from Kentucky is somewhat weaker at 2%.

CAMx Metrics -- For Illinois, all of the CAMx metrics indicate relatively large and/or frequent contributions, as described below. For Kentucky, Indiana, Michigan, and North Carolina the magnitude of contribution is large, as indicated by the maximum contribution which ranges from 6 ppb (Indiana) to 11 ppb (North Carolina). Also, the highest daily average contribution from Kentucky, Michigan, and North Carolina are all in range of 5 ppb to 7 ppb. In terms of the frequency of contribution, Indiana and North Carolina contribute in the range of 5 ppb to 10 ppb to 3% and 6% of the exceedences, respectively, in New York City. For Kentucky, Indiana, Michigan, and North Carolina the relative amounts of contribution is somewhat mixed in that 4-episode average contribution is only 1%, but the highest single-episode average percent contributions are higher at 2% from both Indiana and North Carolina, 3 percent from Kentucky, and 4% from Michigan (CAMx Metric 4).

Overall contributions considering UAM-V and CAMx Metrics -- Considering the CAMx and UAM-V metrics, as described below, the majority of the contribution factors indicate that, overall, each of the Group 2 States contributes significantly to 1-hour nonattainment in New York City.

Kentucky --

Metrics indicating relatively high and/or frequent contributions:

- **Magnitude of Contribution**: the maximum contribution from CAMx is 9 ppb (CAMx Metric 2) and highest daily average contribution is 7 ppb (CAMx Metric 3);
- **Frequency of Contribution**: 4 percent of the exceedences receive contributions of more than 2 ppb (UAM-V Metrics 1 and 2); and
- **Relative Amount of Contribution**: the highest single-episode average contribution is 3% (CAMx Metric 4).

Metrics indicating relatively low and/or infrequent contributions:

- **Magnitude of Contribution**: the maximum contribution from UAM-V is 2 ppb; and
- **Relative Amount of Contribution**: the 4-episode average percent contribution is 1% (CAMx Metric 4).

Indiana --

Metrics indicating relatively high and/or frequent contributions:

- **Magnitude of Contribution**: the maximum "ppb" contribution is 6 ppb (CAMx Metric 2);
- **Frequency of Contribution**: 4 percent of the exceedences receive contributions of more than 2 ppb (UAM-V Metrics 1 and 2) ; and
- **Relative Amount of Contribution**: the total "ppb" contribution is equivalent to 3% of total amount of nonattainment (UAM-V Metric 3).

Metrics indicating relatively low and/or infrequent contributions:

- **Magnitude of Contribution**: the maximum contribution from is 2 ppb (UAM-V Metric 2); and
- **Relative Amount of Contribution**: the 4-episode average percent contribution is 1% (CAMx Metric 4)**.**

Illinois --

Metrics indicating relatively high and/or frequent contributions:

- **Magnitude of Contribution**: the maximum contribution is 8 ppb (CAMx Metric 2); the highest daily average contribution is 6 ppb;
- **Frequency of Contribution**: 3 percent of the exceedences receive contributions of more than 2 ppb; and
- **Relative Amount of Contribution**: the highest single-episode average contribution is 3 percent (CAMx Metric 4); the total "ppb" contribution is equivalent to 3% of total amount of nonattainment.

Metrics indicating relatively low and/or infrequent contributions:

- **Magnitude of Contribution**: the maximum contribution from UAM-V is 2 ppb.

Michigan --

Metrics indicating relatively high and/or frequent contributions:

- **Magnitude of Contribution**: the maximum contribution is 7 ppb (CAMx Metric 2); the highest daily average contribution is 5 ppb (CAMx Metric 3);
- **Frequency of Contribution:** 3 percent of the exceedences receive contributions of more than 2 ppb (UAM-V Metrics 1 and 2); and
- **Relative Amount of Contribution**: the highest single-episode average contribution is 4% (CAMx Metric 4); the total "ppb" contribution is equivalent to 3% of the total amount of nonattainment.

Metrics indicating relatively low and/or infrequent contributions:

- **Magnitude of Contribution**: the maximum contribution from UAM-V is 2 ppb;
- **Frequency of Contribution**: 1 percent of the exceedences receive contributions of 5 ppb or more (CAMx Metrics 1 and 2); and
- **Relative Amount of Contribution**: the 4-episode average percent contribution is 1% (CAMx Metric 4)

North Carolina --

Metrics indicating relatively high and/or frequent contributions:

- **Magnitude of Contribution**: the maximum contribution is 11 ppb (CAMx Metric 2); the highest daily average contribution is 6 ppb (CAMx Metric 3);
- **Frequency of Contribution**: 6 percent of exceedences receive contributions of 5 ppb or more (CAMx Metrics 1 and 2); and
- **Relative Amount of Contribution**: the total "ppb" contribution is equivalent to 3% of total amount of nonattainment.

Metrics indicating relatively low and/or infrequent contributions:

- **Relative Amount of Contribution**: the 4-episode average percent contribution is 1% (CAMx Metric 4).

Group 3 Upwind States:

The CAMx and UAM-V metrics clearly indicate that the emissions from the following States do not make large and/or frequent contributions to 1-hour nonattainment in New York City: Alabama, Georgia, Massachusetts, Missouri, South Carolina, Tennessee, and Wisconsin. The rationale for this conclusion is as follows:

- **Magnitude of Contribution**: all of these upwind States individually contribute less than 2 ppb to 1-hour daily maximum exceedences in New York City (UAM-V Metric 2); the highest daily average contribution was 1 ppb or less from Alabama, Georgia, and Massachusetts, and 2 ppb from South Carolina, Tennessee, and Wisconsin (CAMx Metric 3); and

- **Relative Amount of Contribution**: the 4-episode average contributions from Alabama, Georgia, Massachusetts, South Carolina, and Wisconsin are less than 1% (CAMx Metric 4); the total contributions from Missouri and Tennessee are each equivalent to 1 percent of the total amount of nonattainment in New York City (UAM-V Metric 3).

Based on the preceding evaluation, EPA believes that emissions in each of the following twelve jurisdictions contribute significantly to 1-hour nonattainment in New York City: the District of Columbia, Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, North Carolina, Ohio, Pennsylvania, Virginia, and West Virginia.

IV.C. Results of Evaluation of Contributions

The EPA applied the evaluation methodology described in Section IV.b.3 to each upwind-downwind linkage to determine which States contribute significantly to nonattainment in specific downwind areas. The linkages which EPA found to be significant are listed in Tables IV.C-1 and IV.C-2 for the 1-hour NAAQS and Table IV.C-3 and Table IV.C-4 for the 8-hour NAAQS. The information on the 1-hour contribution linkages are presented by upwind State in Table IV.C-1 and by downwind State in Table IV.C-2. In Table IV.C-1 the upwind States are each listed in the first column and the downwind States to which each upwind State contributes significantly are listed in the second column. In Table IV.C-2, the same information is presented by downwind State. In this table, each downwind State is listed in the first column and the upwind States that contribute to that downwind State, either as a result of the upwind-State-to-downwind-State linkages or the upwind-State-to-downwind-nonattainment-area linkages, are listed in the second column. The 8-hour contribution linkages are presented by upwind State in Table IV.C-3 and by downwind State in Table IV.C-4.

Table IV.C-1. Downwind States for Which Upwind States Contain Sources that Contribute Significantly to 1-Hr Nonattainment.[1]

Upwind State	Downwind States
Alabama	**GA, IL*, IN*, MI*, TN, WI***
Connecticut	**ME, MA, NH**
Delaware	**CT, ME, MA, NH*, NJ, NY, PA, RI, VA**
District of Columbia	**CT, ME, MA, NH*, NJ, NY, PA, RI, VA**
Georgia	**AL, TN**
Illinois	**CT*, IN, MD, NJ*, NY, MI, MO, WI***
Indiana	**CT*, DE*, DC*, IL*, KY, MD, NJ*, NY, MI, OH, VA*, WI***
Kentucky	**AL, CT*, DC*, GA, IL*, IN, MD, MI*,NJ, NY, MO, OH, VA, WI***
Maryland	**CT, ME, MA, NH*, NJ, NY, PA, RI, VA**
Massachusetts	**ME, NH**
Michigan	**CT, DC*, MD, NJ, NY, VA***
Missouri	**IL, IN, MI, WI***
New Jersey	**CT, ME, MA, NH, NY, PA, RI**
New York	**CT, ME, MA, NH, NJ, RI**
North Carolina	**CT*, DC*, GA, KY, MD*, NJ, NY, OH, PA, VA***
Ohio	**CT, DE, DC*, KY, MD, MA, NH*, NJ, NY, PA, RI, VA**
Pennsylvania	**CT, DE, DC, ME, MD, MA, NH, NJ, NY, RI, VA**
Rhode Island	**ME, MA, NH**
South Carolina	**AL, GA, TN**
Tennessee	**AL, GA, IL*, IN, KY, MI*, OH, WI***
Virginia	**CT, DE, DC, KY*, MD, MA, NH*, NJ, NY, PA, RI**
West Virginia	**CT, DE, DC, MD, MA, NJ, NY, PA, RI, VA**
Wisconsin	**IL*, IN*, MI***

1. Downwind States marked with an asterisk (*) are included because they are part of an interstate nonattainment area that receives a contribution from the upwind State. New Hampshire is included because it is part of the combined Boston/Portsmouth area; Connecticut and New Jersey are included because they are part of the New York City area; Kentucky is included because it is part of the Cincinnati area; Delaware is included because it is part of the Philadelphia area; Illinois is included because it is part of the St. Louis area; Illinois, Indiana, Michigan, and Wisconsin are included because they are part of the Lake Michigan area; and Maryland, Virginia, and the District of Columbia are included because they are part of the Washington, DC area.

Table IV.C-2. Upwind States that Contain Sources that Contribute Significantly to 1-Hr Nonattainment in Downwind States.[1]

Downwind State	Upwind States
Alabama	**GA, KY, SC, TN**
Connecticut	**DE, DC, IL*, IN*, KY*, MD, MI*, NJ, NY, NC*, OH, PA, VA, WV**
Delaware	**IN*, OH, PA, VA, WV**
District of Columbia	**IN*, KY*, MI*, NC*, OH*, PA, VA, WV**
Georgia	**AL, KY, NC, SC, TN**
Illinois	**AL*, IN*, KY*, MO, TN*, WI***
Indiana	**AL*, IL, KY, MO, TN, WI***
Kentucky	**IN, NC, OH, TN, VA***
Maine	**CT, DE, DC, MD, MA, NJ, NY, PA, RI**
Maryland	**IL, IN, KY, MI, NC, OH, PA, VA, WV**
Massachusetts	**CT, DE, DC, MD, NJ, NY, OH, PA, RI, VA, WV**
Michigan	**AL*, IL, IN, KY*, MO, TN*, WI***
Missouri	**IL, KY**
New Hampshire	**CT, DC*, DE*, MD*, MA, NJ, NY, OH*, PA, RI, VA***
New Jersey	**DE, DC, IL*, IN*, KY, MD, MI, NY, NC, OH, PA, VA, WV**
New York	**DE, DC, IL, IN, KY, MD, MI, NJ, NC, OH, PA, VA, WV**
Ohio	**IN, KY, TN, NC**
Pennsylvania	**DE, DC, MD, NJ, NC, OH, VA, WV**
Rhode Island	**DE, DC, MD, NJ, NY, OH, PA, VA, WV**
Tennessee	**AL, GA, SC**
Virginia	**DE, DC, IN*, KY, MD, MI*, NC*, OH, PA, WV**
Wisconsin	**AL*, IL*, IN*, KY*, MO*, TN***

1. Upwind States marked with an asterisk (*) are considered to significantly contribute to the downwind State because they contribute to an interstate nonattainment area that includes part of the downwind State. New Hampshire is included in the Boston/Portsmouth area; Connecticut and New Jersey are included in the New York City area; Kentucky is included in the Cincinnati area; Delaware is included in the Philadelphia area; Illinois is included in the St. Louis area; Illinois, Indiana, Michigan, and Wisconsin are included in the Lake Michigan area; and Maryland, Virginia, and the District of Columbia are included in the Washington, DC area.

Table IV.C-3. Downwind States to Which Sources in Upwind States Contribute Significantly for the 8-hour Standard.

Upwind State	Downwind States
Alabama	**GA, IL, IN, KY, MI, MO, NC, OH, PA, SC, TN, VA**
Connecticut	**ME, MA, NH, RI**
Delaware	**CT, ME, MA, NH, NJ, NY, PA, RI, VA**
District of Columbia	**CT, ME, MD, MA, NH, NJ, NY, PA, RI, VA**
Georgia	**AL, IL, IN, KY, MI, MO, NC, SC, TN, VA**
Illinois	**AL, CT, DC, DE, IN, KY, MD, MI, MO, NJ, NY, OH, PA, RI, TN, WV, WI**
Indiana	**DE, IL, KY, MD, MI, MO, NJ, NY, OH, PA, TN, VA, WV, WI**
Kentucky	**AL, DC, DE, GA, IL, IN, MD, MI, MO, NJ, NY, NC, OH, PA, SC, TN, VA, WV, WI**
Maryland	**CT, DE, DC, ME, MA, NH, NJ, NY, PA, RI, VA**
Massachusetts	**ME, NH**
Michigan	**CT, DC, DE, MD, MA, NJ, NY, OH, PA, WV**
Missouri	**IL, IN, KY, MI, OH, PA, TN, WI**
New Jersey	**CT, ME, MA, NH, NY, PA, RI**
New York	**CT, ME, MA, NH, NJ, PA, RI**
North Carolina	**AL, CT, DE, GA, IN, KY, ME, MD, MA, NJ, NY, OH, PA, RI, SC, TN, VA, WV**
Ohio	**CT, DC, DE, IN, KY, MD, MA, MI, NJ, NY, NC, PA, RI, TN, VA, WV**
Pennsylvania	**CT, DC, DE, ME, MD, MA, NH, NJ, NY, OH, RI, VA**
Rhode Island	**ME, MA, NH**
South Carolina	**AL, GA, IN, KY, NC, TN, VA**
Tennessee	**AL, DC, DE, GA, IL, IN, KY, MD, MI, MO, NC, OH, PA, SC, VA, WV, WI**
Virginia	**CT, DE, DC, ME, MD, MA, NJ, NY, NC, OH, PA, RI, SC, WV**
West Virginia	**CT, DC, DE, IN, KY, MD, MA, NJ, NY, NC, OH, PA, RI, SC, TN, VA**
Wisconsin	**MI**

Table IV.C-4. Upwind States that Contain Sources that Contribute Significantly to 8-hour Nonattainment in Downwind States.

Downwind State	Upwind States
Alabama	**GA, IL, KY, NC, SC, TN**
Connecticut	**DE, DC, IL, MD, MI, NJ, NY, NC, OH, PA, VA, WV**
District of Columbia	**IL, KY, MD, MI, OH, PA, TN, VA, WV**
Delaware	**IL, IN, KY, MI, NC, OH, PA, TN, VA, WV**
Georgia	**AL, KY, NC, SC, TN**
Illinois	**AL, GA, IN, KY, MO, TN**
Indiana	**AL, GA, IL, KY, MO, NC, OH, SC, TN, WV**
Kentucky	**AL, GA, IL, IN, MO, NC, OH, SC, TN, WV**
Maine	**CT, DE, DC, MD, MA, NJ, NY, NC, PA, RI, VA**
Maryland	**DC, IL, IN, KY, MI, NC, OH, PA, TN, VA, WV**
Massachusetts	**CT, DE, DC, MD, MI, NJ, NY, NC, OH, PA, RI, VA, WV**
Michigan	**AL, GA, IL, IN, KY, MO, OH, TN, WI**
Missouri	**AL, GA, IL, IN, KY, TN**
New Hampshire	**CT, DE, DC, MD, MA, NJ, NY, PA, RI**
New Jersey	**DE, DC, IL, IN, KY, MD, MI, NC, NY, OH, PA, VA, WV**
New York	**DE, DC, IL, IN, KY, MD, MI, NC, NJ, OH, PA, VA, WV**
North Carolina	**AL, GA, KY, OH, SC, TN, VA, WV**
Ohio	**AL, IL, IN, KY, MI, MO, NC, PA, TN, VA, WV**
Pennsylvania	**AL, DE, DC, IL, IN, KY, MD, MI, MO, NJ, NY, NC, OH, TN, VA, WV**
Rhode Island	**CT, DE, DC, IL, MD, NJ, NY, NC, OH, PA, VA, WV**
South Carolina	**AL, GA, KY, NC, TN, VA, WV**
Tennessee	**AL, GA, IL, IN, KY, MO, NC, OH, SC, WV**
Virginia	**AL, DE, DC, GA, IN, KY, MD, NC, OH, PA, SC, TN, WV**
West Virginia	**IL, IN, KY, MI, NC, OH, TN, VA**
Wisconsin	**IL, IN, KY, MO, TN**

IV.C.4. Examples of Contributions From Upwind States to 1-Hour Downwind Nonattainment

Examples of the types of contributions which link individual upwind States to downwind areas are provided below for the 1-hour NAAQS for the 23 upwind jurisdictions. The detailed upwind-to-downwind linkages for the 1-hour NAAQS are provided in Appendix C.

-- Alabama's Contribution to 1-Hour Nonattainment in Atlanta

- ***Magnitude of Contribution:*** The maximum contribution is 39 ppb *(CAMx Metric 2)*; the highest daily average contribution is 31 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Alabama contributes at least 10 ppb to 12% of the 1-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Alabama is equivalent to 14% of the total amount >=125 ppb in Atlanta *(UAM-V Metric 3)*; Alabama contributes 8% of the total manmade ppb >= 125 ppb in Atlanta (CAMx Metric 4; 4-episode average percent contribution).

-- Connecticut/Rhode Island's Contribution to 1-Hour Nonattainment in Western Massachusetts

- ***Magnitude of Contribution:*** The maximum contribution is 61 ppb *(CAMx Metric 2)*; the highest daily average contribution is 50 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Connecticut/Rhode Island contribute at least 10 ppb to 100% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** Connecticut/Rhode Island contribute 35% of the total manmade ppb >= 125 ppb in Western Massachusetts (CAMx Metric 4; 4-episode average percent contribution).

-- Georgia's Contribution to 1-Hour Nonattainment in Birmingham

- ***Magnitude of Contribution:*** The maximum contribution is 51 ppb *(CAMx Metric 2)*; the highest daily average contribution is 24 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Georgia contributes at least 10 ppb to 11% of the 1-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Georgia is equivalent to 12% of the total amount >=125 ppb in Birmingham *(UAM-V Metric 3)*; Georgia contributes 3%

of the total manmade ppb >= 125 ppb in Birmingham (CAMx Metric 4; 4-episode average percent contribution).

-- Illinois's Contribution to 1-Hour Nonattainment in New York City

- ***Magnitude of Contribution:*** The maximum contribution is 8 ppb *(CAMx Metric 2)*; the highest daily average contribution is 6 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Illinois contributes at least 5 ppb to 20% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Illinois is equivalent to 3% of the total amount >=125 ppb in New York City *(UAM-V Metric 3)*; Illinois contributes 3% of the total manmade ppb >= 125 ppb in New York City (CAMx Metric 4; single highest episode percent contribution).

-- Indiana's Contribution to 1-Hour Nonattainment in Baltimore

- ***Magnitude of Contribution:*** The maximum contribution is 8 ppb *(CAMx Metric 2)*; the highest daily average contribution is 6 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Indiana contributes at least 5 ppb to 26% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Indiana is equivalent to 4% of the total amount >=125 ppb in Baltimore *(UAM-V Metric 3)*; Indiana contributes 3% of the total manmade ppb >= 125 ppb in New York City (CAMx Metric 4; single highest episode percent contribution).

-- Kentucky's Contribution to 1-Hour Nonattainment in Baltimore

- ***Magnitude of Contribution:*** The maximum contribution is 9 ppb *(CAMx Metric 2)*; the highest daily average contribution is 8 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Kentucky contributes at least 5 ppb to 24% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Kentucky is equivalent to 3% of the total amount >=125 ppb in Baltimore *(UAM-V Metric 3)*; Kentucky contributes 5% of the total manmade ppb >= 125 ppb in Baltimore (CAMx Metric 4; single highest episode percent contribution).

-- Maryland/District of Columbia/Delaware's Contribution to 1-Hour Nonattainment in New York City

- ***Magnitude of Contribution:*** The maximum contribution is 50 ppb *(CAMx Metric 2)*; the highest daily average contribution is 15 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Maryland/District of Columbia/Delaware contribute at least 10 ppb to 14% of the 1-hr exceedences and at least 5 ppb to 38% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** Maryland/District of Columbia/Delaware contribute 5% of the total manmade ppb >= 125 ppb in New York City (CAMx Metric 4; 4-episode average percent contribution).

-- Massachusetts' Contribution to 1-Hour Nonattainment in Portland, ME

- ***Magnitude of Contribution:*** The maximum contribution is 79 ppb *(CAMx Metric 2)*; the highest daily average contribution is 67 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Massachusetts contributes at least 10 ppb to 100% of the 1-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Massachusetts is equivalent to 100% of the total amount >=125 ppb in Portland, ME *(UAM-V Metric 3)*; Massachusetts contributes 56% of the total manmade ppb >= 125 ppb in Portland, ME (CAMx Metric 4; 4-episode average percent contribution).

-- Michigan's Contribution to 1-Hour Nonattainment in Baltimore

- ***Magnitude of Contribution:*** The maximum contribution is 9 ppb *(CAMx Metric 2)*; the highest daily average contribution is 8 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Michigan contributes at least 5 ppb to 7% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Michigan is equivalent to 5% of the total amount >=125 ppb in Baltimore *(UAM-V Metric 3)*; Michigan contributes 5% of the total manmade ppb >= 125 ppb in Baltimore (CAMx Metric 4; single highest episode percent contribution).

-- Missouri's Contribution to 1-Hour Nonattainment over Lake Michigan

- ***Magnitude of Contribution:*** The maximum contribution is 19 ppb *(CAMx Metric 2)*; the highest daily average contribution is 12 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Missouri contributes at least 10 ppb to 66% of the 1-

hr exceedences *(CAMx Metrics 1 and 2).*

- ***Relative Amount:*** The total contribution from Missouri is equivalent to 22% of the total amount >=125 ppb over Lake Michigan *(UAM-V Metric 3)*; Missouri contributes 9% of the total manmade ppb >= 125 ppb over Lake Michigan (CAMx Metric 4; 4-episode average percent contribution).

-- New Jersey's Contribution to 1-Hour Nonattainment in Western Massachusetts

- ***Magnitude of Contribution:*** The maximum contribution is 30 ppb *(CAMx Metric 2)*; the highest daily average contribution is 23 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** New Jersey contributes at least 10 ppb to 100% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** New Jersey contributes 16% of the total manmade ppb >= 125 ppb in Western Massachusetts (CAMx Metric 4; 4-episode average percent contribution).

-- New York's Contribution to 1-Hour Nonattainment in Western Massachusetts

- ***Magnitude of Contribution:*** The maximum contribution is 25 ppb *(CAMx Metric 2)*; the highest daily average contribution is 23 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** New York contributes at least 10 ppb to 100% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** New York contributes 18% of the total manmade ppb >= 125 ppb in Western Massachusetts (CAMx Metric 4; 4-episode average percent contribution).

-- North Carolina's Contribution to 1-Hour Nonattainment in Philadelphia

- ***Magnitude of Contribution:*** The maximum contribution is 10 ppb *(CAMx Metric 2)*; the highest daily average contribution is 9 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** North Carolina contributes at least 2 ppb to 4% of the 1-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from North Carolina is equivalent to 4% of the total amount >=125 ppb in Philadelphia *(UAM-V Metric 3)*; North Carolina contributes 2% of the total manmade ppb >= 125 ppb in Philadelphia (CAMx Metric 4; single highest episode percent contribution).

-- Ohio's Contribution to 1-Hour Nonattainment in Baltimore

- ***Magnitude of Contribution:*** The maximum contribution is 13 ppb *(CAMx Metric 2)*; the highest daily average contribution is 12 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Ohio contributes at least 5 ppb to 51% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Ohio is equivalent to 11% of the total amount >=125 ppb in Baltimore *(UAM-V Metric 3)*; Ohio contributes 4% of the total manmade ppb >= 125 ppb in Baltimore (CAMx Metric 4; 4-episode average percent contribution).

-- Pennsylvania's Contribution to 1-Hour Nonattainment in Greater Connecticut

- ***Magnitude of Contribution:*** The maximum contribution is 28 ppb *(CAMx Metric 2)*; the highest daily average contribution is 23 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Pennsylvania contributes at least 10 ppb to 60% of the 1-hr exceedences and at least 5 ppb to 98% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** Pennsylvania contributes 10% of the total manmade ppb >= 125 ppb in Greater Connecticut (CAMx Metric 4; 4-episode average percent contribution).

-- South Carolina's Contribution to 1-Hour Nonattainment in Atlanta

- ***Magnitude of Contribution:*** The maximum contribution is 24 ppb *(CAMx Metric 2)*; the highest daily average contribution is 23 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** South Carolina contributes at least 5 ppb to 6% of the 1-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from South Carolina is equivalent to 4% of the total amount >=125 ppb in Atlanta *(UAM-V Metric 3)*; South Carolina contributes 2% of the total manmade ppb >= 125 ppb in Atlanta (CAMx Metric 4; single highest episode percent contribution).

-- Tennessee's Contribution to 1-Hour Nonattainment over Lake Michigan

- ***Magnitude of Contribution:*** The maximum contribution is 12 ppb *(CAMx Metric 2)*; the highest daily average contribution is 11 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Tennessee contributes at least 5 ppb to 14% of the 1-hr exceedences *(UAM-V Metrics 1 and 2).*

- ***Relative Amount:*** The total contribution from Tennessee is equivalent to 6% of the total amount >=125 ppb over Lake Michigan *(UAM-V Metric 3)*; Tennessee contributes 10% of the total manmade ppb >= 125 ppb over Lake Michigan (CAMx Metric 4; single highest episode percent contribution).

-- Virginia's Contribution to 1-Hour Nonattainment in New York City

- ***Magnitude of Contribution:*** The maximum contribution is 25 ppb *(CAMx Metric 2)*; the highest daily average contribution is 11 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Virginia contributes at least 10 ppb to 11% of the 1-hr exceedences and at least 5 ppb to 36% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Virginia is equivalent to 11% of the total amount >=125 ppb in New York City *(UAM-V Metric 3)*; Virginia contributes 4% of the total manmade ppb >= 125 ppb in New York City (CAMx Metric 4; 4-episode average percent contribution).

-- West Virginia's Contribution to 1-Hour Nonattainment in New York City

- ***Magnitude of Contribution:*** The maximum contribution is 14 ppb *(CAMx Metric 2)*; the highest daily average contribution is 10 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** West Virginia contributes at least 5 ppb to 9% of the 1-hr exceedences and at least 2 ppb to 28% of the 1-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from West Virginia is equivalent to 9% of the total amount >=125 ppb in New York City *(UAM-V Metric 3)*; West Virginia contributes 7% of the total manmade ppb >= 125 ppb in New York City (CAMx Metric 4; single highest episode percent contribution).

-- Wisconsin's Contribution to 1-Hour Nonattainment over Lake Michigan

- ***Magnitude of Contribution:*** The maximum contribution is 43 ppb *(CAMx Metric 2)*; the highest daily average contribution is 8 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Wisconsin contributes at least 10 ppb to 11% of the 1-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** Wisconsin contributes 4% of the total manmade ppb >= 125 ppb over Lake Michigan (CAMx Metric 4; 4-episode average percent contribution).

IV.C.5. Examples of Contributions From Upwind States to 8-Hour Downwind Nonattainment

Examples of the types of contributions which link individual upwind States to downwind areas are provided below for the 8-hour NAAQS for the 23 upwind jurisdictions. The detailed upwind-to-downwind linkages for the 8-hour NAAQS are provided in Appendix D.

-- Alabama's Contribution to 8-Hour Nonattainment in Kentucky

- ***Magnitude of Contribution:*** The maximum contribution is 25 ppb *(CAMx Metric 2)*; the highest daily average contribution is 16 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Alabama contributes at least 10 ppb to 10% of the 8-hr exceedences and at least 5 ppb to 25% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Alabama is equivalent to 7% of the total amount >=85 ppb in Kentucky *(UAM-V Metric 3)*; Alabama contributes 5% of the total manmade ppb >= 85 ppb in Kentucky (CAMx Metric 4; 4-episode average percent contribution).

-- Connecticut/Rhode Island's Contribution to 8-Hour Nonattainment in New Hampshire

- ***Magnitude of Contribution:*** The maximum contribution is 25 ppb *(CAMx Metric 2)*; the highest daily average contribution is 13 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Connecticut/Rhode Island contribute at least 10 ppb to 27% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** Connecticut/Rhode Island contribute 9% of the total manmade ppb >= 85 ppb in New Hampshire (CAMx Metric 4; 4-episode average percent contribution).

-- Georgia's Contribution to 8-Hour Nonattainment in Indiana

- ***Magnitude of Contribution:*** The maximum contribution is 16 ppb *(CAMx Metric 2)*; the highest daily average contribution is 9 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Georgia contributes at least 5 ppb to 12% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Georgia is equivalent to 8% of the

total amount >=85 ppb in Indiana *(UAM-V Metric 3)*; Georgia contributes 4% of the total manmade ppb >= 85 ppb in Indiana (CAMx Metric 4; 4-episode average percent contribution).

-- Illinois's Contribution to 8-Hour Nonattainment in Pennsylvania

- ***Magnitude of Contribution:*** The maximum contribution is 16 ppb *(CAMx Metric 2)*; the highest daily average contribution is 7 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Illinois contributes at least 5 ppb to 18% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Illinois is equivalent to 7% of the total amount >=85 ppb in Pennsylvania *(UAM-V Metric 3)*; Illinois contributes 3% of the total manmade ppb >= 85 ppb in Pennsylvania (CAMx Metric 4; 4-episode average percent contribution).

-- Indiana's Contribution to 8-Hour Nonattainment in West Virginia

- ***Magnitude of Contribution:*** The maximum contribution is 17 ppb *(CAMx Metric 2)*; the highest daily average contribution is 13 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Indiana contributes at least 5 ppb to 8% of the 8-hr exceedences and at least 2 ppb to 46% of the 8-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Indiana is equivalent to 16% of the total amount >=85 ppb in West Virginia *(UAM-V Metric 3)*; Indiana contributes 5% of the total manmade ppb >= 85 ppb in New York City (CAMx Metric 4; 4-episode average percent contribution).

-- Kentucky's Contribution to 8-Hour Nonattainment in Pennsylvania

- ***Magnitude of Contribution:*** The maximum contribution is 20 ppb *(CAMx Metric 2)*; the highest daily average contribution is 10 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Kentucky contributes at least 10 ppb to 11% of the 8-hr exceedences and at least 5 ppb to 32% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Kentucky is equivalent to 13% of the total amount >=85 ppb in Pennsylvania *(UAM-V Metric 3)*; Kentucky contributes 5% of the total manmade ppb >= 85 ppb in Pennsylvania (CAMx Metric 4; 4-episode average percent contribution).

-- Maryland/District of Columbia/Delaware's Contribution to 8-Hour Nonattainment in Massachusetts

- ***Magnitude of Contribution:*** The maximum contribution is 17 ppb *(CAMx Metric 2)*; the highest daily average contribution is 10 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Maryland/District of Columbia/Delaware contribute at least 10 ppb to 5% of the 8-hr exceedences and at least 5 ppb to 34% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** Maryland/District of Columbia/Delaware contribute 5% of the total manmade ppb >= 85 ppb in Massachusetts (CAMx Metric 4; 4-episode average percent contribution).

-- Massachusetts' Contribution to 8-Hour Nonattainment in Maine

- ***Magnitude of Contribution:*** The maximum contribution is 66 ppb *(CAMx Metric 2)*; the highest daily average contribution is 47 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Massachusetts contributes at least 10 ppb to 82% of the 8-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Massachusetts is equivalent to 95% of the total amount >=85 ppb in Maine *(UAM-V Metric 3)*; Massachusetts contributes 33% of the total manmade ppb >= 85 ppb in Maine (CAMx Metric 4; 4-episode average percent contribution).

-- Michigan's Contribution to 8-Hour Nonattainment in Pennsylvania

- ***Magnitude of Contribution:*** The maximum contribution is 30 ppb *(CAMx Metric 2)*; the highest daily average contribution is 8 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Michigan contributes at least 5 ppb to 10% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Michigan is equivalent to 7% of the total amount >=85 ppb in Pennsylvania *(UAM-V Metric 3)*; Michigan contributes 3% of the total manmade ppb >= 85 ppb in Pennsylvania (CAMx Metric 4; single highest episode percent contribution).

-- Missouri's Contribution to 8-Hour Nonattainment in Michigan

- ***Magnitude of Contribution:*** The maximum contribution is 18 ppb *(CAMx Metric 2)*; the highest daily average contribution is 11 ppb *(CAMx Metric 3)*.

- ***Frequency of Contribution:*** Missouri contributes at least 5 ppb to 21% of the 8-hr exceedences and at least 2 ppb to 57% of the 8-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Missouri is equivalent to 22% of the total amount >=85 ppb in Michigan *(UAM-V Metric 3)*; Missouri contributes 7% of the total manmade ppb >= 85 ppb in Michigan (CAMx Metric 4; 4-episode average percent contribution).

-- New Jersey's Contribution to 8-Hour Nonattainment in Massachusetts

- ***Magnitude of Contribution:*** The maximum contribution is 38 ppb *(CAMx Metric 2)*; the highest daily average contribution is 20 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** New Jersey contributes at least 10 ppb to 59% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** New Jersey contributes 16% of the total manmade ppb >= 85 ppb in Massachusetts (CAMx Metric 4; 4-episode average percent contribution).

-- New York's Contribution to 8-Hour Nonattainment in Massachusetts

- ***Magnitude of Contribution:*** The maximum contribution is 33 ppb *(CAMx Metric 2)*; the highest daily average contribution is 26 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** New York contributes at least 10 ppb to 84% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** New York contributes 20% of the total manmade ppb >= 85 ppb in Massachusetts (CAMx Metric 4; 4-episode average percent contribution).

-- North Carolina's Contribution to 8-Hour Nonattainment in Maryland

- ***Magnitude of Contribution:*** The maximum contribution is 31 ppb *(CAMx Metric 2)*; the highest daily average contribution is 15 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** North Carolina contributes at least 10 ppb to 4% of the 8-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from North Carolina is equivalent to 5% of the total amount >=85 ppb in Maryland *(UAM-V Metric 3)*; North Carolina contributes 3% of the total manmade ppb >= 85 ppb in Maryland (CAMx Metric 4; 4-episode average percent contribution).

-- Ohio's Contribution to 8-Hour Nonattainment in New Jersey

- ***Magnitude of Contribution:*** The maximum contribution is 16 ppb *(CAMx Metric 2)*; the highest daily average contribution is 11 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Ohio contributes at least 10 ppb to 11% of the 8-hr exceedences and at least 5 ppb to 39% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Ohio is equivalent to 10% of the total amount >=85 ppb in New Jersey *(UAM-V Metric 3)*; Ohio contributes 6% of the total manmade ppb >= 85 ppb in New Jersey (CAMx Metric 4; 4-episode average percent contribution).

-- Pennsylvania's Contribution to 8-Hour Nonattainment in Massachusetts

- ***Magnitude of Contribution:*** The maximum contribution is 28 ppb *(CAMx Metric 2)*; the highest daily average contribution is 17 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Pennsylvania contributes at least 10 ppb to 39% of the 8-hr exceedences and at least 5 ppb to 73% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** Pennsylvania contributes 11% of the total manmade ppb >= 85 ppb in Massachusetts (CAMx Metric 4; 4-episode average percent contribution).

-- South Carolina's Contribution to 8-Hour Nonattainment in Tennessee

- ***Magnitude of Contribution:*** The maximum contribution is 21 ppb *(CAMx Metric 2)*; the highest daily average contribution is 12 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** South Carolina contributes at least 10 ppb to 7% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from South Carolina is equivalent to 4% of the total amount >=85 ppb in Tennessee *(UAM-V Metric 3)*; South Carolina contributes 3% of the total manmade ppb >= 85 ppb in Tennessee (CAMx Metric 4; 4-episode average percent contribution).

-- Tennessee's Contribution to 8-Hour Nonattainment in Ohio

- ***Magnitude of Contribution:*** The maximum contribution is 27 ppb *(CAMx Metric 2)*; the highest daily average contribution is 13 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Tennessee contributes at least 5 ppb to 14% of the 8-hr exceedences *(UAM-V Metrics 1 and 2).*

- ***Relative Amount:*** The total contribution from Tennessee is equivalent to 18% of the total amount >=85 ppb in Ohio *(UAM-V Metric 3)*; Tennessee contributes 7% of the total manmade ppb >= 85 ppb in Ohio (CAMx Metric 4; 4-episode average percent contribution).

-- Virginia's Contribution to 8-Hour Nonattainment in New Jersey
- ***Magnitude of Contribution:*** The maximum contribution is 37 ppb *(CAMx Metric 2)*; the highest daily average contribution is 20 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Virginia contributes at least 10 ppb to 9% of the 8-hr exceedences and at least 5 ppb to 22% of the 8-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Virginia is equivalent to 19% of the total amount >=85 ppb in New Jersey *(UAM-V Metric 3)*; Virginia contributes 9% of the total manmade ppb >= 85 ppb in New Jersey (CAMx Metric 4; 4-episode average percent contribution).

-- West Virginia's Contribution to 8-Hour Nonattainment in New Jersey
- ***Magnitude of Contribution:*** The maximum contribution is 16 ppb *(CAMx Metric 2)*; the highest daily average contribution is 9 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** West Virginia contributes at least 10 ppb to 5% of the 8-hr exceedences and at least 5 ppb to 23% of the 8-hr exceedences *(UAM-V Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from West Virginia is equivalent to 18% of the total amount >=85 ppb in New Jersey *(UAM-V Metric 3)*; West Virginia contributes 5% of the total manmade ppb >= 85 ppb in New Jersey (CAMx Metric 4; 4-episode average percent contribution).

-- Wisconsin's Contribution to 8-Hour Nonattainment in Michigan
- ***Magnitude of Contribution:*** The maximum contribution is 33 ppb *(CAMx Metric 2)*; the highest daily average contribution is 12 ppb *(CAMx Metric 3)*.
- ***Frequency of Contribution:*** Wisconsin contributes at least 10 ppb to 11% of the 8-hr exceedences *(CAMx Metrics 1 and 2).*
- ***Relative Amount:*** The total contribution from Wisconsin is equivalent to 5% of the total amount >=85 ppb in Michigan *(UAM-V Metric 3)*; Wisconsin contributes 5% of the total manmade ppb >= 85 ppb in Michigan (CAMx Metric 4; 4-episode average percent contribution).

V. Impacts of Alternative Strategies

V.A. Alternative Scenarios

EPA has performed modeling of various alternative utility and non-utility control options. Further, EPA has modeled the benefits in selected "downwind" areas of the budgets applied in "upwind" States. The results of EPA's modeling analysis are summarized below.

As part of EPA's assessment, ten emissions scenarios were modeled, as listed in Table V.A-1. The first four scenarios (i.e. "0.25", "0.20", "0.15t", and "0.12") were designed to evaluate alternative utility and non-utility controls applied uniformly in all 23 jurisdictions. For each of these four scenarios, utility emissions were determined assuming a "traditional trading" program across all 23 jurisdictions. The 0.15t scenario reflects the SIP Call proposal for both non-utility and utility sources. Note that non-utility controls were modeled at the level of the proposal for all scenarios except for the 0.25 scenario for which less stringent controls were assumed.

The EPA modeled two "regionality" runs: "Reg-1" and "Reg-2", which were designed to examine whether ozone benefits equivalent to the 0.15t scenario could be achieved with geographic variations in control levels within a range of 0.20 to 0.12 lb/MMBtu. In both of these scenarios, trading was restricted to occur among those States with the same assumed emissions limit.

The EPA also modeled a 0.15 non-trading scenario, "0.15nt" which was constructed with utility emissions that meet each State's budget without interstate trading. In developing the utility emissions for this scenario, intrastate trading among sources in a State was allowed to occur. The benefits of the 0.15nt scenario compared to those from the 0.15t scenario were examined to determine whether a trading program would affect the overall benefits of the proposal.

Table V.A-1. Emissions Scenarios Modeled.

Base Case	**2007 SIP Call Base Case**[1] Point Sources: Clean Air Act Controls Area Sources: OTAG "Level 1" Controls Highway Vehicles: OTAG "Level 0" Controls	
Control Scenarios	**Utilities (Electric Generation Units – EGUs)**	**Non-Utility Point Sources**
0.25	0.25 lb/mmBTU, interstate trading	60% reduction for large sources[2]
0.20	0.20 lb/mmBTU, interstate trading	70% reduction for large sources, RACT for medium sources[2]
0.15t	0.15 lb/mmBTU, interstate trading	70% reduction for large sources, RACT for medium sources
0.12	0.12 lb/mmBTU, interstate trading.	70% reduction for large sources, RACT for medium sources
Reg-1[3]	0.20 lb/mmBTU in the SE and MW, 0.15 lb/mmBTU in the NE and "adjacent" States; interstate trading within zones having the same emissions limit	70% reduction for large sources, RACT for medium sources
Reg-2[3]	0.20 lb/mmBTU in the SE, 0.15 lb/mmBTU in the MW and "adjacent" States and 0.12 lb/mmBTU in the NE; interstate trading within zones having the same emissions limit	70% reduction for large sources, RACT for medium sources
0.15nt	0.15 lb/mmBTU, non-trading	70% reduction for large sources, RACT for medium sources
Downwind Scenarios for Analysis of "Transport"	(1) 0.15nt utility and non-utility controls in the Northeast[4]; 2007 Base Case emissions elsewhere. (2) 0.15nt utility and non-utility controls in Georgia; 2007 Base Case emissions elsewhere. (3) 0.15nt utility and non-utility controls in Illinois, Indiana, and Wisconsin; 2007 Base Case emissions elsewhere.	

1. See Table III.A-1 for a listing of Base Case control measures.
2. Reductions are from 2007 "uncontrolled" emissions. Non-utility sources >250MMBtu/hr are considered as "large"; sources <250MMBtu/hr, but >1tpd are considered as "medium".
3. For the regionality scenarios, the Southeast (SE) includes Alabama, Georgia, North Carolina South Carolina, and Tennessee; the Midwest(MW) includes Illinois, Indiana, Kentucky, Michigan, Missouri and Wisconsin; the Northeast(NE) includes Connecticut, Delaware, District of Columbia, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island; the "adjacent" States include Ohio, Virginia and West Virginia.
4. The definition of "Northeast" for the Transport Scenario is the same as in footnote 3.

The last three "downwind" scenarios in Table V.A-1 were designed to evaluate the downwind benefits resulting from reductions in transport due to the budgets in upwind States. Each of these scenarios constitutes a separate modeling run that applies the 0.15nt emissions in a different downwind area. For example, in the "nt15NE" scenario, the 0.15nt emissions were applied in those Northeast States subject to the SIP Call. Base Case emissions were applied in the remainder of the OTAG region. The predictions for each of these three modeling runs were compared to the Base Case to estimate the impacts of the budgets applied within the downwind area. The predictions from these three runs were then compared to the 0.15nt scenario to estimate the additional benefits in each downwind area due to reductions in transport resulting from the budgets applied in upwind States.

Base Case emissions were derived as described in Section II.A of this document. Stationary area, highway, and mobile emissions were held constant at the Base Case levels for all modeling runs. The non-EGU sector emissions were derived by applying the specified levels of controls to large and medium sources in the Base Year inventory. The utility emissions estimates for each of the control scenarios in Table V.A-1 were derived using the IPM. A description of the IPM simulations for the control scenarios is contained in the RIA for the NOx SIP Call (EPA, 1998b). Table V.A-2 summarizes the point source emissions for the Base Case and the uniform and regionality scenarios. The total manmade emissions for these scenarios are summarized in Table V.A-3. The percent reduction in point source and total NOx emissions for each scenario compared to the Base Case is shown in Table V.A-4.

Table V.A-2. Comparison of Point Source Emissions for Different Control Scenarios

NOx (Tons/Day) - EMS-95 Output

State Name	2007 Base	0.25t	0.20t	0.15t	0.12t	REG-1	REG-2	0.15nt
Alabama	875.93	559.65	449.32	431.21	353.19	450.13	450.13	381.88
Arkansas	254.39	257.41	257.25	258.38	260.77	257.58	258.24	258.17
Connecticut	85.88	56.24	54.04	49.64	45.44	49.64	45.55	67.21
Delaware	80.64	66.82	51.53	43.47	42.99	43.37	41.39	55.45
DC	2.06	2.09	1.74	1.76	1.80	1.77	1.76	4.15
Florida	1023.28	1048.03	1051.57	1055.35	1073.78	1,052.55	1,053.09	1056.34
Georgia	869.61	532.68	441.13	374.29	295.44	441.19	448.22	336.84
Illinois	1346.93	808.95	670.44	566.43	498.48	657.66	568.87	555.92
Indiana	1339.81	786.17	656.61	540.96	446.35	687.07	502.62	573.19
Iowa	334.74	356.68	356.68	357.32	358.91	357.23	357.23	357.23
Kansas	474.11	508.96	515.22	511.19	515.94	512.79	509.77	508.69
Kentucky	913.39	508.37	429.42	360.34	301.97	439.25	351.56	363.00
Louisiana	1052.65	1067.89	1065.14	1070.03	1082.58	1,065.07	1,069.49	1068.90
Maine	65.31	86.09	86.10	87.46	88.39	87.40	88.15	86.22
Maryland	342.65	237.13	177.45	160.01	139.07	154.58	137.26	152.16
Massachusetts	196.59	169.68	147.32	121.77	120.94	121.77	121.60	153.38
Michigan	1005.55	687.53	531.12	476.77	420.61	531.00	484.26	438.18
Minnesota	332.10	339.23	339.23	339.91	342.09	339.89	339.56	339.20
Mississippi	361.61	397.14	400.57	400.45	416.68	400.33	399.41	399.55
Missouri	686.99	391.23	315.73	237.46	169.02	325.12	244.88	255.15
Nebraska	145.03	153.08	153.08	153.30	154.32	153.47	153.27	153.27
New Hampshire	36.74	41.37	41.37	46.31	49.69	46.15	48.92	41.61
New Jersey	308.09	219.67	197.18	171.17	165.04	169.37	163.28	161.05
New York	430.85	341.20	297.67	276.86	259.57	281.07	265.61	328.14
North Carolina	885.76	608.51	516.83	396.62	360.95	519.13	526.52	382.91
North Dakota	0.57	0.59	0.59	0.61	0.68	0.61	0.61	0.61
Ohio	1566.09	939.59	733.83	553.76	502.52	546.40	553.73	588.05
Oklahoma	456.97	469.74	466.71	470.92	477.48	466.57	470.64	469.78
Pennsylvania	1484.80	981.49	851.55	665.46	634.11	761.88	630.54	661.64
Rhode Island	10.05	9.98	9.98	9.98	9.29	9.98	9.98	10.03
South Carolina	516.85	357.00	300.17	268.81	236.23	307.56	326.44	279.23
South Dakota	40.64	55.81	55.81	55.93	56.93	55.89	55.89	52.95
Tennessee	980.95	612.58	416.40	412.72	386.95	412.95	418.64	431.05
Texas	2317.37	2319.84	2319.34	2320.43	2328.74	2,319.30	2,320.21	2319.86
Vermont	1.20	2.31	2.30	3.49	4.31	3.48	4.13	2.36
Virginia	509.50	345.64	271.58	233.77	205.85	228.21	238.92	246.56
West Virginia	1147.39	662.58	574.81	391.92	333.16	386.81	385.35	270.82
Wisconsin	513.72	321.72	256.38	213.25	208.30	256.33	212.41	249.12
Domain Total	22,996.79	17,310.67	15,463.19	14,089.51	13,348.56	14,900.55	14,258.13	14,059.85

Table V.A-3. Comparison of Total Emissions for Different Control Scenarios

NOx (Tons/Day) - EMS-95 Output

State Name	2007 Base	0.25t	0.20t	0.15t	0.12t	REG-1	REG-2	0.15nt
Alabama	1597.86	1281.58	1171.25	1153.14	1075.12	1,172.06	1,172.06	1103.81
Arkansas	720.10	723.12	722.96	724.09	726.48	723.29	723.95	723.88
Connecticut	306.25	276.61	274.41	270.01	265.81	270.01	265.92	287.58
Delaware	175.14	161.32	146.03	137.97	137.49	137.87	135.89	149.95
DC	44.27	44.30	43.95	43.97	44.01	43.98	43.97	46.36
Florida	2249.89	2274.64	2278.18	2281.96	2300.39	2,279.16	2,279.70	2282.95
Georgia	1666.99	1330.06	1238.51	1171.67	1092.82	1,238.57	1,245.60	1134.22
Illinois	2354.57	1816.59	1678.08	1574.07	1506.12	1,665.30	1,576.51	1563.56
Indiana	2192.61	1638.97	1509.41	1393.76	1299.15	1,539.87	1,355.42	1425.99
Iowa	738.53	760.47	760.47	761.11	762.70	761.02	761.02	761.02
Kansas	1041.88	1076.73	1082.99	1078.96	1083.71	1,080.56	1,077.54	1076.46
Kentucky	1691.27	1286.25	1207.30	1138.22	1079.85	1,217.13	1,129.44	1140.88
Louisiana	2044.37	2059.61	2056.86	2061.75	2074.30	2,056.79	2,061.21	2060.62
Maine	212.44	233.22	233.23	234.59	235.52	234.53	235.28	233.35
Maryland	734.15	628.63	568.95	551.51	530.57	546.08	528.76	543.66
Massachusetts	562.78	535.87	513.51	487.96	487.13	487.96	487.79	519.57
Michigan	1949.25	1631.23	1474.82	1420.47	1364.31	1,474.70	1,427.96	1381.88
Minnesota	851.96	859.09	859.09	859.77	861.95	859.75	859.42	859.06
Mississippi	961.60	997.13	1000.56	1000.44	1016.67	1,000.32	999.40	999.54
Missouri	1257.13	961.37	885.87	807.60	739.16	895.26	815.02	825.29
Nebraska	385.11	393.16	393.16	393.38	394.40	393.55	393.35	393.35
New Hampshire	158.32	162.95	162.95	167.89	171.27	167.73	170.50	163.19
New Jersey	818.56	730.14	707.65	681.64	675.51	679.84	673.75	671.52
New York	1413.83	1324.18	1280.65	1259.84	1242.55	1,264.05	1,248.59	1311.12
North Carolina	1598.95	1321.70	1230.02	1109.81	1074.14	1,232.32	1,239.71	1096.10
North Dakota	53.27	53.29	53.29	53.31	53.38	53.31	53.31	53.31
Ohio	2655.81	2029.31	1823.55	1643.48	1592.24	1,636.12	1,643.45	1677.77
Oklahoma	1255.26	1268.03	1265.00	1269.21	1275.77	1,264.86	1,268.93	1268.07
Pennsylvania	2327.75	1824.44	1694.50	1508.41	1477.06	1,604.83	1,473.49	1504.59
Rhode Island	67.92	67.85	67.85	67.85	67.16	67.85	67.85	67.90
South Carolina	1019.05	859.20	802.37	771.01	738.43	809.76	828.64	781.43
South Dakota	120.58	135.75	135.75	135.87	136.87	135.83	135.83	132.89
Tennessee	1893.76	1525.39	1329.21	1325.53	1299.76	1,325.76	1,331.45	1343.86
Texas	4005.14	4007.61	4007.11	4008.20	4016.51	4,007.07	4,007.98	4007.63
Vermont	72.83	73.94	73.93	75.12	75.94	75.11	75.76	73.99
Virginia	1433.66	1269.80	1195.74	1157.93	1130.01	1,152.37	1,163.08	1170.72
West Virginia	1402.51	917.70	829.93	647.04	588.28	641.93	640.47	525.94
Wisconsin	990.20	798.20	732.86	689.73	684.78	732.81	688.89	725.60
Domain Total	45,025.55	39,339.43	37,491.95	36,118.27	35,377.32	36,929.31	36,286.89	36,088.61

Table V.A-4. Summary of NOx Emissions Reductions.

Percent Reduction in Point Source NOx Emissions From 2007 SIP Call Base Case							
Region[1]	**0.25**	**0.20**	**0.15t**	**0.12**	**Reg-1**	**Reg-2**	**0.15nt**
Northeast	29%	39%	49%	52%	46%	49%	46%
Midwest	40%	51%	59%	65%	50%	59%	58%
Southeast	35%	49%	54%	61%	48%	54%	56%
Adjacent States	40%	51%	63%	68%	64%	63%	66%
SIP Call[2]	37%	48%	57%	62%	52%	57%	57%

Percent Reduction in Total NOx Emissions From 2007 SIP Call Base Case							
Region[1]	**0.25**	**0.20**	**0.15t**	**0.12**	**Reg-1**	**Reg-2**	**0.15nt**
Northeast	13%	18%	22%	24%	21%	24%	21%
Midwest	22%	28%	33%	36%	28%	33%	32%
Southeast	19%	26%	29%	32%	26%	25%	30%
Adjacent States	23%	30%	37%	40%	38%	37%	39%
SIP Call[2]	20%	26%	30%	33%	28%	30%	30%

1. The Northeast includes Connecticut, Delaware, District of Columbia, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island; the Midwest includes Illinois, Indiana, Kentucky, Michigan, Missouri Ohio, West Virginia, and Wisconsin; the Southeast includes Alabama, Georgia, North Carolina South Carolina, Tennessee and Virginia; the "Adjacent States' include Ohio, Virginia, and West Virginia.
2. “SIP Call” includes the total percent reduction over all 23 jurisdictions subject to budgets as part of this notice.

V.B. Modeling Results

The EPA applied UAM-V for each of the four OTAG episodes to simulate ozone concentrations for the Base Case and each scenario. The results for the uniform regionwide scenarios are presented first. This is followed by the results for the two regionality control options and the 0.15nt scenario. The results for the assessment of overall "downwind" benefits of the budgets applied in "upwind" States is presented last.

The analysis of model predictions focused on hourly values, 1-hour daily maximum values, and 8-hour daily maximum values predicted for all 4 episodes. Each of the control scenarios was evaluated using the four UAM-V metrics described in Section IV.A.2. of this document and summarized in Table V.B-1. Note that the model predictions used in calculating the metrics were restricted to those 1-hour values >=125 ppb and 8-hour values >=85 ppb. Model predictions less than these concentrations were not included in the analysis.

Table V.B-1. UAM-V Air Quality Metrics.

Metric 1: Exceedences	The number of values above the concentration level of NAAQS
Metric 2: Ozone Reduced–ppb	The magnitude and frequency of the “ppb” reductions in ozone
Metric 3: Total ppb Reduced	The total “ppb” reduced by a given scenario, not including that portion of the reduction that occurs below the level of the NAAQS
Metric 4: Population-Weighted Total ppb Reduced	The same as Metric 3, except that the ozone reductions are weighted by the population in the grid cell in which the reductions occur.

In general, the four metrics lead to similar overall conclusions. The results for the full set of receptor areas (i.e., "designated plus modeled" for the 1-hour NAAQS and "violating plus modeled" and "modeled only" for the 8-hour NAAQS) are provided in the docket for the NOx SIP Call rulemaking for all four metrics. In this document, Metrics 1 and 3 are presented to illustrate the results. For the 1-hour NAAQS, the metrics are presented for 1-hour daily maximum ozone concentrations using the “designated plus modeled” receptors. For the 8-hour NAAQS, the metrics are presented for both 8-hour daily maximum concentrations using the "violating plus modeled" receptors.

V.B.1. Impacts of Alternative Controls

The impacts on ozone concentrations of the 0.15t scenario and each of the alternative scenarios are provided by region in Tables V.B-2 and V.B-3 for Metrics 1 and 3, respectively. The complete set of data for individual States and 1-hour nonattainment areas based on the 1-hour and 8-hour daily maximum values is provided Appendix L. Table V.B-2 shows the percent reduction in the number of exceedences across all four episodes between each control scenario and the Base Case. This percentage is calculated by taking the difference between the Base Case and control case exceedences and dividing by the Base Case exceedences. Table V.B-3 shows the percent reduction in total ozone above the NAAQS provided by each scenario, compared to the total ozone above the NAAQS in the Base Case. The values in this table were calculated by dividing the Total “ppb” Reduced in the control scenario by the Total “ppb” above the NAAQS in the Base Case. These values represent the percent of total ozone above the NAAQS in the Base Case that is reduced by the control scenario.

The results indicate that the 0.15t scenario provides substantial reductions in both 1-hour and 8-hour ozone concentrations in all three regions. In the Midwest the 0.15t scenario provides a 38 percent reduction in 1-hour exceedences and a 45 percent reduction in "total ozone" >=125 ppb. For several individual 1-hour nonattainment areas in this region, the reduction in exceedences due to the 0.15t controls is 36 percent over Lake Michigan, 73 percent in Southwest Michigan, and 54 percent in Louisville. The corresponding reduction in "total ozone" >=125 ppb is 44 percent over Lake Michigan, 81 percent in Southwest Michigan, and 64 percent in Louisville. The regionwide Midwest reductions in 8-hour exceedences and "total ozone" >=85 ppb are 45 percent and 50 percent, respectively. For several specific States in this region the reduction in exceedences is 66 percent in Indiana, 73 percent in West Virginia, and 43 percent in Illinois. The corresponding reduction in “total ozone” >=85 ppb is 68 percent in Indiana, 76 percent in West Virginia, and 52 percent in Illinois.

Table V.B-2. Results for Metric 1: Number of Exceedences.

Percent Reduction in the Number of Exceedences 1-hour Daily Maximum >=125 ppb							
	0.25	**0.20**	**0.15t**	**0.12**	**Reg-1**	**Reg-2**	**0.15nt**
Midwest	25%	32%	38%	43%	32%	38%	38%
Southeast	23%	33%	34%	40%	33%	33%	36%
Northeast	24%	31%	36%	39%	35%	38%	36%
SIP Call Total	24%	31%	36%	40%	34%	37%	37%
Percent Reduction in the Number of Exceedences 8-hour Daily Maximum >=85 ppb							
	0.25	**0.20**	**0.15t**	**0.12**	**Reg-1**	**Reg-2**	**0.15nt**
Midwest	35%	44%	50%	54%	45%	50%	49%
Southeast	30%	40%	46%	51%	42%	42%	48%
Northeast	26%	34%	41%	44%	39%	43%	41%
SIP Call Total	30%	39%	45%	49%	42%	45%	45%

Table V.B-3. Results for Metric 3: Total “ppb” Reduced.[1]

Total “ppb” Reduced Compared to the Total “ppb” Above NAAQS in Base Case 1-hour Daily Maximum >=125 ppb							
	0.25	**0.20**	**0.15t**	**0.12**	**Reg-1**	**Reg-2**	**0.15nt**
Midwest	31%	39%	45%	49%	39%	45%	44%
Southeast	27%	37%	39%	44%	37%	37%	41%
Northeast	25%	32%	37%	40%	36%	39%	37%
SIP Call Total	27%	35%	40%	43%	37%	40%	40%
Total “ppb” Reduced Compared to the Total “ppb” Above NAAQS in Base Case 8-hour Daily Maximum >=85 ppb							
	0.25	**0.20**	**0.15t**	**0.12**	**Reg-1**	**Reg-2**	**0.15nt**
Midwest	35%	42%	48%	52%	43%	48%	47%
Southeast	33%	44%	49%	53%	45%	45%	50%
Northeast	28%	37%	43%	46%	42%	45%	43%
SIP Call Total	31%	40%	46%	50%	43%	46%	46%

1. The values in this table were calculated by dividing the total "ppb" reduced in the control scenario by the total "ppb" above the NAAQS in the Base Case. These values represent the percent of total ozone above the NAAQS in the Base Case that is reduced by the control scenario.

In the Southeast, 1-hour exceedences are reduced by 39 percent and the "total ozone" >=125 ppb by 34 percent. Considering individual nonattainment areas in the Southeast, the 0.15t scenario provides a 36 percent reduction in 1-hour exceedences in Atlanta and a 39% reduction in exceedences in Birmingham. The reduction in "total ozone" >=125 ppb is 41 percent in Atlanta and 54 percent in Birmingham. The overall regionwide ozone benefits across the Southeast are also large for the 8-hour NAAQS. The number of 8-hour exceedences regionwide is reduced by 46 percent with the 0.15t scenario and the “total ozone” >= 85 ppb is reduced by 49 percent. Exceedences are reduced by 27 percent in Georgia and 61 percent in North Carolina. The corresponding reduction in “total ozone” >= 85 ppb is 33 percent in Georgia and 69 percent in North Carolina.

In the Northeast, 0.15t provides a 37 percent reduction in 1-hour exceedences and a 34 percent reduction in "total ozone" >=125 pp. For individual nonattainment areas in the Northeast, the reductions in both Metrics 1 and 3 range from approximately 25 percent in Washington, DC up to 100 percent in Pittsburgh. For the serious and severe 1-hour nonattainment areas along the Northeast Corridor from Baltimore to Boston, the 1-hour reductions vary from city to city, but are generally in the range of 25 percent to 55 percent. For example, in the 0.15t scenario, 1-hour exceedences are reduced by 50 percent in Philadelphia, 48 percent in Baltimore, and 27 percent in New York City. The corresponding reduction in “total ozone” >= 125 ppb are 56 percent in Philadelphia, 43 percent in Baltimore, and 32 percent in New York City. The regionwide reductions in 8-hour exceedences and "total ozone" >=85 ppb in the Northeast are above 40 percent. Looking at specific States, exceedences are reduced by 33 percent in Maryland, 73 percent in Pennsylvania, and 14 percent in New York. The corresponding reduction in “total ozone” >= 85 ppb is 42 percent in Maryland, 76 percent in Pennsylvania, and 23 percent in New York.

In general, results from these scenarios demonstrate that the larger the reduction in NOx emissions, the greater the overall ozone benefit. As indicated in Table V.B-2 and V.B-3, the 0.25 and 0.20 scenarios generally do not provide the same level of reduction as the 0.15t scenario in any of the three regions, whereas the 0.12 scenario provides additional ozone benefits beyond 0.15t. Also, the results indicate that even with the most stringent control option considered, nonattainment problems requiring additional local controls may continue in some areas currently violating the NAAQS.

Concerning the two "regionality" runs, the relative amount of ozone reduction provided by each of these scenarios versus the uniform scenarios is comparable to the relative difference in the amount of emissions reductions (see Table V.A-4). For example, the total emissions reduction across the 23 jurisdictions provided by Reg-1 (28 percent) is between the amount provided by the 0.20 (26 percent) and the 0.15t (30 percent) uniform scenarios. Similarly, the ozone benefits from Reg-1 lie between those of the 0.20 and 0.15t uniform scenarios. The total emissions reduction from Reg-2 is the same as the reduction from 0.15t (30 percent) and the overall ozone benefits with Reg-2, for the 23 jurisdictions as a whole, are the same as those from the 0.15t uniform scenario. The emission reduction and ozone benefits for the 0.15t and Reg-2 scenarios are not the same for individual States. In general, the differences in the benefits correspond to the differences in emissions on a regional basis.

In the Midwest, the benefits from Reg-1 are less than the benefits from the 0.15t uniform regionwide scenario for both 1-hour and 8-hour concentrations, which would be expected from the difference in emissions. For example, there is a 38 percent reduction in 1-hour exceedences with 0.15t in the Midwest compared to a 32 percent reduction with Reg-1. Looking at specific nonattainment areas, there is a 54 percent reduction with 0.15t in Louisville compared to 43 percent with Reg-1 and a 36 percent reduction with 0.15t in Lake Michigan compared to 31 percent with Reg-1. The reductions in 8-hour exceedences with 0.15t and Reg-1 are 45 percent and 41 percent, respectively. The reduction in exceedences is 43 percent with 0.15t and 39 percent for Reg-1 in Illinois, 66 percent with 0.15t and 57 percent with Reg-1 in Indiana, and 44 percent with 0.15t and 31 percent with Reg-1 in Wisconsin. The benefits in the Midwest of 0.15t compared to Reg-1 are somewhat greater with metric 3. For this metric, the reduction in "total ozone" >=125 ppb is 45 percent with 0.15t and 39 percent with Reg-1. The differences in individual nonattainment areas are comparable. The data in Table V.B-3 for Metric 3 indicate similar results for the 8-hour NAAQS. In the Midwest, the 1-hour and 8-hour air quality benefits for Reg-2 are comparable to 0.15t as are the emissions reductions, as indicated by the data in Table V.B-2 and V.B-3.

In the Southeast, the 1-hour ozone reductions with 0.15t regionwide are 1-2 percent greater than those with Reg-1 for both metrics The 8-hour ozone reductions are 3-4 percent greater with 0.15t. This is fairly consistent across the nonattainment areas and States in the region. As seen in Tables V.B-2 and V.B-3, the results of Reg-2 compared to 0.15t are the same as those from Reg-1 for 1-hour and 8-hour concentrations.

In the Northeast, the total emissions reduction with the Reg-1 scenario is about the same as the reduction with 0.15t, which is expected since the regionwide emission limit in the Northeast in Reg-1 is 0.15lb/mmBtu and the emissions reductions from these two scenarios are generally comparable. Although the emission limits are the same the net emissions reductions in individual States are not, due to differences in the effects of trading between these two scenarios (the emissions reductions in Pennsylvania are 4 percent greater with 0.15t than in the Reg-1 scenario). The 1-hour ozone benefits of the 0.15t scenario are 1-2 percent greater than Reg-1 in the Northeast. The 8-hour benefits are 3 percent greater than Reg-1. The increase in benefits appear to be the result of the application of the 0.15 lb/mmBtu limit to sources outside the Northeast and adjacent States.

For Reg-2, the emissions reductions in individual States are less than 1 percent different from the reductions with the 0.12 uniform regionwide scenario. However, the air quality benefits in the Northeast with 0.12t regionwide are 1 to 2 percent greater than with Reg-2 using both metrics. Reductions in several individual nonattainment areas and States are as high as 4 percent. This additional ozone reduction in the Northeast appears to be the result of the 5 percent additional reduction in total NOx emissions (between Reg-2 and 0.12t) in upwind States subject to the SIP Call.

The impact on ozone reductions of a trading program versus meeting the budgets in each State can be seen by comparing the results for the 0.15t and 0.15nt scenarios. The data in Tables V.B-2 and V.B-3 indicate that there is no overall loss of ozone benefits for either 1-hour or 8-hour concentrations across the 23 jurisdictions due to trading. On a regional basis, the benefits of trading and non-trading at the 0.15 control level are essentially the same in the Northeast and Midwest and slightly less with trading in the Southeast.

The modeling runs discussed here also shed light on the issue of local “disbenefits” of the regional controls. Of the four metrics examined by EPA, Metrics 3 and 4 (i.e., "Total ppb Reduced" and "Population-Weighted Total ppb Reduced") are most appropriate for identifying any net disbenefits because the ozone decreases and any increases disbenefits) are considered in calculating each of these metrics. The metrics will have negative values for situations in which the total disbenefits are greater than the total benefits. The EPA examined the 1-hour estimates for these metrics for each 1-hour nonattainment area and the 8-hour estimates by State to identify any areas in which the modeling indicated a net disbenefit. The results indicate that the only net disbenefit predicted in any of the scenarios were in Cincinnati for the 1-hour NAAQS. However, these disbenefits occurred only in the 0.25 and 0.20 scenarios. In the 0.15t scenario, there is net a 32 percent benefit in Cincinnati with Metric 3 and a net benefit of 23 percent with Metric 4. There were no net Statewide 8-hour disbenefits in any of the scenarios examined by EPA.

V.B.2 Impacts of Upwind Controls on Downwind Nonattainment

The impacts of the budgets applied in "upwind" States on "downwind" ozone in (a) the Northeast, (b) Georgia, and (c) Illinois-Indiana-Wisconsin, were evaluated using the 0.15nt scenario along with the three "downwind" transport assessment scenarios listed in Table V.A-1. In each of these scenarios, EPA modeled the 0.15nt option in one of the areas with the Base Case emissions applied in the rest of the OTAG region. The results of the "downwind" control runs were compared to the Base Case in order to assess the benefits of the controls applied within those areas (i.e., the "downwind" areas). Similarly, the predictions for the 0.15nt regionwide run were compared to the Base Case to estimate the benefits in each area of the "downwind plus upwind" controls. Emissions from the intrastate trading scenario rather than the interstate trading scenario were used for the analysis of upwind controls in order to avoid any potentially confounding effects of small changes in the downwind emissions between the downwind control scenario and the downwind plus upwind control scenario due to interstate trading. The benefits of the "upwind" controls were examined in two ways. In the first way, the benefits of the "downwind" controls relative to the Base are compared to the benefits of the "downwind plus upwind" controls relative to the Base. The difference between these relative reductions can be interpreted as the reduction associated with "upwind" controls. For example, if the reduction in 1-hour exceedences due to "downwind" controls is 20 percent and the reduction due to "downwind plus upwind" controls is 35 percent, then the benefit of the "upwind" controls alone (compared to the Base Case) is 15 percent. Similarly, if "downwind" controls provide a 25 percent reduction in "total ozone" >=125 ppb compared to the "total ozone" >=125 ppb in the Base Case and the "downwind plus upwind" controls provide a 50 percent reduction, then the amount of reduction due to "upwind" controls alone is 25 percent.

A second way to analyze the benefits of "upwind" controls using the number of exceedences (i.e., Metric 1) is to compare the number of exceedences in the "upwind plus downwind" scenario to the number of "residual" exceedences remaining after the application of the "downwind" controls. In this way, the model predictions in the "upwind" controls case serve as the baseline and the benefits of "upwind" controls can be thought of as being "incremental additional reductions" beyond the reductions provided by the "downwind" controls alone. The benefits of "upwind" controls are calculated as the difference between the "downwind plus upwind" exceedences and the "downwind" exceedences, divided by the "downwind" exceedences and expressed as a percent. The second way of analyzing the "upwind" benefits using Metric 3, Total "ppb" Reduced, is to determine the relative portion of the total "downwind plus upwind" reduction that is due to the "upwind" controls. The "ppb" amount of reduction from "upwind" controls is then expressed as a percent of the total "downwind plus upwind" reduction. For example, if the total ppb reduced (across all days and receptors in a particular "downwind" area) due to the "downwind plus upwind" controls is 1000 ppb and the portion due to "upwind" controls is 200 ppb, then the "upwind" controls provide 20 percent of the total reduction in ozone in the "downwind" area.

The results for the transport analysis for Metrics 1 and 3 are provided in Table V.B-4. These data indicate that there are substantial benefits in "downwind" areas resulting from the budgets applied in "upwind" States. Specifically, the scenario with 0.15 applied throughout the Northeast only (i.e., "downwind" controls), provides approximately a 20 percent overall reduction in both 1-hour exceedences and "total ozone" >=125 ppb. By comparison, the "upwind plus downwind" application of 0.15 results provides an overall reduction in this region of approximately 35 percent and 37 percent, respectively for these two metrics. The additional incremental reduction in the number of "residual" 1-hour and 8-hour exceedences (i.e., the number of exceedences that remain after the application of the downwind controls) due to "upwind" controls is 19 percent and 27 percent, respectively. The results for Metric 3 indicate that "upwind" controls provide 40 percent of the 1-hour total ("downwind plus upwind") ppb reduction and 48 percent of the 8-hour total ppb reduction in the Northeast.

Table V.B-4. Results for Transport Runs.

	Percent Reduction in Exceedences[1]					
	1-Hr Daily Max			8-Hr Daily Max		
	DW[2]	DW + UW[2]	UW[2]	DW	DW + UW	UW
Northeast	21%	36%	19%	18%	40%	27%
Lake MI	29%	36%	9%	11%	17%	7%
IL/IN/WI	35%	50%	23%	27%	57%	41%
Atlanta	30%	39%	12%	NA[3]	NA	NA
Georgia[4]	30%	39%	12%	15%	27%	14%
	Total "ppb" Reduced Compared to Total "ppb" Above NAAQS in Base Case					
	1-Hr Daily Max			8-Hr Daily Max		
	DW[5]	DW + UW[5]	UW[5]	DW	DW + UW	UW
Northeast	22%	37%	40%	23%	43%	48%
Lake MI	39%	44%	12%	20%	28%	27%
IL/IN/WI	17%	33%	49%	32%	62%	48%
Atlanta	37%	43%	14%	NA	NA	NA
Georgia	37%	43%	14%	25%	35%	28%

1. The percent reduction provided by "downwind" and by "downwind + upwind" controls are both calculated by comparing the number of exceedences in each scenario back to the Base Case. The reduction provided by "upwind" controls was calculated by comparing the number of exceedences after "downwind + upwind" controls to the number of exceedences remaining after "downwind" controls only. That is, the upwind reductions indicate the additional incremental benefits after the controls are applied "downwind".
2. "DW" denotes the reductions due to the "downwind" controls; "DW + UW" denotes the reductions due to controls applied regionwide in "downwind plus upwind" areas; and "UW" denotes the incremental additional reduction in exceedences.
3. NA: The metrics for the 8-hour NAAQS were not calculated for individual 1-hour nonattainment areas.
4. The 1-hour results for Georgia are the same as for Atlanta because Atlanta is the only 1-hour nonattainment area in that State.
5. The "DW" and "DW + UW" values in the bottom portion of the table were calculated by dividing the Total "ppb" Reduced in the control scenario by the Total "ppb" above the NAAQS in the Base Case. These values represent the percent of total ozone above the NAAQS in the Base Case that is reduced by the control scenario; "UW" in the bottom part of the table denotes the portion of the total "upwind plus downwind" reduction that is due to the "upwind" controls.

The results for individual 1-hour nonattainment areas and individual States for the 8-hour NAAQS in the Northeast are provided in Appendix M. As an example of the 1-hour benefits in these areas, the additional incremental reductions in 1-hour exceedences due to "upwind" controls include a 28 percent reduction in Baltimore, a 20 percent reduction in Philadelphia, a 15 percent reduction in New York City, and a 23 percent reduction in Greater Connecticut. The relative portion of the total "ppb" reduction in 1-hour ozone concentrations due to "upwind" controls is 48 percent in Baltimore, 29 percent in Philadelphia, 38 percent in New York City, and 47 percent in Connecticut.

The impacts of "upwind" controls on nonattainment in Georgia were examined using the scenario with the 0.15nt controls applied in Georgia versus the Base Case scenario and the scenario with 0.15nt applied regionwide. The results, as shown in Table V.B-4, indicate that the "downwind" application of 0.15 in Georgia is predicted to reduce the number of 1-hour exceedences in Atlanta by 30 percent and the "total ozone" >=125 ppb by 37 percent. With the "downwind plus upwind" controls, the reduction in exceedences increases to 39 percent with a 43 percent reduction in "total ozone" >=125 ppb. The "upwind" controls are estimated to provide an additional incremental 12 percent reduction in residual 1-hour exceedences in Atlanta after the application of downwind controls in Georgia. Also, in Atlanta, 14 percent of the 1-hour total "ppb" reduced by the "downwind plus upwind" regionwide scenario is due to the controls applied in "upwind" States. For the 8-hour NAAQS, the "downwind" controls provide a 15 percent reduction in 8-hour exceedences and a 25 percent reduction 8-hour "total ozone" >=85 ppb within the State of Georgia. With "downwind plus upwind" controls, there is a 27 percent reduction in the number of 8-hour exceedences and a 35 percent reduction in "total ozone" >=85 ppb. The "upwind" controls provide a 14 percent incremental additional reduction in 8-hour exceedences in Georgia and the portion of the total "ppb" reduced that is due to "upwind" controls is 28 percent.

To assess the benefits in Illinois-Indiana-Wisconsin due to "upwind" controls, EPA examined the data for the Lake Michigan receptor area and for the three States, combined. The discussion of results focuses on the Lake Michigan receptor area. The data for this area and the three States are provided in Table V.B-4. For the Lake Michigan receptor area, there is a 29 percent reduction in 1-hour exceedences due to "downwind" controls and reduction in "total ozone" >=125 ppb of 39 percent. With the "downwind plus upwind" controls the benefits increase to a 36 percent reduction in 1-hour exceedences and the 44 percent reduction in "total ozone" >=125 ppb. The incremental reduction in 1-hour exceedences is 9 percent. The "upwind" controls provide 12 percent of the total reduction that results from the "upwind plus downwind" regionwide controls. The data in Table V.B-4 indicate that the incremental reduction in 8-hour exceedences due to "upwind" controls is 7 percent which is comparable to the incremental reduction in 1-hour exceedences. However, the portion of the 8-hour total "ppb" reduction that is due to "upwind" control is much larger at 27 percent.

The data in Table V.B-4 indicate that in Illinois, Indiana, and Wisconsin, the incremental reduction in 1-hour and 8-hour exceedences due to "upwind" controls are larger than over Lake Michigan (i.e., 23 percent and 41 percent for 1-hour and 8-hour exceedences, respectively). The "upwind" controls provide nearly 50 percent of the 1-hour and 8-hour total "ppb" reductions associated with the "upwind plus downwind" regionwide control scenario.

V.B.3 Summary of Findings

The EPA has performed an air quality assessment to estimate the ozone benefits of the proposal and several alternative uniform and "regionality-based" control levels. In addition, EPA examined the overall benefits in several major "downwind" nonattainment areas of the application of the proposal in upwind States. The results of EPA's assessment corroborate and extend the findings presented in the SNPR. The major findings are as follows:

(1) The NOx emissions reductions associated with the proposed Statewide budgets are predicted to produce large reductions in (a) 1-hour concentrations >=125 ppb in areas which are currently nonattainment for the 1-hour NAAQS and which would likely continue to have a 1-hour nonattainment problem in the future without the SIP call budget reductions and (b) 8-hour concentrations >=85 ppb in areas which currently violate the 8-hour NAAQS and which would likely continue to have an 8-hour ozone problem in the future without the SIP call budget reductions.

(2) The more NOx emissions are reduced, the greater the benefits in reducing ozone concentrations. There does not appear to be any "leveling off" of benefits within the range of NOx reductions associated with EPA's proposal. That is, NOx reductions at control levels less than EPA's proposal provide fewer air quality benefits than the proposal and NOx reduction greater than the proposal provide more air quality benefits.

(3) Any disbenefits due to the NOx reductions associated with the budgets are expected to be very limited compared to the extent of the benefits expected from these budgets.

(4) There are likely to be benefits in major nonattainment areas due to the "downwind" application of controls in the proposed budgets. Reductions in ozone transport associated with the collective application of the budgets in "upwind" States are expected to provide substantial ozone benefits in "downwind" areas, beyond what is provided by the budgets applied in these areas. Together, the "downwind" reductions and transport reductions from "upwind" controls will provide significant progress toward attainment in major nonattainment areas within the OTAG region. However, even with the most stringent control option considered, nonattainment problems requiring additional local control measures may continue in some areas currently violating the NAAQS.

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ERRATA

The following items were discovered and corrected on September 28, 1998,

(1) Table IV.B-1. Extent of 1-Hour Nonattainment Problem and section IV.B.4a. Extent of 1-Hour Nonattainment in New York City -- the 1-hour design value for New York City was is 144 ppb which was incorrectly typed as 149 ppb.

(2) Table IV.B-6. Contributions to 1-Hour Nonattainment in New York City: CAMx Metrics -- the right column in the table (i.e., Max 1-hour contribution) was inadvertantly not included in the table.

(3) Section IV.B.4.b. Upwind Contributions to 1-Hour Nonattainment in New York City,

(a) under the description of the Group 1 Upwind States: -- the discussion for UAM-V Metrics 2 and 3 were clarified to indicate that the results for these metrics are applicable to Ohio, Virginia, and West Virginia;

(b) under the description of the Group 2 Upwind States: -- the CAMx frequency of contribution from Indiana to New York City was incorrectly typed as 4%, instead of 3%;

(c) under the description of the "Overall contributions considering UAM-V and CAMx Metrics" for the contributions from Michigan to New York City, the following factor was inadvertantly excluded from the list of "Metrics indicating relatively high and/or frequent contributions:"

- Frequency of Contribution: 3 percent of the exceedences receive contributions of more than 2 ppb (UAM-V Metrics 1 and 2)

(d) under the description of the "Overall contributions considering UAM-V and CAMx Metrics" for the contributions from North Carolina to New York City, the following factor listed in the text was found to contain a numerical error and was therefore removed from the list of factors under the heading "Metrics indicating relatively low and/or infrequent contributions." The incorrect item which was removed is:

- Magnitude of Contribution: the maximum contribution from UAM-V is 2 ppb

(4) In the description of Metric 2 for both UAM-V and CAMx, the concentration range cut-offs were described incorrectly as ">". The correct concentration range cut-offs are ">=". For example, the correct ranges are >= 2 to 5 ppb, >= 5 to 10 ppb, etc.

APPENDIX A
FIGURES

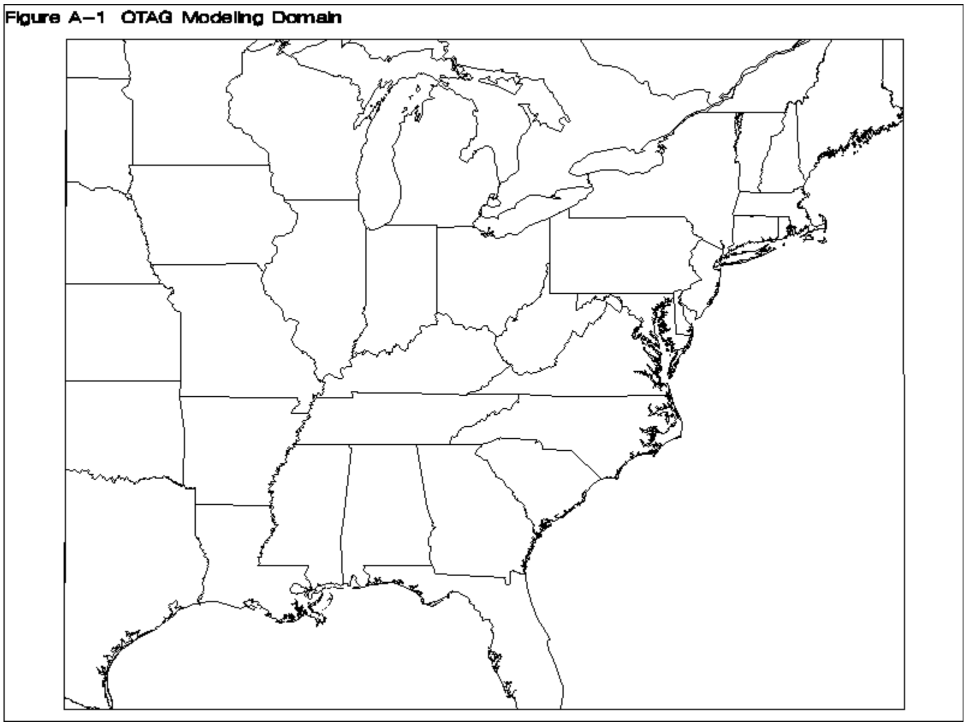

Figure A-1. OTAG Modeling Domain

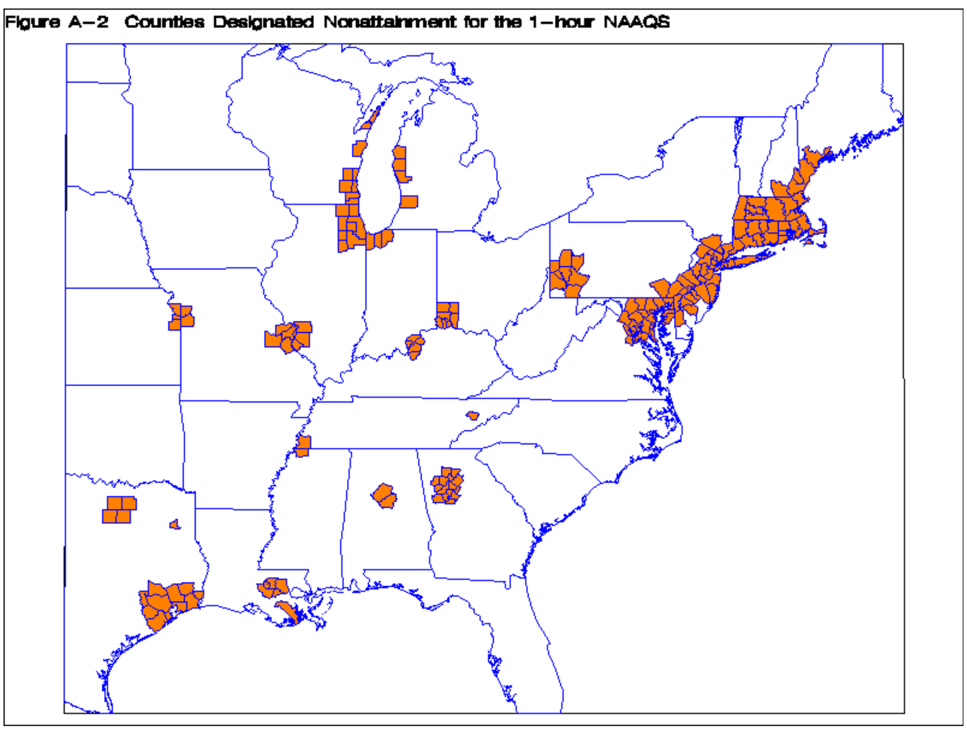

Figure A-2. Counties Designated Nonattainment for the 1-Hour NAAQS.

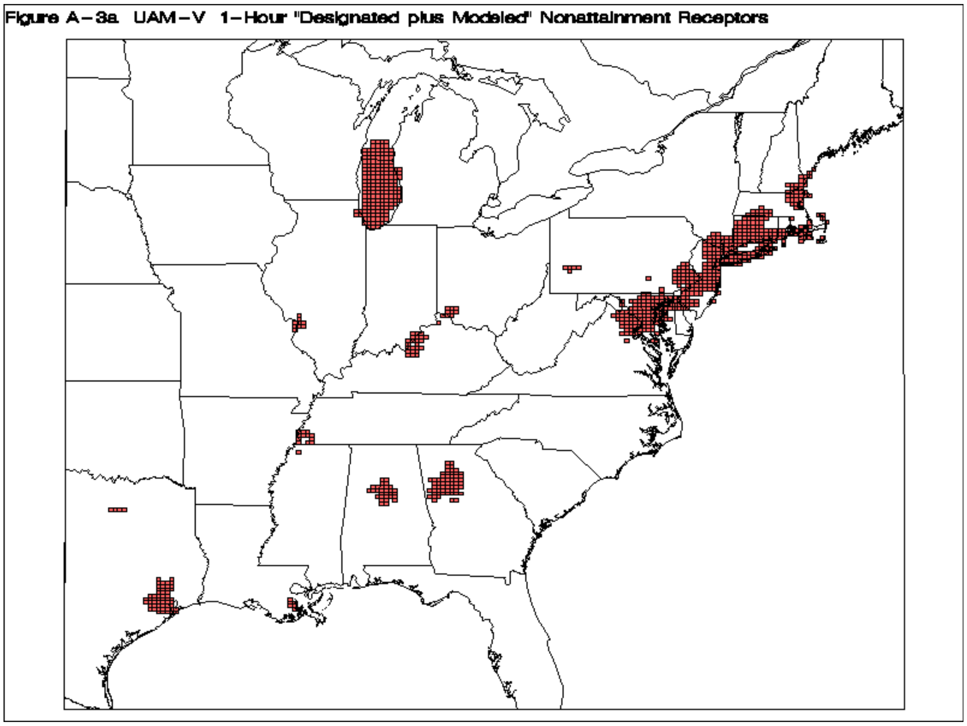

Figure A-3a. UAM-V 1-Hour “Designated plus Modeled” Nonattainment Receptors.

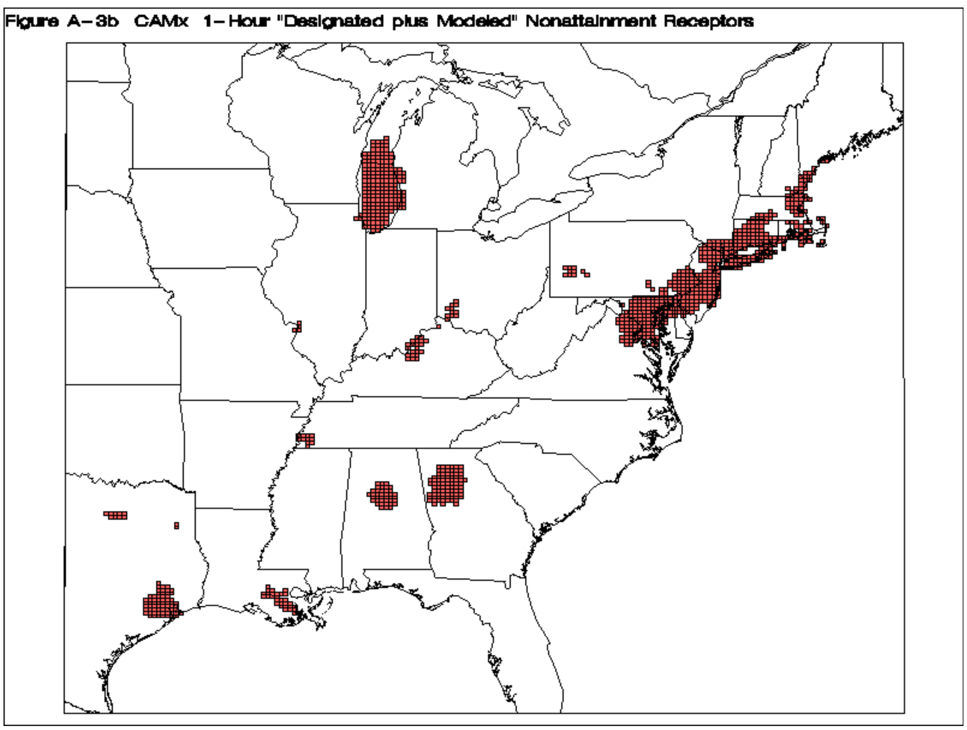

Figure A-3b. CAMx 1-Hour “Designated plus Modeled” Nonattainment Receptors.

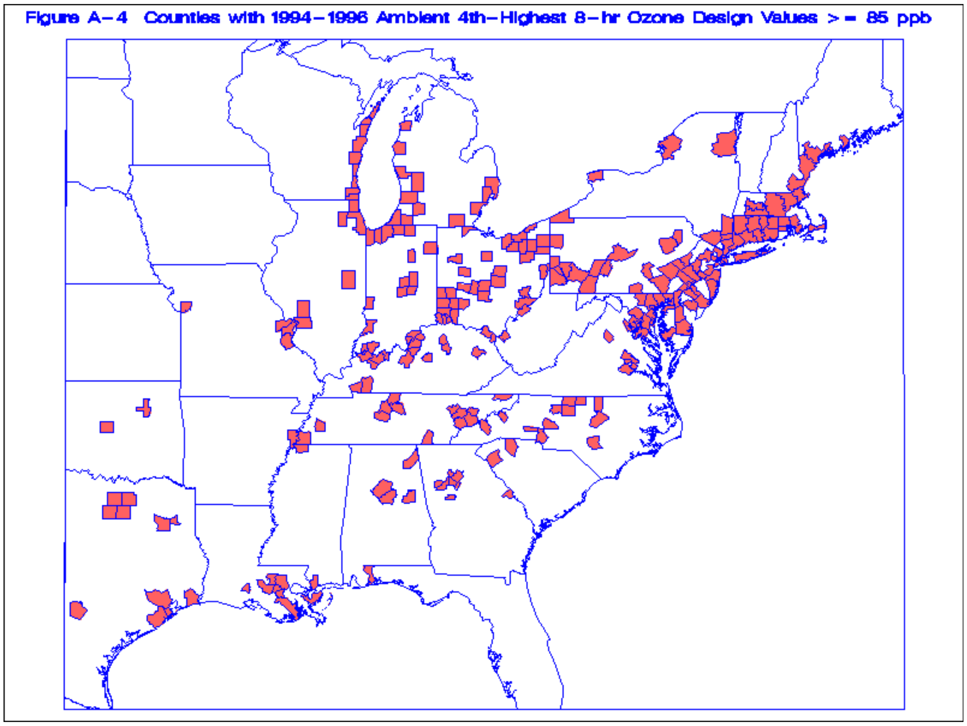

Figure A-4. Counties with 1994-1996 Ambient 4th Highest 8-Hour Ozone Design Values ≥ 85ppb

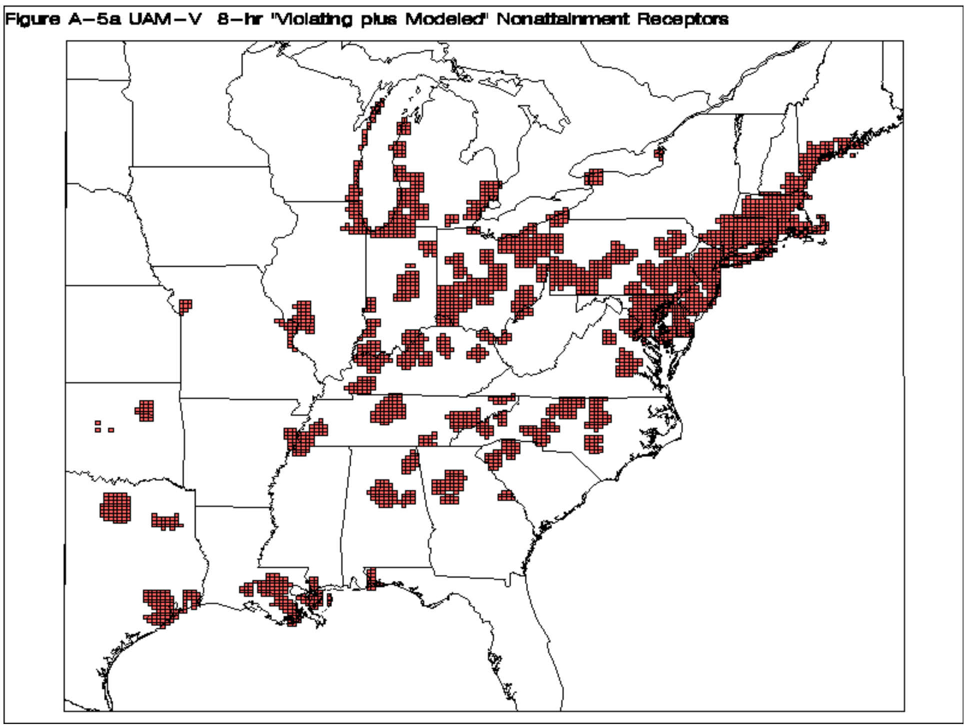

Figure A-5a. UAM-V 8-Hour "Violating plus Modeling" Nonattainment Receptors.

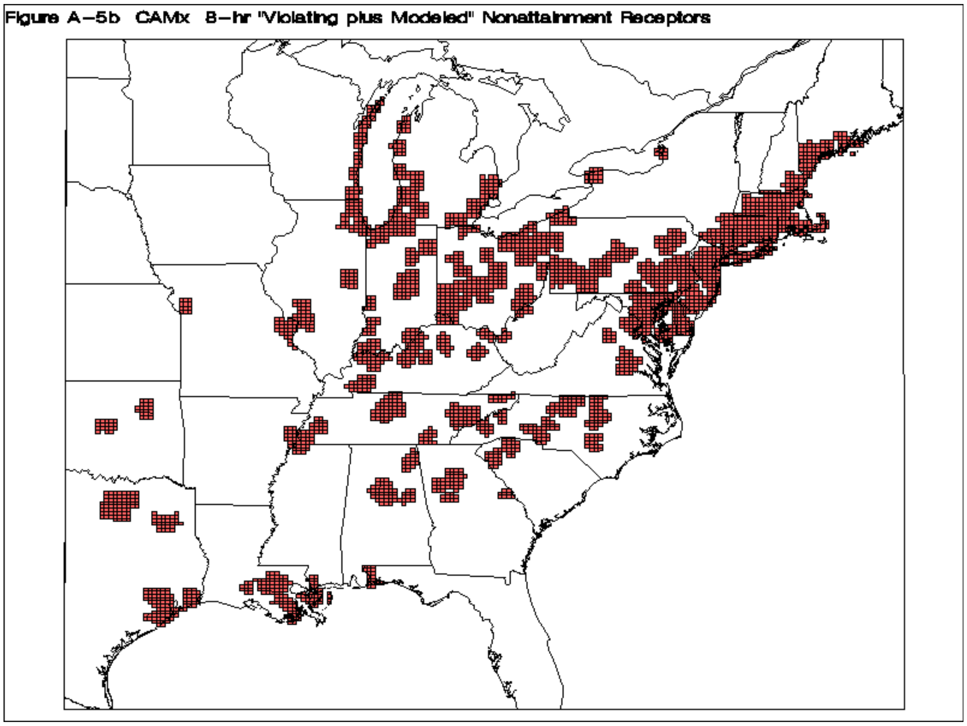

Figure A-5b. CAMx 8-Hour “Violating plus Modeled” Nonattainment Receptors.

Figure A-6 CAMx Source Areas

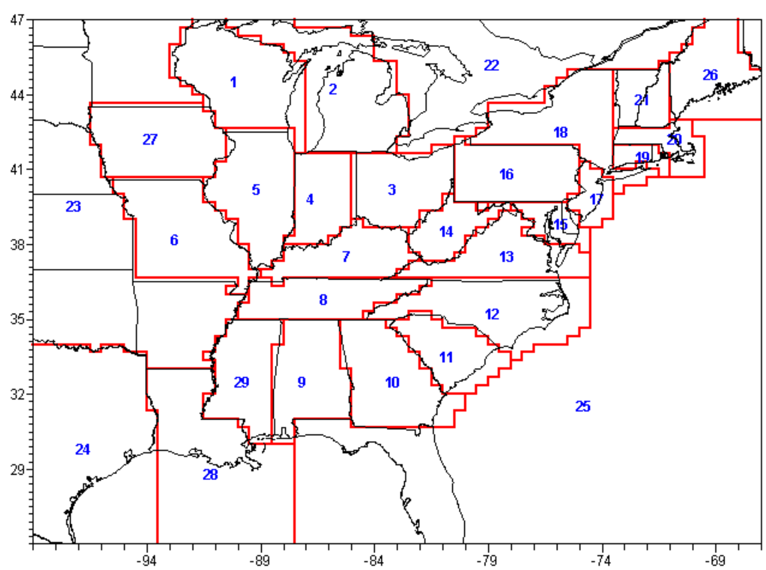

Figure A-6. CAMx Source Areas.

APPENDIX B
EQUATIONS FOR UAM-V METRICS

UAM-V Metric 3: Total ppb Reduced. This metric quantifies the total ppb contributed in the downwind area from an upwind State, not including that portion of the contribution that occurs below the level of the NAAQS. For 1-hour concentrations, Metric 3 is calculated by taking the difference between the Base Case predictions in each nonattainment receptor and either (a) the corresponding value in the zero-out run, or (b) 125 ppb, whichever is greater (i.e., 125 ppb or the prediction in the zero-out run). The Base Case vs zero-out differences are summed over all time periods (i.e., hourly or daily) and across all nonattainment receptors in the downwind area. The calculation of this metric is illustrated by the following example. If the Base Case 1-hour daily maximum ozone prediction is 150 ppb and the corresponding value from the zero-out run is 130 ppb, then the difference used in this metric is 20 ppb. However, if the value from the zero-out run is 115 ppb, then the difference used in this metric is 25 ppb (i.e., 150 ppb - 125 ppb, because 115 ppb is less than 125 ppb). The following equation was used for calculating this metric:

$$\mathrm{Sum}_{\mathrm{Grid\ Cells}}\ \{\ \mathrm{Sum}_{\mathrm{Days}}\ [\ (\mathrm{O3})_{\mathrm{Base}}\ -\ \max[\ (125\ \textit{or}\ 85),\ (\mathrm{O}_3)_{\mathrm{Zero\text{-}out}}\ ]\ ]\ \}$$

To analyze the contributions using Metric 3, the values of this metric are compared to the total amount of ozone above the NAAQS (i.e., 125 ppb, 1-hour or 85 ppb, 8-hour) in the Base Case. This baseline measure of the "total amount of nonattainment" (i.e., the total "ppb" of ozone that is above the NAAQS) is calculated by summing the "ppb" values in the Base Case that are above the level of the NAAQS. The total contribution from an upwind State to a particular downwind area calculated by Metric 3 is expressed in relation to the amount that the downwind area is in nonattainment. For example, if Upwind State #1 contributes a total of 50 ppb >=125 ppb to Downwind Area #2 and the total Base Case ozone >=125 ppb in Downwind Area #2 is 500 ppb, then the contribution from Upwind State #1 (i.e., 50 ppb) to Downwind Area #2 is equivalent to 10 percent of Downwind Area #2's nonattainment problem (i.e., 50 ppb divided by 500 ppb, times 100). The following equation was used to calculate the baseline for this metric:

$$\mathrm{Sum}_{\mathrm{Grid\ Cells}}\ \{\ \mathrm{Sum}_{\mathrm{Days}}\ [\ (\mathrm{O3})_{\mathrm{Base}}\ -\ (125\ \textit{or}\ 85)\ ]\ \}$$

UAM-V Metric 4: "Population-Weighted Total ppb Reduced." This metric is similar to the "Total ppb Reduced" metric except that the calculated contributions are weighted by (i.e., multiplied by) population. In calculating this metric, the "ppb" contributions are determined for each nonattainment receptor, then summed across all nonattainment receptors in a particular downwind area. During this calculation, the population in the nonattainment receptor is multiplied by the total contribution in that receptor (i.e., grid cell) and then this value is added to the corresponding values for the other receptors in the downwind area. The following equation was used to calculate this metric:

$$\mathrm{Sum}_{\text{Grid Cells}} \{ \mathrm{Pop}_{\text{Grid Cell}} \times \{ \mathrm{Sum}_{\text{Days}} [(O3)_{\text{Base}} - \max[(125 \textit{ or } 85), (O_3)_{\text{Zero-out}}]] \} \}$$

The Population-Weighted Total ppb > NAAQS in the 2007 Base Case serves as a baseline for evaluating the "Population-weighted Total ppb Reduced." This metric is similar to the "Total ppb > NAAQS" except that the amount above the NAAQS is weighted by the population in the grid cell. The following equation was used to calculate the baseline metric:

$$\mathrm{Sum}_{\text{Grid Cells}} \{ \mathrm{Pop}_{\text{Grid Cell}} \times \{ \mathrm{Sum}_{\text{Days}} [(O3)_{\text{Base}} - (125 \textit{ or } 85)] \} \}$$

Definition of Terms for Metrics 3 and 4:

$(O3)_{\text{Base}}$ -- ozone prediction in a grid cell for the 2007 Base Case

$(O_3)_{\text{Zero-out}}$ -- ozone prediction in a grid cell for the zero-out scenario

$\max[(125 \textit{ or } 85), (O_3)_{\text{Zero-out}}]$
-- for calculations of this metric for the 1-Hr NAAQS, this is the higher of (a) 125 ppb or (b) the zero-out scenario ozone prediction
-- for calculations of this metric for the 8-Hr NAAQS, this is the higher of (a) 85 ppb or (b) the zero-out scenario ozone prediction

$\mathrm{Sum}_{\text{Days}}[\ ]$ -- perform the calculations within the brackets for each day, for a single grid cell, then sum the results across all days[1]

$\mathrm{Sum}_{\text{Grid Cells}}\{\ \}$
-- perform the calculations within the brackets for each grid cell, then sum the results for all applicable receptor grid cells

$\mathrm{Pop}_{\text{Grid Cell}}$ -- 1990 population in the grid cell

[1] All "non-ramp up" days. For OTAG, the first few days of each episode were excluded from analysis because of the influence of "initial conditions" from the start of the model simulation.

APPENDIX C
1-HOUR UPWIND/DOWNWIND LINKAGES[1]

1. Note that the Metric 2 data on the maximum "ppb" contributions are rounded to the nearest "ppb" in the presentation of contributions in this Appendix**.**

States which Contribute Significantly to 1-hr Nonattainment Areas

-- Birmingham

Georgia's Contribution to Birmingham

UAM-V zero-out modeling:

- Georgia contributes at least 10 ppb to 11% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from Georgia is 17 ppb;
- The total contribution from Georgia is equivalent to 12% of the total ppb >= 125 ppb in Birmingham.

CAMx modeling:

- Georgia contributes at least 10 ppb to 16% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from Georgia is 51 ppb;
- Georgia contributes 3% of the total manmade ppb >= 125 ppb in Birmingham;
- The highest daily average 1-hr contribution from Georgia to Birmingham is 24 ppb; which is 18% of the average 1-hr ozone concentration >= 125 ppb in Birmingham on that day.

Kentucky's Contribution to Birmingham

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 5% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from Kentucky is 3 ppb;
- The total contribution from Kentucky is equivalent to 2% of the total ppb >= 125 ppb in Birmingham.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 21% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from Kentucky is 10 ppb;
- Kentucky contributes 2% of the total manmade ppb >= 125 ppb in Birmingham;
- The highest daily average 1-hr contribution from Kentucky to Birmingham is 7 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Birmingham on that day.

South Carolina's Contribution to Birmingham

UAM-V zero-out modeling:

- South Carolina contributes at least 10 ppb to 2% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from South Carolina is 11 ppb;
- The total contribution from South Carolina is equivalent to 2% of the total ppb >= 125 ppb in Birmingham.

CAMx modeling:

- South Carolina contributes at least 10 ppb to 2% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from South Carolina is 21 ppb;
- The highest daily average 1-hr contribution from South Carolina to Birmingham is 18 ppb; which is 14% of the average 1-hr ozone concentration >= 125 ppb in Birmingham on that day.

Tennessee's Contribution to Birmingham

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 20% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from Tennessee is 14 ppb;
- The total contribution from Tennessee is equivalent to 14% of the total ppb >= 125 ppb in Birmingham.

CAMx modeling:

- Tennessee contributes at least 10 ppb to 29% of the 1-hr exceedences in Birmingham; the maximum 1-hr contribution from Tennessee is 26 ppb;
- Tennessee contributes 5% of the total manmade ppb >= 125 ppb in Birmingham;
- The highest daily average 1-hr contribution from Tennessee to Birmingham is 17 ppb; which is 12% of the average 1-hr ozone concentration >= 125 ppb in Birmingham on that day.

-- Greater Connecticut

Maryland/DC/Delaware's Contribution to Greater Connecticut

CAMx modeling:

- Maryland/DC/Delaware contributes at least 5 ppb to 29% of the 1-hr exceedences in Greater

Connecticut; the maximum 1-hr contribution from Maryland/DC/Delaware is 12 ppb;
- Maryland/DC/Delaware contributes 3% of the total manmade ppb >= 125 ppb in Greater Connecticut;
- The highest daily average 1-hr contribution from Maryland/DC/Delaware to Greater Connecticut is 7 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Connecticut on that day.

New Jersey's Contribution to Greater Connecticut

CAMx modeling:
- New Jersey contributes at least 10 ppb to 99% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from New Jersey is 62 ppb;
- New Jersey contributes 26% of the total manmade ppb >= 125 ppb in Greater Connecticut;
- The highest daily average 1-hr contribution from New Jersey to Greater Connecticut is 45 ppb; which is 35% of the average 1-hr ozone concentration >= 125 ppb in Greater Connecticut on that day.

New York's Contribution to Greater Connecticut

CAMx modeling:
- New York contributes at least 10 ppb to 99% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from New York is 65 ppb;
- New York contributes 26% of the total manmade ppb >= 125 ppb in Greater Connecticut;
- The highest daily average 1-hr contribution from New York to Greater Connecticut is 37 ppb; which is 27% of the average 1-hr ozone concentration >= 125 ppb in Greater Connecticut on that day.

Ohio's Contribution to Greater Connecticut

UAM-V zero-out modeling:
- Ohio contributes at least 2 ppb to 20% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from Ohio is 4 ppb;
- The total contribution from Ohio is equivalent to 6% of the total ppb >= 125 ppb in Greater Connecticut.

CAMx modeling:
- Ohio contributes at least 5 ppb to 18% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from Ohio is 14 ppb;
- Ohio contributes 2% of the total manmade ppb >= 125 ppb in Greater Connecticut;
- The highest daily average 1-hr contribution from Ohio to Greater Connecticut is 10 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Greater Connecticut on that day.

Pennsylvania's Contribution to Greater Connecticut

CAMx modeling:
- Pennsylvania contributes at least 10 ppb to 60% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from Pennsylvania is 29 ppb;
- Pennsylvania contributes 10% of the total manmade ppb >= 125 ppb in Greater Connecticut;
- The highest daily average 1-hr contribution from Pennsylvania to Greater Connecticut is 23 ppb; which is 18% of the average 1-hr ozone concentration >= 125 ppb in Greater Connecticut on that day.

Virginia's Contribution to Greater Connecticut

UAM-V zero-out modeling:
- Virginia contributes at least 2 ppb to 29% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from Virginia is 6 ppb;
- The total contribution from Virginia is equivalent to 9% of the total ppb >= 125 ppb in Greater Connecticut.

CAMx modeling:
- Virginia contributes at least 5 ppb to 36% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from Virginia is 15 ppb;
- Virginia contributes 4% of the total manmade ppb >= 125 ppb in Greater Connecticut;
- The highest daily average 1-hr contribution from Virginia to Greater Connecticut is 9 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Greater Connecticut on that day.

West Virginia's Contribution to Greater Connecticut

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 9% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from West Virginia is 7 ppb;
- The total contribution from West Virginia is equivalent to 10% of the total ppb >= 125 ppb in Greater Connecticut.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 23% of the 1-hr exceedences in Greater Connecticut; the maximum 1-hr contribution from West Virginia is 11 ppb;
- West Virginia contributes 2% of the total manmade ppb >= 125 ppb in Greater Connecticut;
- The highest daily average 1-hr contribution from West Virginia to Greater Connecticut is 10 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Greater Connecticut on that day.

-- Washington, DC

Indiana's Contribution to Washington, DC

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 4% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Indiana is 4 ppb;
- The total contribution from Indiana is equivalent to 2% of the total ppb >= 125 ppb in Washington, DC.

CAMx modeling:

- Indiana contributes at least 5 ppb to 13% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Indiana is 9 ppb;
- The highest daily average 1-hr contribution from Indiana to Washington, DC is 7 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Washington, DC on that day.

Kentucky's Contribution to Washington, DC

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 6% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Indiana is 5 ppb;
- The total contribution from Kentucky is equivalent to 2% to the population-weighted total ppb >= 125 ppb in Washington, DC.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 13% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Kentucky is 12 ppb;
- The highest daily average 1-hr contribution from Kentucky to Washington, DC is 7 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Washington, DC on that day.

Michigan's Contribution to Washington, DC

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 4% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Michigan is 7 ppb;
- The total contribution from Michigan is equivalent to 2% of the total ppb >= 125 ppb in Washington, DC.

CAMx modeling:

- Michigan contributes at least 5 ppb to 5% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Michigan is 8 ppb;
- Michigan contributes 2% of the total manmade ppb >= 125 ppb in Washington, DC;
- The highest daily average 1-hr contribution from Michigan to Washington, DC is 8 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Washington, DC on that day.

North Carolina's Contribution to Washington, DC

UAM-V zero-out modeling:

- North Carolina contributes at least 10 ppb to 1% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from North Carolina is 12 ppb;
- The total contribution from North Carolina is equivalent to 2% of the total ppb >= 125 ppb in Washington, DC.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 1% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from North Carolina is 20 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 125 ppb in Washington, DC;
- The highest daily average 1-hr contribution from North Carolina to Washington, DC is 9 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Washington, DC on that day.

Pennsylvania's Contribution to Washington, DC

CAMx modeling:

- Pennsylvania contributes at least 5 ppb to 81% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Pennsylvania is 57 ppb;
- Pennsylvania contributes 8% of the total manmade ppb >= 125 ppb in Washington, DC;
- The highest daily average 1-hr contribution from Pennsylvania to Washington, DC is 16 ppb; which is 11% of the average 1-hr ozone concentration >= 125 ppb in Washington, DC on that day.

Ohio's Contribution to Washington, DC

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 17% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Ohio is 5 ppb;
- The total contribution from Ohio is equivalent to 4% of the total ppb >= 125 ppb in Washington, DC.

CAMx modeling:

- Ohio contributes at least 5 ppb to 30% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from Ohio is 11 ppb;
- Ohio contributes 3% of the total manmade ppb >= 125 ppb in Washington, DC;
- The highest daily average 1-hr contribution from Ohio to Washington, DC is 10 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Washington, DC on that day.

West Virginia's Contribution to Washington, DC

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 13% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from West Virginia is 16 ppb;
- The total contribution from West Virginia is equivalent to 7% of the total ppb >= 125 ppb in Washington, DC.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 19% of the 1-hr exceedences in Washington, DC; the maximum 1-hr contribution from West Virginia is 20 ppb;
- West Virginia contributes 2% of the total manmade ppb >= 125 ppb in Washington, DC;
- The highest daily average 1-hr contribution from West Virginia to Washington, DC is 19 ppb; which is 15% of the average 1-hr ozone concentration >= 125 ppb in Washington, DC on that day.

-- Atlanta

Alabama's Contribution to Atlanta

UAM-V zero-out modeling:

- Alabama contributes at least 10 ppb to 12% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from Alabama is 29 ppb;
- The total contribution from Alabama is equivalent to 14% of the total ppb >= 125 ppb in Atlanta.

CAMx modeling:

- Alabama contributes at least 10 ppb to 34% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from Alabama is 39 ppb;
- Alabama contributes 8% of the total manmade ppb >= 125 ppb in Atlanta;
- The highest daily average 1-hr contribution from Alabama to Atlanta is 31 ppb; which is 23% of the average 1-hr ozone concentration >= 125 ppb in Atlanta on that day.

Kentucky's Contribution to Atlanta

UAM-V zero-out modeling:

- Kentucky contributes at least 5 ppb to 3% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from Kentucky is 11 ppb;
- The total contribution from Kentucky is equivalent to 2% of the total ppb >= 125 ppb in Atlanta.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 7% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from Kentucky is 14 ppb;
- The highest daily average 1-hr contribution from Kentucky to Atlanta is 11 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Atlanta on that day.

North Carolina's Contribution to Atlanta

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 5% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from North Carolina is 4 ppb;

CAMx modeling:

- North Carolina contributes at least 2 ppb to 14% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from North Carolina is 8 ppb;
- The highest daily average 1-hr contribution from North Carolina to Atlanta is 7 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Atlanta on that day.

South Carolina's Contribution to Atlanta

UAM-V zero-out modeling:

- South Carolina contributes at least 10 ppb to 5% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from South Carolina is 16 ppb;
- The total contribution from South Carolina is equivalent to 4% of the total ppb >= 125 ppb in Atlanta.

CAMx modeling:

- South Carolina contributes at least 5 ppb to 11% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from South Carolina is 25 ppb;
- The highest daily average 1-hr contribution from South Carolina to Atlanta is 23 ppb; which is 18% of the average 1-hr ozone concentration >= 125 ppb in Atlanta on that day.

Tennessee's Contribution to Atlanta

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 11% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from Tennessee is 11 ppb;
- The total contribution from Tennessee is equivalent to 8% of the total ppb >= 125 ppb in Atlanta.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 42% of the 1-hr exceedences in Atlanta; the maximum 1-hr contribution from Tennessee is 20 ppb;
- Tennessee contributes 4% of the total manmade ppb >= 125 ppb in Atlanta;
- The highest daily average 1-hr contribution from Tennessee to Atlanta is 11 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Atlanta on that day.

-- Chicago/Milwaukee

Missouri's Contribution to Chicago/Milwaukee

UAM-V zero-out modeling:

- Missouri contributes at least 2 ppb to 88% of the 1-hr exceedences in Chicago/Milwaukee; the maximum 1-hr contribution from Missouri is 4 ppb;
- The total contribution from Missouri is equivalent to 15% of the total ppb >= 125 ppb in Chicago/Milwaukee.

CAMx modeling:

- Missouri contributes at least 5 ppb to 100% of the 1-hr exceedences in Chicago/Milwaukee; the maximum 1-hr contribution from Missouri is 11 ppb;
- Missouri contributes 8% of the total manmade ppb >= 125 ppb in Chicago/Milwaukee;
- The highest daily average 1-hr contribution from Missouri to Chicago/Milwaukee is 9 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Chicago/Milwaukee on that day.

-- Louisville

Tennessee's Contribution to Louisville

UAM-V zero-out modeling:

- Tennessee contributes at least 10 ppb to 22% of the 1-hr exceedences in Louisville; the maximum 1-hr contribution from Tennessee is 15 ppb;

- The total contribution from Tennessee is equivalent to 37% of the total ppb >= 125 ppb in Louisville.

CAMx modeling:

- Tennessee contributes at least 10 ppb to 48% of the 1-hr exceedences in Louisville; the maximum 1-hr contribution from Tennessee is 38 ppb;
- Tennessee contributes 14% of the total manmade ppb >= 125 ppb in Louisville;
- The highest daily average 1-hr contribution from Tennessee to Louisville is 34 ppb; which is 25% of the average 1-hr ozone concentration >= 125 ppb in Louisville on that day.

-- Lake Michigan

As noted in the TSD, the EPA included the contributions over Lake Michigan in this analysis since high concentrations over the Lake can impact coastal areas of Illinois, Indiana, Michigan, and Wisconsin.

Alabama's Contribution to ozone over Lake Michigan

UAM-V zero-out modeling:

- Alabama contributes at least 2 ppb to 3% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Alabama is 4 ppb;

CAMx modeling:

- Alabama contributes at least 5 ppb to 8% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Alabama is 10 ppb;
- The highest daily average 1-hr contribution from Alabama to Lake Michigan is 8 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Lake Michigan on that day.

Illinois's Contribution to ozone over Lake Michigan

UAM-V zero-out modeling:

- Illinois contributes at least 10 ppb to 100% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Illinois is 111 ppb;
- The total contribution from Illinois is equivalent to 100% of the total ppb >= 125 ppb in Lake Michigan.

CAMx modeling:

- Illinois contributes at least 10 ppb to 100% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Illinois is 120 ppb;
- Illinois contributes 59% of the total manmade ppb >= 125 ppb in Lake Michigan;
- The highest daily average 1-hr contribution from Illinois to Lake Michigan is 68 ppb; which is 50% of the average 1-hr ozone concentration >= 125 ppb in Lake Michigan on that day.

Indiana's Contribution to ozone over Lake Michigan

UAM-V zero-out modeling:

- Indiana contributes at least 10 ppb to 14% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Indiana is 40 ppb;
- The total contribution from Indiana is equivalent to 13% of the total ppb >= 125 ppb in Lake Michigan.

CAMx modeling

- Indiana contributes at least 10 ppb to 37% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Indiana is 56 ppb;
- Indiana contributes 9% of the total manmade ppb >= 125 ppb in Lake Michigan;
- The highest daily average 1-hr contribution from Indiana to Lake Michigan is 24 ppb; which is 19% of the average 1-hr ozone concentration >= 125 ppb in Lake Michigan on that day.

Kentucky's Contribution to ozone over Lake Michigan

UAM-V zero-out modeling:

- Kentucky contributes at least 5 ppb to 2% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Kentucky is 7 ppb;
- The total contribution from Kentucky is equivalent to 2% of the total ppb >= 125 ppb in Lake Michigan.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 6% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Kentucky is 15 ppb;
- The highest daily average 1-hr contribution from Kentucky to Lake Michigan is 14 ppb; which is

11% of the average 1-hr ozone concentration >= 125 ppb in Lake Michigan on that day.

Missouri's Contribution to ozone over Lake Michigan

UAM-V zero-out modeling:

- Missouri contributes at least 5 ppb to 23% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Missouri is 8 ppb;
- The total contribution from Missouri is equivalent to 22% of the total ppb >= 125 ppb in Lake Michigan.

CAMx modeling:

- Missouri contributes at least 10 ppb to 67% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Missouri is 19 ppb;
- Missouri contributes 9% of the total manmade ppb >= 125 ppb in Lake Michigan;
- The highest daily average 1-hr contribution from Missouri to Lake Michigan is 12 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Lake Michigan on that day.

Tennessee's Contribution to ozone over Lake Michigan

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 14% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Tennessee is 8 ppb;
- The total contribution from Tennessee is equivalent to 6% of the total ppb >= 125 ppb in Lake Michigan.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 14% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Tennessee is 13 ppb;
- Tennessee contributes 2% of the total manmade ppb >= 125 ppb in Lake Michigan;
- The highest daily average 1-hr contribution from Tennessee to Lake Michigan is 11 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Lake Michigan on that day

Wisconsin's Contribution to ozone over Lake Michigan

UAM-V zero-out modeling:

- Wisconsin contributes at least 2 ppb to 4% of the 1-hr exceedences and at least 5 ppb to 1% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Wisconsin is 10 ppb;

CAMx modeling:

- Wisconsin contributes at least 5 ppb to 28% of the 1-hr exceedences in Lake Michigan; the maximum 1-hr contribution from Wisconsin is 43 ppb;
- Wisconsin contributes 4% of the total manmade ppb >= 125 ppb in Lake Michigan;
- The highest daily average 1-hr contribution from Wisconsin to Lake Michigan is 8 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Lake Michigan on that day.

-- Baltimore

Illinois's Contribution to Baltimore

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 3% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Illinois is 2 ppb;
- The total contribution from Illinois is equivalent to 3% of the total ppb >= 125 ppb in Baltimore.

CAMx modeling:

- Illinois contributes at least 5 ppb to 7% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Illinois is 7 ppb;
- Illinois contributes 2% to the total manmade ppb >= 125 ppb in Baltimore;
- The highest daily average 1-hr contribution from Illinois to Baltimore is 6 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

Indiana's Contribution to Baltimore

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 10% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Indiana is 4 ppb;
- The total contribution from Indiana is equivalent to 4% of the total ppb >= 125 ppb in Baltimore.

CAMx modeling:

- Indiana contributes at least 5 ppb to 27% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Indiana is 9 ppb;

- Indiana contributes 2% of the total manmade ppb >= 125 ppb in Baltimore;
- The highest daily average 1-hr contribution from Indiana to Baltimore is 6 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

Kentucky's Contribution to Baltimore

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 7% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Kentucky is 4 ppb;
- The total contribution from Kentucky is equivalent to 3% to the population-weighted total ppb >= 125 ppb in Baltimore.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 24% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Kentucky is 9 ppb;
- Kentucky contributes 2% of the total manmade ppb >= 125 ppb in Baltimore;
- The highest daily average 1-hr contribution from Kentucky to Baltimore is 8 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

Michigan's Contribution to Baltimore

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 14% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Michigan is 5 ppb;
- The total contribution from Michigan is equivalent to 5% of the total ppb >= 125 ppb in Baltimore.

CAMx modeling:

- Michigan contributes at least 2 ppb to 47% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Michigan is 10 ppb;
- Michigan contributes 2% of the total manmade ppb >= 125 ppb in Baltimore;
- The highest daily average 1-hr contribution from Michigan to Baltimore is 8 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

Ohio's Contribution to Baltimore

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 49% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Ohio is 7 ppb;
- The total contribution from Ohio is equivalent to 11% of the total ppb >= 125 ppb in Baltimore.

CAMx modeling:

- Ohio contributes at least 5 ppb to 52% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Ohio is 14 ppb;
- Ohio contributes 4% of the total manmade ppb >= 125 ppb in Baltimore;
- The highest daily average 1-hr contribution from Ohio to Baltimore is 12 ppb; which is 10% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

Pennsylvania's Contribution to Baltimore

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 34% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Pennsylvania is 87 ppb;
- Pennsylvania contributes 7% of the total manmade ppb >= 125 ppb in Baltimore;
- The highest daily average 1-hr contribution from Pennsylvania to Baltimore is 26 ppb; which is 19% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

Virginia's Contribution to Baltimore

UAM-V zero-out modeling:

- Virginia contributes at least 10 ppb to 64% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Virginia is 66 ppb;
- The total contribution from Virginia is equivalent to 66% of the total ppb >= 125 ppb in Baltimore.

CAMx modeling:

- Virginia contributes at least 10 ppb to 88% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from Virginia is 104 ppb;
- Virginia contributes 24% of the total manmade ppb >= 125 ppb in Baltimore;

- The highest daily average 1-hr contribution from West Virginia to Baltimore is 39 ppb; which is 30% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

West Virginia's Contribution to Baltimore

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 23% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from West Virginia is 16 ppb;
- The total contribution from West Virginia is equivalent to 15% of the total ppb >= 125 ppb in Baltimore.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 50% of the 1-hr exceedences in Baltimore; the maximum 1-hr contribution from West Virginia is 20 ppb;
- West Virginia contributes 4% of the total manmade ppb >= 125 ppb in Baltimore;
- The highest daily average 1-hr contribution from West Virginia to Baltimore is 17 ppb; which is 13% of the average 1-hr ozone concentration >= 125 ppb in Baltimore on that day.

-- **Portland, Maine**

Connecticut/Rhode Island's Contribution to Portland

CAMx modeling:

- Connecticut/Rhode Island contribute at least 5 ppb to 76% of the 1-hr exceedences in Portland; the maximum 1-hr contribution from Connecticut/Rhode Island is 11 ppb;
- Connecticut/Rhode Island contribute 6% of the total manmade ppb >= 125 ppb in Portland;
- The highest daily average 1-hr contribution from Connecticut/Rhode Island to Portland is 7 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Portland on that day.

Maryland/DC/Delaware's Contribution to Portland

CAMx modeling:

- Maryland/DC/Delaware contribute at least 5 ppb to 22% of the 1-hr exceedences in Portland; the maximum 1-hr contribution from Maryland/DC/Delaware is 7 ppb;
- Maryland/DC/Delaware contribute 3% of the total manmade ppb >= 125 ppb in Portland.

Massachusetts's Contribution to Portland

UAM-V zero-out modeling:

- Massachusetts contributes at least 10 ppb to 100% of the 1-hr exceedences in Portland; the maximum 1-hr contribution from Massachusetts is 53 ppb;
- The total contribution from Massachusetts is equivalent to 100% of the total ppb >= 125 ppb in Portland.

CAMx modeling:

- Massachusetts contributes at least 10 ppb to 100% of the 1-hr exceedences in Portland; the maximum 1-hr contribution from Massachusetts is 79 ppb;
- Massachusetts contributes 56% of the total manmade ppb >= 125 ppb in Portland;
- The highest daily average 1-hr contribution from Massachusetts to Portland is 67 ppb; which is 51% of the average 1-hr ozone concentration >= 125 ppb in Portland on that day.

New Jersey's Contribution to Portland

CAMx modeling:

- New Jersey contributes at least 5 ppb to 39% of the 1-hr exceedences in Portland; the maximum 1-hr contribution from New Jersey is 9 ppb;
- New Jersey contributes 4% of the total manmade ppb >= 125 ppb in Portland;
- The highest daily average 1-hr contribution from New Jersey to Portland is 9 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Portland on that day.

New York's Contribution to Portland

CAMx modeling:

- New York contributes at least 10 ppb to 39% of the 1-hr exceedences in Portland; the maximum 1-hr contribution from New York is 16 ppb;
- New York contributes 6% of the total manmade ppb >= 125 ppb in Portland;
- The highest daily average 1-hr contribution from New York to Portland is 14 ppb; which is 11% of the average 1-hr ozone concentration >= 125 ppb in Portland on that day.

Pennsylvania's Contribution to Portland

CAMx modeling:

- Pennsylvania contributes at least 5 ppb to 61% of the 1-hr exceedences in Portland; the maximum 1-hr contribution from Pennsylvania is 10 ppb;
- Pennsylvania contributes 5% of the total manmade ppb >= 125 ppb in Portland;
- The highest daily average 1-hr contribution from Pennsylvania to Portland is 10 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Portland on that day.

-- Boston

Connecticut/Rhode Island's Contribution to Boston

CAMx modeling:

- Connecticut/Rhode Island contribute at least 10 ppb to 35% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from Connecticut/Rhode Island is 43 ppb;
- Connecticut/Rhode Island contribute 8% of the total manmade ppb >= 125 ppb in Boston;
- The highest daily average 1-hr contribution from Connecticut/Rhode Island to Boston is 15 ppb; which is 11% of the average 1-hr ozone concentration >= 125 ppb in Boston on that day.

Maryland/DC/Delaware's Contribution to Boston

CAMx modeling:

- Maryland/DC/Delaware contribute at least 2 ppb to 71% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from Maryland/DC/Delaware is 9 ppb;
- Maryland/DC/Delaware contribute 2% of the total manmade ppb >= 125 ppb in Boston;
- The highest daily average 1-hr contribution from Maryland/DC/Delaware to Boston is 5 ppb; which is 4% of the average 1-hr ozone concentration >= 125 ppb in Boston on that day.

New Jersey's Contribution to Boston

CAMx modeling:

- New Jersey contributes at least 5 ppb to 52% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from New Jersey is 42 ppb;
- New Jersey contributes 7% of the total manmade ppb >= 125 ppb in Boston;
- The highest daily average 1-hr contribution from New Jersey to Boston is 25 ppb; which is 19% of the average 1-hr ozone concentration >= 125 ppb in Boston on that day.

New York's Contribution to Boston

CAMx modeling:

- New York contributes at least 10 ppb to 49% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from New York is 34 ppb;
- New York contributes 9% of the total manmade ppb >= 125 ppb in Boston;
- The highest daily average 1-hr contribution from New York to Boston is 21 ppb; which is 16% of the average 1-hr ozone concentration >= 125 ppb in Boston on that day.

Ohio's Contribution to Boston

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 12% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from Ohio is 3 ppb;
- The total contribution from Ohio is equivalent to 5% of the total ppb >= 125 ppb in Boston.

CAMx modeling:

- Ohio contributes at least 5 ppb to 15% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from Ohio is 8 ppb;
- Ohio contributes 2% of the total manmade ppb >= 125 ppb in Boston;
- The highest daily average 1-hr contribution from Ohio to Boston is 7 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Boston on that day.

Pennsylvania's Contribution to Boston

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 25% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from Pennsylvania is 18 ppb;
- Pennsylvania contributes 5% of the total manmade ppb >= 125 ppb in Boston;
- The highest daily average 1-hr contribution from Pennsylvania to Boston is 13 ppb; which is 10% of the average 1-hr ozone concentration >= 125 ppb in Boston on that day.

Virginia's Contribution to Boston

UAM-V zero-out modeling:

- Virginia contributes at least 2 ppb to 10% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from Virginia is 7 ppb;
- The total contribution from Virginia is equivalent to 5% of the total ppb >= 125 ppb in Boston.

CAMx modeling:

- Virginia contributes at least 5 ppb to 15% of the 1-hr exceedences in Boston; the maximum 1-hr contribution from Virginia is 20 ppb;
- Virginia contributes 2% of the total manmade ppb >= 125 ppb in Boston;
- The highest daily average 1-hr contribution from Virginia to Boston is 10 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Boston on that day.

--Western Massachusetts

Connecticut/Rhode Island's Contribution to Western Massachusetts

CAMx modeling:

- Connecticut/Rhode Island contribute at least 10 ppb to 23% of the 1-hr exceedences in Western Massachusetts; the maximum 1-hr contribution from Connecticut/Rhode Island is 61 ppb;
- Connecticut/Rhode Island contribute 35% of the total manmade ppb >= 125 ppb in Western Massachusetts;
- The highest daily average 1-hr contribution from Connecticut/Rhode Island to Western Massachusetts is 50 ppb; which is 39% of the average 1-hr ozone concentration >= 125 ppb in Western Massachusetts on that day.

Maryland/DC/Delaware's Contribution to Western Massachusetts

CAMx modeling:

- Maryland/DC/Delaware contribute at least 2 ppb to 100% of the 1-hr exceedences in Western Massachusetts; the maximum 1-hr contribution from Maryland/DC/Delaware is 5 ppb;
- Maryland/DC/Delaware contribute 3% of the total manmade ppb >= 125 ppb in Western Massachusetts.

New Jersey's Contribution to Western Massachusetts

CAMx modeling:

- New Jersey contributes at least 10 ppb to 100% of the 1-hr exceedences in Western Massachusetts; the maximum 1-hr contribution from New Jersey is 30 ppb;
- New Jersey contributes 16% of the total manmade ppb >= 125 ppb in Western Massachusetts;
- The highest daily average 1-hr contribution from New Jersey to Western Massachusetts is 23 ppb; which is 17% of the average 1-hr ozone concentration >= 125 ppb in Western Massachusetts on that day.

New York's Contribution to Western Massachusetts

CAMx modeling:

- New York contributes at least 10 ppb to 100% of the 1-hr exceedences in Western Massachusetts; the maximum 1-hr contribution from New York is 26 ppb;
- New York contributes 18% of the total manmade ppb >= 125 ppb in Western Massachusetts;
- The highest daily average 1-hr contribution from New York to Western Massachusetts is 23 ppb; which is 18% of the average 1-hr ozone concentration >= 125 ppb in Western Massachusetts on that day.

Pennsylvania's Contribution to Western Massachusetts

CAMx modeling:

- Pennsylvania contributes at least 5 ppb to 91% of the 1-hr exceedences in Western Massachusetts; the maximum 1-hr contribution from Pennsylvania is 14 ppb;
- Pennsylvania contributes 7% of the total manmade ppb >= 125 ppb in Western Massachusetts;
- The highest daily average 1-hr contribution from Pennsylvania to Western Massachusetts is 12 ppb; which is 10% of the average 1-hr ozone concentration >= 125 ppb in Western Massachusetts on that day.

West Virginia's Contribution to Western Massachusetts

UAM-V zero-out modeling:

- West Virginia contributes at least 2 ppb to 21% of the 1-hr exceedences in Western Massachusetts; the maximum 1-hr contribution from West Virginia is 4 ppb;

- The total contribution from West Virginia is equivalent to 12% of the total ppb >= 125 ppb in Western Massachusetts.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 36% of the 1-hr exceedences in Western Massachusetts; the maximum 1-hr contribution from West Virginia is 7 ppb;
- West Virginia contributes 2% of the total manmade ppb >= 125 ppb in Western Massachusetts;
- The highest daily average 1-hr contribution from West Virginia to Western Massachusetts is 7 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Western Massachusetts on that day.

-- Southwestern Michigan

Illinois's Contribution to Southwestern Michigan

UAM-V zero-out modeling:

- Illinois contributes at least 10 ppb to 100% of the 1-hr exceedences in Southwestern Michigan; the maximum 1-hr contribution from Illinois is 60 ppb;
- The total contribution from Illinois is equivalent to 100% of the total ppb >= 125 ppb in Southwestern Michigan.

CAMx modeling:

- Illinois contributes at least 10 ppb to 100% of the 1-hr exceedences in Southwestern Michigan; the maximum 1-hr contribution from Illinois is 78 ppb;
- Illinois contributes 54% of the total manmade ppb >= 125 ppb in Southwestern Michigan;
- The highest daily average 1-hr contribution from Illinois to Southwestern Michigan is 57 ppb; which is 43% of the average 1-hr ozone concentration >= 125 ppb in Southwestern Michigan on that day.

Indiana's Contribution to Southwestern Michigan

UAM-V zero-out modeling:

- Indiana contributes at least 10 ppb to 18% of the 1-hr exceedences in Southwestern Michigan; the maximum 1-hr contribution from Indiana is 21 ppb;
- The total contribution from Indiana is equivalent to 25% of the total ppb >= 125 ppb in Southwestern Michigan.

CAMx modeling:

- Indiana contributes at least 10 ppb to 38% of the 1-hr exceedences in Southwestern Michigan; the maximum 1-hr contribution from Indiana is 33 ppb;
- Indiana contributes 10% of the total manmade ppb >= 125 ppb in Southwestern Michigan;
- The highest daily average 1-hr contribution from Indiana to Southwestern Michigan is 14 ppb; which is 11% of the average 1-hr ozone concentration >= 125 ppb in Southwestern Michigan on that day.

Missouri's Contribution to Southwestern Michigan

UAM-V zero-out modeling:

- Missouri contributes at least 5 ppb to 73% of the 1-hr exceedences in Southwestern Michigan; the maximum 1-hr contribution from Missouri is 6 ppb;
- The total contribution from Missouri is equivalent to 64% of the total ppb >= 125 ppb in Southwestern Michigan.

CAMx modeling:

- Missouri contributes at least 10 ppb to 94% of the 1-hr exceedences in Southwestern Michigan; the maximum 1-hr contribution from Missouri is 16 ppb;
- Missouri contributes 12% of the total manmade ppb >= 125 ppb in Southwestern Michigan;
- The highest daily average 1-hr contribution from Missouri to Southwestern Michigan is 12 ppb; which is 9% of the average 1-hr ozone concentration >= 125 ppb in Southwestern Michigan on that day.

-- St. Louis

Kentucky's Contribution to St. Louis

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 36% of the 1-hr exceedences in St. Louis; the maximum 1-hr contribution from Kentucky is 4 ppb;

- The total contribution from Kentucky is equivalent to 16% of the total ppb >= 125 ppb in St. Louis.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 14% of the 1-hr exceedences in St. Louis; the maximum 1-hr contribution from Kentucky is 5 ppb;
- The highest daily average 1-hr contribution from Kentucky to St. Louis is 5 ppb; which is 4% of the average 1-hr ozone concentration >= 125 ppb in St. Louis on that day.

-- New York City

CAMx modeling:

- Maryland/DC/Delaware contribute at least 10 ppb to 14% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Maryland/DC/Delaware is 51 ppb;
- Maryland/DC/Delaware contribute 5% of the total manmade ppb >= 125 ppb in New York City;
- The highest daily average 1-hr contribution from Maryland/DC/Delaware to New York City is 15 ppb; which is 12% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

Illinois's Contribution to New York City

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 3% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Michigan is 3 ppb;
- The total contribution from Illinois is equivalent to 3% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- Illinois contributes at least 5 ppb to 20% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Illinois is 9 ppb;
- Illinois contributes 2% of the total manmade ppb >= 125 ppb in New York City;
- The highest daily average 1-hr contribution from Illinois to New York City is 6 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

Indiana's Contribution to New York City

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 4% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Indiana is 3 ppb;
- The total contribution from Indiana is equivalent to 3% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- Indiana contributes at least 5 ppb to 4% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Indiana is 6 ppb.

Kentucky's Contribution to New York City

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 4% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Kentucky is 3 ppb;
- The total contribution from Kentucky is equivalent to 2% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 12% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Kentucky is 10 ppb;
- The highest daily average 1-hr contribution from Kentucky to New York City is 7 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

Michigan's Contribution to New York City

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 3% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Michigan is 3 ppb;
- The total contribution from Michigan is equivalent to 3% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- Michigan contributes at least 2 ppb to 41% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Michigan is 8 ppb;

- The highest daily average 1-hr contribution from Michigan to New York City is 5 ppb; which is 4% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

North Carolina's Contribution to New York City

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 4% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from North Carolina is 4 ppb;
- The total contribution from North Carolina is equivalent to 3% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 6% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from North Carolina is 11 ppb;
- The highest daily average 1-hr contribution from North Carolina to New York City is 6 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

Ohio's Contribution to New York City

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 28% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Ohio is 5 ppb;
- The total contribution from Ohio is equivalent to 8% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- Ohio contributes at least 5 ppb to 49% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Ohio is 15 ppb;
- Ohio contributes 4% of the total manmade ppb >= 125 ppb in New York City;
- The highest daily average 1-hr contribution from Ohio to New York City is 9 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

Pennsylvania's Contribution to New York City

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 91% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Pennsylvania is 53 ppb;
- Pennsylvania contributes 18% of the total manmade ppb >= 125 ppb in New York City;
- The highest daily average 1-hr contribution from Pennsylvania to New York City is 25 ppb; which is 19% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

Virginia's Contribution to New York City

UAM-V zero-out modeling:

- Virginia contributes at least 5 ppb to 9% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Virginia is 10 ppb;
- The total contribution from Virginia is equivalent to 11% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- Virginia contributes at least 10 ppb to 11% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from Virginia is 25 ppb;
- Virginia contributes 4% of the total manmade ppb >= 125 ppb in New York City;
- The highest daily average 1-hr contribution from Virginia to New York City is 11 ppb; which is 9% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

West Virginia's Contribution to New York City

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 9% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from West Virginia is 11 ppb;
- The total contribution from West Virginia is equivalent to 9% of the total ppb >= 125 ppb in New York City.

CAMx modeling:

- West Virginia contributes at least 10 ppb to 7% of the 1-hr exceedences in New York City; the maximum 1-hr contribution from West Virginia is 15 ppb;
- West Virginia contributes 3% of the total manmade ppb >= 125 ppb in New York City;

- The highest daily average 1-hr contribution from West Virginia to New York City is 10 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in New York City on that day.

-- Cincinnati

Indiana's Contribution to Cincinnati

UAM-V zero-out modeling:

- Indiana contributes at least 5 ppb to 17% of the 1-hr exceedences in Cincinnati; the maximum 1-hr contribution from Indiana is 10 ppb;
- The total contribution from Indiana is equivalent to 6% to the population-weighted total ppb >= 125 ppb in Cincinnati.

CAMx modeling:

- Indiana contributes at least 10 ppb to 61% of the 1-hr exceedences in Cincinnati; the maximum 1-hr contribution from Indiana is 23 ppb;
- Indiana contributes 11% of the total manmade ppb >= 125 ppb in Cincinnati;
- The highest daily average 1-hr contribution from Indiana to Cincinnati is 19 ppb; which is 15% of the average 1-hr ozone concentration >= 125 ppb in Cincinnati on that day.

North Carolina's Contribution to Cincinnati

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 67% of the 1-hr exceedences in Cincinnati; the maximum 1-hr contribution from North Carolina is 44 ppb;
- The total contribution from North Carolina is equivalent to 17% of the total ppb >= 125 ppb in Cincinnati.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 17% of the 1-hr exceedences in Cincinnati; the maximum 1-hr contribution from North Carolina is 6 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 125 ppb in Cincinnati;
- The highest daily average 1-hr contribution from North Carolina to Cincinnati is 5 ppb; which is 4% of the average 1-hr ozone concentration >= 125 ppb in Cincinnati on that day.

Tennessee's Contribution to Cincinnati

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 17% of the 1-hr exceedences in Cincinnati; the maximum 1-hr contribution from Tennessee is 9 ppb;
- The total contribution from Tennessee is equivalent to 20% of the total ppb >= 125 ppb in Cincinnati.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 52% of the 1-hr exceedences in Cincinnati; the maximum 1-hr contribution from Tennessee is 27 ppb;
- Tennessee contributes 8% of the total manmade ppb >= 125 ppb in Cincinnati;
- The highest daily average 1-hr contribution from Tennessee to Cincinnati is 25 ppb; which is 19% of the average 1-hr ozone concentration >= 125 ppb in Cincinnati on that day.

-- Philadelphia

North Carolina's Contribution to Philadelphia

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 4% of the 1-hr exceedences in Philadelphia; the maximum 1-hr contribution from North Carolina is 4 ppb;
- The total contribution from North Carolina is equivalent to 4% of the total ppb >= 125 ppb in Philadelphia.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 18% of the 1-hr exceedences in Philadelphia; the maximum 1-hr contribution from North Carolina is 11 ppb;
- The highest daily average 1-hr contribution from North Carolina to Philadelphia is 9 ppb; which is 7% of the average 1-hr ozone concentration >= 125 ppb in Philadelphia on that day.

Ohio's Contribution to Philadelphia

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 36% of the 1-hr exceedences in Philadelphia; the maximum 1-hr

contribution from Ohio is 5 ppb;
- The total contribution from Ohio is equivalent to 13% of the total ppb >= 125 ppb in Philadelphia.

CAMx modeling:
- Ohio contributes at least 5 ppb to 63% of the 1-hr exceedences in Philadelphia; the maximum 1-hr contribution from Ohio is 13 ppb;
- Ohio contributes 5% of the total manmade ppb >= 125 ppb in Philadelphia;
- The highest daily average 1-hr contribution from Ohio to Philadelphia is 10 ppb; which is 8% of the average 1-hr ozone concentration >= 125 ppb in Philadelphia on that day.

Virginia's Contributions to Philadelphia

UAM-V zero-out modeling:
- Virginia contributes at least 5 ppb to 41% of the 1-hr exceedences in Philadelphia; the maximum 1-hr contribution from Virginia is 24 ppb;
- The total contribution from Virginia is equivalent to 32% of the total ppb >= 125 ppb in Philadelphia.

CAMx modeling:
- Virginia contributes at least 10 ppb to 36% of the 1-hr exceedences in Philadelphia; the maximum 1-hr contribution from Virginia is 38 ppb;
- Virginia contributes 7% of the total manmade ppb >= 125 ppb in Philadelphia;
- The highest daily average 1-hr contribution from Virginia to Philadelphia is 28 ppb; which is 21% of the average 1-hr ozone concentration >= 125 ppb in Philadelphia on that day.

West Virginia's Contribution to Philadelphia

UAM-V zero-out modeling:
- West Virginia contributes at least 5 ppb to 19% of the 1-hr exceedences in Philadelphia; the maximum 1-hr contribution from West Virginia is 10 ppb;
- The total contribution from West Virginia is equivalent to 19% of the total ppb >= 125 ppb in Philadelphia.

CAMx modeling:
- West Virginia contributes at least 5 ppb to 65% of the 1-hr exceedences in Philadelphia; the maximum 1-hr contribution from West Virginia is 19 ppb;
- West Virginia contributes 5% of the total manmade ppb >= 125 ppb in Philadelphia;
- The highest daily average 1-hr contribution from West Virginia to Philadelphia is 13 ppb; which is 10% of the average 1-hr ozone concentration >= 125 ppb in Philadelphia on that day.

-- Pittsburgh

North Carolina's Contribution to Pittsburgh:

UAM-V zero-out modeling:
- North Carolina contributes at least 2 ppb to 100% of the 1-hr exceedences in Pittsburgh; the maximum 1-hr contribution from North Carolina is 3 ppb;
- The total contribution from North Carolina is equivalent to 57% of the total ppb >= 125 ppb in Pittsburgh.

CAMx modeling:
- North Carolina contributes at least 5 ppb to 44% of the 1-hr exceedences in Pittsburgh; the maximum 1-hr contribution from North Carolina is 5 ppb;
- North Carolina contributes 4% of the total manmade ppb >= 125 ppb in Pittsburgh;
- The highest daily average 1-hr contribution from North Carolina to Pittsburgh is 4 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Pittsburgh on that day.

Ohio's Contribution to Pittsburgh:

UAM-V zero-out modeling:
- Ohio contributes at least 2 ppb to 60% of the 1-hr exceedences in Pittsburgh; the maximum 1-hr contribution from Ohio is 3 ppb;
- The total contribution from Ohio is equivalent to 64% of the total ppb >= 125 ppb in Pittsburgh.

CAMx modeling:
- Ohio contributes at least 10 ppb to 100% of the 1-hr exceedences in Pittsburgh; the maximum 1-hr contribution from Ohio is 25 ppb;
- Ohio contributes 18% of the total manmade ppb >= 125 ppb in Pittsburgh;

- The highest daily average 1-hr contribution from Ohio to Pittsburgh is 20 ppb; which is 16% of the average 1-hr ozone concentration >= 125 ppb in Pittsburgh on that day.

West Virginia's Contribution to Pittsburgh:

UAM-V zero-out modeling:

- West Virginia contributes at least 10 ppb to 100% of the 1-hr exceedences in Pittsburgh; the maximum 1-hr contribution from West Virginia is 40 ppb;
- The total contribution from West Virginia is equivalent to 100% of the total ppb >= 125 ppb in Pittsburgh.

CAMx modeling:

- West Virginia contributes at least 10 ppb to 100% of the 1-hr exceedences in Pittsburgh; the maximum 1-hr contribution from West Virginia is 36 ppb;
- West Virginia contributes 28% of the total manmade ppb >= 125 ppb in Pittsburgh;
- The highest daily average 1-hr contribution from West Virginia to Pittsburgh is 31 ppb; which is 24% of the average 1-hr ozone concentration >= 125 ppb in Pittsburgh on that day.

-- Rhode Island

Maryland/DC/Delaware's Contribution to Rhode Island

CAMx modeling:

- Maryland/DC/Delaware contribute at least 2 ppb to 75% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from Maryland/DC/Delaware is 7 ppb;
- Maryland/DC/Delaware contribute 3% of the total manmade ppb >= 125 ppb in Rhode Island;
- The highest daily average 1-hr contribution from Maryland/DC/Delaware to Rhode Island is 7 ppb; which is 5% of the average 1-hr ozone concentration >= 125 ppb in Rhode Island on that day.

New Jersey's Contribution to Rhode Island

CAMx modeling:

- New Jersey contributes at least 10 ppb to 100% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from New Jersey is 48 ppb;
- New Jersey contributes 30% of the total manmade ppb >= 125 ppb in Rhode Island;
- The highest daily average 1-hr contribution from New Jersey to Rhode Island is 38 ppb; which is 29% of the average 1-hr ozone concentration >= 125 ppb in Rhode Island on that day.

New York's Contribution to Rhode Island

CAMx modeling:

- New York contributes at least 10 ppb to 100% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from New York is 45 ppb;
- New York contributes 24% of the total manmade ppb >= 125 ppb in Rhode Island;
- The highest daily average 1-hr contribution from New York to Rhode Island is 37 ppb; which is 26% of the average 1-hr ozone concentration >= 125 ppb in Rhode Island on that day.

Ohio's Contribution to Rhode Island

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 42% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from Ohio is 4 ppb;
- The total contribution from Ohio is equivalent to 16% of the total ppb >= 125 ppb in Rhode Island.

CAMx modeling:

- Ohio contributes at least 5 ppb to 81% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from Ohio is 10 ppb;
- Ohio contributes 6% of the total manmade ppb >= 125 ppb in Rhode Island;
- The highest daily average 1-hr contribution from Ohio to Rhode Island is 8 ppb; which is 6% of the average 1-hr ozone concentration >= 125 ppb in Rhode Island on that day.

Pennsylvania's Contribution Rhode Island

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 100% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from Pennsylvania is 22 ppb;
- Pennsylvania contributes 12% of the total manmade ppb >= 125 ppb in Rhode Island;
- The highest daily average 1-hr contribution from Pennsylvania to Rhode Island is 20 ppb; which is 16% of the average 1-hr ozone concentration >= 125 ppb in Rhode Island on that day.

Virginia's Contribution to Rhode Island

UAM-V zero-out modeling:

- Virginia contributes at least 2 ppb to 37% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from Virginia is 8 ppb;
- The total contribution from Virginia is equivalent to 17% of the total ppb >= 125 ppb in Rhode Island.

CAMx modeling:

- Virginia contributes at least 5 ppb to 69% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from Virginia is 18 ppb;
- Virginia contributes 7% of the total manmade ppb >= 125 ppb in Rhode Island;
- The highest daily average 1-hr contribution from Virginia to Rhode Island is 13 ppb; which is 10% of the average 1-hr ozone concentration >= 125 ppb in Rhode Island on that day.

West Virginia's Contribution to Rhode Island

UAM-V zero-out modeling:

- West Virginia contributes at least 2 ppb to 37% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from West Virginia is 5 ppb;
- The total contribution from West Virginia is equivalent to 15% of the total ppb >= 125 ppb in Rhode Island.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 40% of the 1-hr exceedences in Rhode Island; the maximum 1-hr contribution from West Virginia is 8 ppb;
- West Virginia contributes 4% of the total manmade ppb >= 125 ppb in Rhode Island;
- The highest daily average 1-hr contribution from West Virginia to Rhode Island is 6 ppb; which is 4% of the average 1-hr ozone concentration >= 125 ppb in Rhode Island on that day.

-- Memphis

Alabama's Contribution to Memphis

UAM-V zero-out modeling:

- Alabama contributes at least 5 ppb to 17% of the 1-hr exceedences in Memphis; the maximum 1-hr contribution from Alabama is 7 ppb;
- The total contribution from Alabama is equivalent to 21% of the total ppb >= 125 ppb in Memphis.

CAMx modeling:

- Alabama contributes at least 10 ppb to 31% of the 1-hr exceedences in Memphis; the maximum 1-hr contribution from Alabama is 20 ppb;
- Alabama contributes 6% of the total manmade ppb >= 125 ppb in Memphis;
- The highest daily average 1-hr contribution from Alabama to Memphis is 18 ppb; which is 13% of the average 1-hr ozone concentration >= 125 ppb in Memphis on that day.

Georgia's Contribution to Memphis

UAM-V zero-out modeling:

- Georgia contributes at least 5 ppb to 17% of the 1-hr exceedences in Memphis; the maximum 1-hr contribution from Georgia is 8 ppb;
- The total contribution from Georgia is equivalent to 18% of the total ppb >= 125 ppb in Memphis.

CAMx modeling:

- Georgia contributes at least 10 ppb to 31% of the 1-hr exceedences in Memphis; the maximum 1-hr contribution from Georgia is 18 ppb;
- Georgia contributes 5% of the total manmade ppb >= 125 ppb in Memphis;
- The highest daily average 1-hr contribution from Georgia to Memphis is 17 ppb; which is 13% of the average 1-hr ozone concentration >= 125 ppb in Memphis on that day.

South Carolina's Contribution to Memphis

UAM-V zero-out modeling:

- South Carolina contributes at least 2 ppb to 9% of the 1-hr exceedences in Memphis; the maximum 1-hr contribution from South Carolina is 3 ppb;
- The total contribution from South Carolina is equivalent to 7% of the total ppb >= 125 ppb in Memphis.

CAMx modeling:

- South Carolina contributes at least 5 ppb to 31% of the 1-hr exceedences in Memphis; the maximum 1-hr contribution from South Carolina is 7 ppb;
- South Carolina contributes 2% of the total manmade ppb >= 125 ppb in Memphis;
- The highest daily average 1-hr contribution from South Carolina to Memphis is 6 ppb; which is 4% of the average 1-hr ozone concentration >= 125 ppb in Memphis on that day.

States Not Making a Significant Contribution for the 1-Hr NAAQS

Philadelphia Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Massachusetts, Michigan, Missouri, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Philadelphia in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Philadelphia in the CAMx modeling;
- Connecticut/Rhode Island and New York contribute less than 1% to the total manmade ppb >= 125 ppb and have no contributions more than 2 ppb to 1-hr exceedences in Philadelphia in the CAMx modeling;
- Indiana contributes less than 2% to the 1-hr exceedences in the range of 2-5 ppb and contributes a maximum of 2 ppb or less in Philadelphia in the UAM-V zero-out modeling;
- Kentucky contributes less than 1% to the 1-hr exceedences in the range of 2-5 ppb in Philadelphia in the UAM-V zero-out modeling and contributes 1% or less to the total manmade ppb >= 125 ppb in Philadelphia in the CAMx modeling.

Pittsburgh Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, South Carolina, Tennessee, Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Pittsburgh in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Pittsburgh in the CAMx modeling;
- Connecticut/Rhode Island, New York, New Jersey, and Maryland/D.C./Delaware have no contributions more than 2 ppb to 1-hr exceedences in Pittsburgh in the CAMx modeling.

New York City Nonattainment Area -- 1-Hr

- Alabama, Georgia, Massachusetts, Missouri, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in New York City in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in New York City in the CAMx modeling.

Greater Connecticut Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Greater Connecticut in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Greater Connecticut in the CAMx modeling;
- North Carolina contributes less than 1% to the 1-hr exceedences in the range of 2-5 ppb in Greater Connecticut in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Greater Connecticut in the CAMx modeling.

Rhode Island Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, North Carolina, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Rhode Island in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Rhode Island in the CAMx modeling.

Boston Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Indiana, Kentucky, Missouri, North Carolina, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Boston in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Boston in the CAMx modeling;
- Michigan contributes 1% or less to the 1-hr exceedences in the range of 2-5 ppb in Boston in the UAM-V zero-out modeling contribute 1% or less to the total manmade ppb >= 125 ppb in Boston in the CAMx modeling;
- West Virginia contributes 1% or less to the population-weighted total ppb >= 125 ppb in Boston in the UAM-V zero-out modeling and 1% or less to the total manmade ppb >= 125 ppb in Boston in the CAMx modeling.

Western Massachusetts Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Indiana, Kentucky, Michigan, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Western Massachusetts in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Western Massachusetts in the CAMx modeling.

Portland, Maine Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Indiana, Kentucky, Michigan, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, West Virginia and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in

Portland, Maine in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Portland, Maine in the CAMx modeling.

Washington, DC Nonattainment Area -- 1-Hr

- Alabama, Georgia, Massachusetts, Missouri, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Washington, DC in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Washington, DC in the CAMx modeling;
- Connecticut/Rhode Island and New Jersey have no contributions more than 2 ppb to 1-hr exceedences and contribute 1% or less to the total manmade ppb >= 125 ppb in Washington, DC in the CAMx modeling;
- Illinois contributes less than 1% to the 1-hr exceedences in the range of 2-5 ppb in Washington, DC in the UAM-V zero-out modeling and contributes 1% or less to the total manmade ppb >= 125 ppb in Washington, DC in the CAMx modeling;
- New York contributes 1% or less to the total manmade ppb >= 125 ppb and has 2 ppb or less highest daily average contribution to the ozone concentration >= 125 ppb in Washington, DC in the CAMx modeling.

Baltimore Nonattainment Area -- 1-Hr

- Georgia, North Carolina, South Carolina, Massachusetts, Missouri, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Baltimore in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Baltimore in the CAMx modeling;
- Alabama and Tennessee contribute less than 1% to the 1-hr exceedences in the range of 2-5 ppb in Baltimore in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Baltimore in the CAMx modeling;
- Connecticut/Rhode Island, New York, and New Jersey contribute less than 1% to the total manmade ppb >= 125 ppb and has 2 ppb or less highest daily average contribution to the ozone concentration >= 125 ppb in Baltimore in the CAMx modeling.

Atlanta Nonattainment Area -- 1-Hr

- Indiana, Massachusetts, Michigan, Missouri, Ohio, Virginia West Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Atlanta in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Atlanta in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in Atlanta and contribute 1% or less to the total manmade ppb >= 125 ppb in Atlanta in the CAMx modeling;
- Illinois contributes 1% or less to the 1-hr exceedences in the range of 2-5 ppb in Atlanta in the UAM-V zero-out modeling and contributes less than 1% to the total manmade ppb >= 125 ppb in Atlanta in the CAMx modeling.

Birmingham Nonattainment Area -- 1-Hr

- Illinois, Indiana, Massachusetts, Michigan, Missouri, North Carolina, Ohio, Virginia, West Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Birmingham in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 125 ppb in Birmingham in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in Birmingham in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Birmingham in the CAMx modeling.

Memphis Nonattainment Area -- 1-Hr

- Indiana, Kentucky, Massachusetts, Michigan, North Carolina, Ohio, Virginia, West Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Memphis in the UAM-V zero-out modeling and/or contribute less than 1% to the total manmade ppb >= 125 ppb in Memphis in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in Memphis in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Memphis in the CAMx modeling;
- Illinois and Missouri contribute less than 1% to the total manmade ppb >= 125 ppb in Memphis in the CAMx modeling.

Louisville Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Massachusetts, Michigan, Missouri, Ohio, West Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Louisville in the UAM-V zero-out modeling and/or contribute less than 1% to the total manmade ppb >= 125 ppb in Memphis in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in Louisville in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Louisville in the CAMx modeling;
- North Carolina, South Carolina, and Virginia each contributes only one value of the 1-hr exceedences in the range of 2-5 ppb in Louisville in the UAM-V zero-out modeling and has less than 5 ppb of the maximum 1-hr contributions to the ozone concentration >= 125 ppb in Louisville in the CAMx modeling.

St. Louis Nonattainment Area -- 1-Hr

- Alabama, Georgia, North Carolina, South Carolin a, Tennessee, Virginia, Michigan, Wisconsin, Indiana, Massachusetts, Ohio, and West Virginia have no contributions more than 2 ppb to 1-hr exceedences in St. Louis in the UAM-V zero-out modeling and/or contribute less than 1% to the total manmade ppb >= 125 ppb in St. Louis in the CAMx modeling;

- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in St. Louis in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in St. Louis in the CAMx modeling.

Cincinnati Nonattainment Area -- 1-Hr

- Alabama, Georgia, Illinois, Massachusetts, Michigan, Missouri, South Carolina, West Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Cincinnati in the UAM-V zero-out modeling and/or contribute less than 1% to the total manmade ppb >= 125 ppb in Cincinnati in the CAMx modeling;

- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in Cincinnati in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Cincinnati in the CAMx modeling;
- Virginia has no contributions more than 5 ppb to 1-hr exceedences in Cincinnati in the CAMx modeling and contributes 3% or less to the highest daily average contribution to the ozone concentration >= 125 ppb in Cincinnati in the CAMx modeling.

Southwestern Michigan Nonattainment Area -- 1-Hr

- Alabama, Georgia, Kentucky, Massachusetts, North Carolina, Ohio, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin have no contributions more than 2 ppb to 1-hr exceedences in Southwestern Michigan in the UAM-V zero-out modeling and/or contribute less than 1% to the total manmade ppb >= 125 ppb in Southwestern Michigan in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in Southwestern Michigan in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Southwestern Michigan in the CAMx modeling.

Chicago-Milwaukee Nonattainment Area -- 1-Hr

- Alabama, Georgia, Kentucky, Michigan, Massachusetts, North Carolina, Ohio, South Carolina, Tennessee, Virginia, and West Virginia have no contributions more than 2 ppb to 1-hr exceedences in Chicago-Milwaukee in the UAM-V zero-out modeling and/or contribute less than 1% to the total manmade ppb >= 125 ppb in Chicago-Milwaukee in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania have no contributions more than 2 ppb to 1-hr exceedences in Chicago-Milwaukee in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Chicago-Milwaukee in the CAMx modeling.

Lake Michigan Nonattainment Area -- 1-Hr

- North Carolina, South Carolina, Michigan, Massachusetts, Ohio, Virginia, and West Virginia have no contributions more than 2 ppb to 1-hr exceedences in Lake Michigan in the UAM-V zero-out modeling and/or contribute less than 1% to the total manmade ppb >= 125 ppb in Lake Michigan in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New York, New Jersey, and Pennsylvania

have no contributions more than 2 ppb to 1-hr exceedences in Lake Michigan in the CAMx modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Lake Michigan in the CAMx modeling;

- Georgia contributes less than 1% to the 1-hr exceedences in the range of 2-5 ppb in Lake Michigan in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 125 ppb in Lake Michigan in the CAMx modeling**.**

APPENDIX D
8-HOUR UPWIND/DOWNWIND LINKAGES[1]

1. Note that the Metric 2 data on the maximum "ppb" contributions are rounded to the nearest "ppb" in the presentation of contributions in this Appendix**.**

States which Contribute Significantly to 8-hr Nonattainment

-- Alabama

Georgia's Contribution to Alabama:

UAM-V zero-out modeling (8-Hr daily maximum):

- Georgia contributes at least 10 ppb to 27% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Georgia is 65 ppb;
- The total contribution from Georgia is equivalent to 23% of the total ppb >= 85 ppb in Alabama.

CAMx modeling:

- Georgia contributes at least 10 ppb to 28% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Georgia is 71 ppb;
- Georgia contributes 10% of the total manmade ppb >= 85 ppb in Alabama;
- The highest daily average 8-hr contribution from Georgia to Alabama is 30 ppb; which is 31% of the average 8-hr ozone concentration >= 85 ppb in Alabama on that day.

Illinois's Contribution to Alabama:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 3% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Illinois is 5 ppb.

CAMx modeling:

- Illinois contributes at least 2 ppb to 5% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Illinois is 9 ppb;
- The highest daily average 8-hr contribution from Illinois to Alabama is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Alabama on that day.

Kentucky's Contribution to Alabama:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 11% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Kentucky is 5 ppb;
- The total contribution from Kentucky is equivalent to 3% of the total ppb >= 85 ppb in Alabama.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 11% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Kentucky is 10 ppb;
- Kentucky contributes 2% of the total manmade ppb >= 85 ppb in Alabama;
- The highest daily average 8-hr contribution from Kentucky to Alabama is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Alabama on that day.

North Carolina's Contribution to Alabama:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 5% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from North Carolina is 8 ppb;
- The total contribution from North Carolina is equivalent to 2% of the total ppb >= 85 ppb in Alabama.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 6% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from North Carolina is 14 ppb;
- The highest daily average 8-hr contribution from North Carolina to Alabama is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Alabama on that day.

South Carolina's Contribution to Alabama:

UAM-V zero-out modeling:

- South Carolina contributes at least 5 ppb to 12% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from South Carolina is 22 ppb;
- The total contribution from South Carolina is equivalent to 8% of the total ppb >= 85 ppb in Alabama.

CAMx modeling:

- South Carolina contributes at least 5 ppb to 16% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from South Carolina is 29 ppb;

- South Carolina contributes 3% of the total manmade ppb >= 85 ppb in Alabama;
- The highest daily average 8-hr contribution from South Carolina to Alabama is 15 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in Alabama on that day.

Tennessee's Contribution to Alabama:

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 25% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Tennessee is 28 ppb;
- The total contribution from Tennessee is equivalent to 13% of the total ppb >= 85 ppb in Alabama.

CAMx modeling:

- Tennessee contributes at least 10 ppb to 21% of the 8-hr exceedences in Alabama; the maximum 8-hr contribution from Tennessee is 39 ppb;
- Tennessee contributes 7% of the total manmade ppb >= 85 ppb in Alabama;
- The highest daily average 8-hr contribution from Tennessee to Alabama is 14 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Alabama on that day.

-- Connecticut

Illinois's Contribution to Connecticut:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 3% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Illinois is 4 ppb;
- The total contribution from Illinois is equivalent to 2% of the total ppb >= 85 ppb in Connecticut.

CAMx modeling:

- Illinois contributes at least 5 ppb to 5% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Illinois is 9 ppb;
- Illinois contributes 3% of the total manmade ppb >= 85 ppb in Connecticut in one episode;
- The highest daily average 8-hr contribution from Illinois to Connecticut is 6 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

Maryland/DC/Delaware's Contribution to Connecticut:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 5 ppb to 46% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Maryland/DC/Delaware is 18 ppb;
- Maryland/DC/Delaware contribute 6% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to Connecticut is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

Michigan's Contribution to Connecticut:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 4% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Michigan is 4 ppb;
- The total contribution from Michigan is equivalent to 2% of the total ppb >= 85 ppb in Connecticut.

CAMx modeling:

- Michigan contributes at least 2 ppb to 30% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Michigan is 7 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from Michigan to Connecticut is 4 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

New Jersey's Contribution to Connecticut:

CAMx modeling:

- New Jersey contributes at least 10 ppb to 81% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from New Jersey is 54 ppb;
- New Jersey contributes 23% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from New Jersey to Connecticut is 30 ppb; which is 29% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

New York's Contribution to Connecticut:

CAMx modeling:

- New York contributes at least 10 ppb to 88% of the 8-hr exceedences in Connecticut; the

maximum 8-hr contribution from New York is 51 ppb;
- New York contributes 24% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from New York to Connecticut is 39 ppb; which is 45% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

North Carolina's Contribution to Connecticut:

UAM-V zero-out modeling:
- North Carolina contributes at least 2 ppb to 3% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from North Carolina is 4 ppb;
- The total contribution from North Carolina is equivalent to 2% of the total ppb >= 85 ppb in Connecticut.

CAMx modeling:
- North Carolina contributes at least 5 ppb to 8% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from North Carolina is 13 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from North Carolina to Connecticut is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

Ohio's Contribution to Connecticut:

UAM-V zero-out modeling:
- Ohio contributes at least 2 ppb to 21% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Ohio is 7 ppb;
- The total contribution from Ohio is equivalent to 5% of the total ppb >= 85 ppb in Connecticut.

CAMx modeling:
- Ohio contributes at least 5 ppb to 21% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Ohio is 15 ppb;
- Ohio contributes 3% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from Ohio to Connecticut is 9 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

Pennsylvania's Contribution to Connecticut:

CAMx modeling:
- Pennsylvania contributes at least 10 ppb to 56% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Pennsylvania is 38 ppb;
- Pennsylvania contributes 14% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from Pennsylvania to Connecticut is 28 ppb; which is 29% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

Virginia's Contribution to Connecticut:

UAM-V zero-out modeling:
- Virginia contributes at least 2 ppb to 24% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Virginia is 9 ppb;
- The total contribution from Virginia is equivalent to 6% of the total ppb >= 85 ppb in Connecticut.

CAMx modeling:
- Virginia contributes at least 5 ppb to 28% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from Virginia is 21 ppb;
- Virginia contributes 4% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from Virginia to Connecticut is 9 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

West Virginia's Contribution to Connecticut:

UAM-V zero-out modeling:
- West Virginia contributes at least 2 ppb to 22% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from West Virginia is 7 ppb;
- The total contribution from West Virginia is equivalent to 5% of the total ppb >= 85 ppb in Connecticut.

CAMx modeling:
- West Virginia contributes at least 5 ppb to 16% of the 8-hr exceedences in Connecticut; the maximum 8-hr contribution from West Virginia is 12 ppb;

- West Virginia contributes 2% of the total manmade ppb >= 85 ppb in Connecticut;
- The highest daily average 8-hr contribution from West Virginia to Connecticut is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Connecticut on that day.

-- District of Columbia

Illinois's Contribution to DC:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 9% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Illinois is 3 ppb;
- The total contribution from Illinois is equivalent to 3% of the total ppb >= 85 ppb in DC.

CAMx modeling:

- Illinois contributes at least 2 ppb to 39% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Illinois is 6 ppb;
- Illinois contributes 2% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from Illinois to DC is 5 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in DC on that day.

Kentucky's Contribution to DC:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 27% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Kentucky is 4 ppb;
- The total contribution from Kentucky is equivalent to 6% of the total ppb >= 85 ppb in DC.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 24% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Kentucky is 9 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from Kentucky to DC is 8 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in DC on that day.

Michigan's Contribution to DC:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 18% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Michigan is 3 ppb;
- The total contribution from Michigan is equivalent to 3% of the total ppb >= 85 ppb in DC.

CAMx modeling:

- Michigan contributes at least 2 ppb to 30% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Michigan is 7 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from Michigan to DC is 7 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in DC on that day.

Ohio's Contribution to DC:

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 45% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Ohio is 5 ppb;
- The total contribution from Ohio is equivalent to 11% of the total ppb >= 85 ppb in DC.

CAMx modeling:

- Ohio contributes at least 5 ppb to 46% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Ohio is 10 ppb;
- Ohio contributes 5% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from Ohio to DC is 10 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in DC on that day.

Pennsylvania's Contribution to DC:

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 55% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Pennsylvania is 14 ppb;
- Pennsylvania contributes 6% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from Pennsylvania to DC is 10 ppb; which is 11% of

the average 8-hr ozone concentration >= 85 ppb in DC on that day.

Tennessee's Contribution to DC:

UAM-V zero-out modeling:

- Tennessee contributes at least 2 ppb to 9% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Tennessee is 2 ppb;
- The total contribution from Tennessee is equivalent to 3% of the total ppb >= 85 ppb in DC.

CAMx modeling:

- Tennessee contributes at least 2 ppb to 34% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Tennessee is 7 ppb;
- Tennessee contributes 2% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from Tennessee to DC is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in DC on that day.

Virginia's Contribution to DC:

UAM-V zero-out modeling:

- Virginia contributes at least 10 ppb to 73% of the 8-hr exceedences in DC; the maximum 8-hr contribution from Virginia is 54 ppb;
- The total contribution from Virginia is equivalent to 59% of the total ppb >= 85 ppb in DC.

CAMx modeling:

- Virginia contributes at least 10 ppb to 100% of the 8-hr exceedences in DC; the maximum 8-hr contribution from West Virginia is 88 ppb;
- Virginia contributes 47% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from Virginia to DC is 60 ppb; which is 62% of the average 8-hr ozone concentration >= 85 ppb in DC on that day.

West Virginia's Contribution to DC:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 45% of the 8-hr exceedences in DC; the maximum 8-hr contribution from West Virginia is 18 ppb;
- The total contribution from West Virginia is equivalent to 20% of the total ppb >= 85 ppb in DC.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 41% of the 8-hr exceedences in DC; the maximum 8-hr contribution from West Virginia is 23 ppb;
- West Virginia contributes 6% of the total manmade ppb >= 85 ppb in DC;
- The highest daily average 8-hr contribution from West Virginia to DC is 21 ppb; which is 23% of the average 8-hr ozone concentration >= 85 ppb in DC on that day.

-- Delaware

Illinois's Contribution to Delaware:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 6% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Illinois is 3 ppb;
- The total contribution from Illinois is equivalent to 6% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- Illinois contributes at least 2 ppb to 47% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Illinois is 7 ppb;
- Illinois contributes 2% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Illinois to Delaware is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

Indiana's Contribution to Delaware:

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 9% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Indiana is 3 ppb;
- The total contribution from Indiana is equivalent to 7% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- Indiana contributes at least 2 ppb to 39% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Indiana is 6 ppb;

- Indiana contributes 3% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Indiana to Delaware is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

Kentucky's Contribution to Delaware:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 12% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Kentucky is 4 ppb;
- The total contribution from Kentucky is equivalent to 7% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 17% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Kentucky is 9 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Kentucky to Delaware is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

Michigan's Contribution to Delaware:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 11% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Michigan is 7 ppb;
- The total contribution from Michigan is equivalent to 5% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- Michigan contributes at least 2 ppb to 41% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Michigan is 9 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Michigan to Delaware is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

North Carolina's Contribution to Delaware:

UAM-V zero-out modeling:

- North Carolina contributes at least 5 ppb to 7% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from North Carolina is 22 ppb;
- The total contribution from North Carolina is equivalent to 8% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 18% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from North Carolina is 28 ppb;
- North Carolina contributes 4% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from North Carolina to Delaware is 18 ppb; which is 19% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

Ohio's Contribution to Delaware:

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 51% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Ohio is 6 ppb;
- The total contribution from Ohio is equivalent to 19% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- Ohio contributes at least 5 ppb to 48% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Ohio is 14 ppb;
- Ohio contributes 6% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Ohio to Delaware is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

Pennsylvania's Contribution to Delaware:

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 17% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Pennsylvania is 32 ppb;
- Pennsylvania contributes 7% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Pennsylvania to Delaware is 20 ppb; which is

23% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

Tennessee's Contribution to Delaware:

UAM-V zero-out modeling:

- Tennessee contributes at least 2 ppb to 6% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Tennessee is 3 ppb;
- The total contribution from Tennessee is equivalent to 4% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- Tennessee contributes at least 2 ppb to 33% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Tennessee is 7 ppb;
- Tennessee contributes 2% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Tennessee to Delaware is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

Virginia's Contribution to Delaware:

UAM-V zero-out modeling:

- Virginia contributes at least 10 ppb to 40% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Virginia is 34 ppb;
- The total contribution from Virginia is equivalent to 60% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- Virginia contributes at least 10 ppb to 76% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from Virginia is 60 ppb;
- Virginia contributes 23% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from Virginia to Delaware is 35 ppb; which is 37% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

West Virginia's Contribution to Delaware:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 35% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from West Virginia is 15 ppb;
- The total contribution from West Virginia is equivalent to 33% of the total ppb >= 85 ppb in Delaware.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 45% of the 8-hr exceedences in Delaware; the maximum 8-hr contribution from West Virginia is 17 ppb;
- West Virginia contributes 6% of the total manmade ppb >= 85 ppb in Delaware;
- The highest daily average 8-hr contribution from West Virginia to Delaware is 12 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in Delaware on that day.

-- Georgia

Alabama's Contribution to Georgia:

UAM-V zero-out modeling:

- Alabama contributes at least 5 ppb to 33% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from Alabama is 33 ppb;
- The total contribution from Alabama is equivalent to 15% of the total ppb >= 85 ppb in Georgia.

CAMx modeling:

- Alabama contributes at least 10 ppb to 44% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from Alabama is 44 ppb;
- Alabama contributes 11% of the total manmade ppb >= 85 ppb in Georgia;
- The highest daily average 8-hr contribution from Alabama to Georgia is 27 ppb; which is 26% of the average 8-hr ozone concentration >= 85 ppb in Georgia on that day.

Kentucky's Contribution to Georgia:

UAM-V zero-out modeling:

- Kentucky contributes at least 5 ppb to 5% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from Kentucky is 15 ppb;
- The total contribution from Kentucky is equivalent to 3% of the total ppb >= 85 ppb in Georgia.

CAMx modeling:

- Kentucky contributes at least 2 ppb to 17% of the 8-hr exceedences in Georgia; the maximum 8-hr

contribution from Kentucky is 14 ppb;
- The highest daily average 8-hr contribution from Kentucky to Georgia is 9 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Georgia on that day.

North Carolina's Contribution to Georgia:

UAM-V zero-out modeling:

- North Carolina contributes at least 5 ppb to 2% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from North Carolina is 7 ppb;
- The total contribution from North Carolina is equivalent to 2% of the total ppb >= 85 ppb in Georgia.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 8% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from North Carolina is 15 ppb;
- The highest daily average 8-hr contribution from North Carolina to Georgia is 7 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Georgia on that day.

South Carolina's Contribution to Georgia:

UAM-V zero-out modeling:

- South Carolina contributes at least 10 ppb to 13% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from South Carolina is 41 ppb;
- The total contribution from South Carolina is equivalent to 8% of the total ppb >= 85 ppb in Georgia.

CAMx modeling:

- South Carolina contributes at least 5 ppb to 20% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from South Carolina is 47 ppb;
- South Carolina contributes 4% of the total manmade ppb >= 85 ppb in Georgia;
- The highest daily average 8-hr contribution from South Carolina to Georgia is 24 ppb; which is 26% of the average 8-hr ozone concentration >= 85 ppb in Georgia on that day.

Tennessee's Contribution to Georgia:

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 18% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from Tennessee is 15 ppb;
- The total contribution from Tennessee is equivalent to 9% of the total ppb >= 85 ppb in Georgia.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 38% of the 8-hr exceedences in Georgia; the maximum 8-hr contribution from Tennessee is 28 ppb;
- Tennessee contributes 6% of the total manmade ppb >= 85 ppb in Georgia;
- The highest daily average 8-hr contribution from Tennessee to Georgia is 18 ppb; which is 19% of the average 8-hr ozone concentration >= 85 ppb in Georgia on that day.

-- Illinois

Alabama's Contribution to Illinois:

UAM-V zero-out modeling:

- Alabama contributes at least 2 ppb to 10% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Alabama is 5 ppb;
- The total contribution from Alabama is equivalent to 4% of the total ppb >= 85 ppb in Illinois.

CAMx modeling:

- Alabama contributes at least 5 ppb to 21% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Alabama is 16 ppb;
- Alabama contributes 4% of the total manmade ppb >= 85 ppb in Illinois;
- The highest daily average 8-hr contribution from Alabama to Illinois is 8 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Illinois on that day.

Georgia's Contribution to Illinois:

UAM-V zero-out modeling:

- Georgia contributes at least 2 ppb to 8% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Georgia is 3 ppb;
- The total contribution from Georgia is equivalent to 4% of the total ppb >= 85 ppb in Illinois.

CAMx modeling:
- Georgia contributes at least 5 ppb to 13% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Georgia is 11 ppb;
- Georgia contributes 3% of the total manmade ppb >= 85 ppb in Illinois;
- The highest daily average 8-hr contribution from Georgia to Illinois is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Illinois on that day.

Indiana's Contribution to Illinois:

UAM-V zero-out modeling:
- Indiana contributes at least 5 ppb to 9% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Indiana is 31 ppb;
- The total contribution from Indiana is equivalent to 7% of the total ppb >= 85 ppb in Illinois.

CAMx modeling:
- Indiana contributes at least 5 ppb to 7% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Indiana is 15 ppb;
- Indiana contributes 2% of the total manmade ppb >= 85 ppb in Illinois;
- The highest daily average 8-hr contribution from Indiana to Illinois is 13 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in Illinois on that day.

Kentucky's Contribution to Illinois:

UAM-V zero-out modeling:
- Kentucky contributes at least 5 ppb to 8% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Kentucky is 8 ppb;
- The total contribution from Kentucky is equivalent to 7% of the total ppb >= 85 ppb in Illinois.

CAMx modeling:
- Kentucky contributes at least 5 ppb to 12% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Kentucky is 16 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in Illinois;
- The highest daily average 8-hr contribution from Kentucky to Illinois is 8 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Illinois on that day.

Missouri's Contribution to Illinois:

UAM-V zero-out modeling:
- Missouri contributes at least 10 ppb to 52% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Missouri is 71 ppb;
- The total contribution from Missouri is equivalent to 66% of the total ppb >= 85 ppb in Illinois.

CAMx modeling:
- Missouri contributes at least 10 ppb to 76% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Missouri is 73 ppb;
- Missouri contributes 38% of the total manmade ppb >= 85 ppb in Illinois;
- The highest daily average 8-hr contribution from Missouri to Illinois is 60 ppb; which is 62% of the average 8-hr ozone concentration >= 85 ppb in Illinois on that day.

Tennessee's Contribution to Illinois:

UAM-V zero-out modeling:
- Tennessee contributes at least 2 ppb to 14% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Tennessee is 24 ppb;
- The total contribution from Tennessee is equivalent to 7% of the total ppb >= 85 ppb in Illinois.

CAMx modeling:
- Tennessee contributes at least 5 ppb to 29% of the 8-hr exceedences in Illinois; the maximum 8-hr contribution from Tennessee is 29 ppb;
- Tennessee contributes 7% of the total manmade ppb >= 85 ppb in Illinois;
- The highest daily average 8-hr contribution from Tennessee to Illinois is 25 ppb; which is 27% of the average 8-hr ozone concentration >= 85 ppb in Illinois on that day.

-- Indiana

Alabama's Contribution to Indiana:

UAM-V zero-out modeling:
- Alabama contributes at least 2 ppb to 15% of the 8-hr exceedences in Indiana; the maximum 8-hr

contribution from Alabama is 11 ppb;
- The total contribution from Alabama is equivalent to 8% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- Alabama contributes at least 2 ppb to 25% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Alabama is 21 ppb;
- Alabama contributes 4% of the total manmade ppb >= 85 ppb in Indiana;
- The highest daily average 8-hr contribution from Alabama to Indiana is 10 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

Georgia's Contribution to Indiana:

UAM-V zero-out modeling:

- Georgia contributes at least 2 ppb to 14% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Georgia is 12 ppb;
- The total contribution from Georgia is equivalent to 8% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- Georgia contributes at least 2 ppb to 53% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Georgia is 17 ppb;
- Georgia contributes 4% of the total manmade ppb >= 85 ppb in Indiana;
- The highest daily average 8-hr contribution from Georgia to Indiana is 9 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

Illinois's Contribution to Indiana:

UAM-V zero-out modeling:

- Illinois contributes at least 5 ppb to 13% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Illinois is 41 ppb;
- The total contribution from Illinois is equivalent to 19% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- Illinois contributes at least 5 ppb to 26% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Illinois is 44 ppb;
- Illinois contributes 5% of the total manmade ppb >= 85 ppb in Indiana;
- The highest daily average 8-hr contribution from Illinois to Indiana is 11 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

Kentucky's Contribution to Indiana:

UAM-V zero-out modeling:

- Kentucky contributes at least 10 ppb to 45% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Kentucky is 64 ppb;
- The total contribution from Kentucky is equivalent to 70% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- Kentucky contributes at least 10 ppb to 71% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Kentucky is 65 ppb;
- Kentucky contributes 27% of the total manmade ppb >= 85 ppb in Indiana;
- The highest daily average 8-hr contribution from Kentucky to Indiana is 47 ppb; which is 53% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

Missouri's Contribution to Indiana:

UAM-V zero-out modeling:

- Missouri contributes at least 2 ppb to 12% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Missouri is 9 ppb;
- The total contribution from Missouri is equivalent to 5% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- Missouri contributes at least 5 ppb to 10% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Missouri is 15 ppb;
- Missouri contributes 2% of the total manmade ppb >= 85 ppb in Indiana;
- The highest daily average 8-hr contribution from Missouri to Indiana is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

North Carolina's Contribution to Indiana:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 10% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from North Carolina is 5 ppb;
- The total contribution from North Carolina is equivalent to 8% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 32% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from North Carolina is 8 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in Indiana.

Ohio's Contribution to Indiana:

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 8% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Ohio is 14 ppb;
- The total contribution from Ohio is equivalent to 5% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- Ohio contributes at least 5 ppb to 7% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Ohio is 28 ppb;
- Ohio contributes 2% of the total manmade ppb >= 85 ppb in Indiana;
- The highest daily average 8-hr contribution from Ohio to Indiana is 12 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

South Carolina's Contribution to Indiana:

UAM-V zero-out modeling:

- South Carolina contributes at least 2 ppb to 4% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from South Carolina is 6 ppb;
- The total contribution from South Carolina is equivalent to 6% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- South Carolina contributes at least 2 ppb to 25% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from South Carolina is 7 ppb;
- South Carolina contributes 2% of the total manmade ppb >= 85 ppb in Indiana.

Tennessee's Contribution to Indiana:

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 32% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Tennessee is 33 ppb;
- The total contribution from Tennessee is equivalent to 38% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 72% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from Tennessee is 52 ppb;
- Tennessee contributes 15% of the total manmade ppb >= 85 ppb in Indiana;
- The highest daily average 8-hr contribution from Tennessee to Indiana is 18 ppb; which is 20% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

West Virginia's Contribution to Indiana:

UAM-V zero-out modeling:

- West Virginia contributes at least 2 ppb to 11% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from West Virginia is 8 ppb;
- The total contribution from West Virginia is equivalent to 6% of the total ppb >= 85 ppb in Indiana.

CAMx modeling:

- West Virginia contributes at least 2 ppb to 14% of the 8-hr exceedences in Indiana; the maximum 8-hr contribution from West Virginia is 8 ppb;
- The highest daily average 8-hr contribution from West Virginia to Indiana is 8 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Indiana on that day.

-- Kentucky

Alabama's Contribution to Kentucky:

UAM-V zero-out modeling:

- Alabama contributes at least 5 ppb to 8% of the 8-hr exceedences in Kentucky; the maximum 8-hr

contribution from Alabama is 20 ppb;
- The total contribution from Alabama is equivalent to 7% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- Alabama contributes at least 5 ppb to 25% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Alabama is 26 ppb;
- Alabama contributes 5% of the total manmade ppb >= 85 ppb in Kentucky;
- The highest daily average 8-hr contribution from Alabama to Kentucky is 16 ppb; which is 18% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

Georgia's Contribution to Kentucky:

UAM-V zero-out modeling:
- Georgia contributes at least 2 ppb to 11% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Georgia is 9 ppb;
- The total contribution from Georgia is equivalent to 6% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- Georgia contributes at least 5 ppb to 17% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Georgia is 20 ppb;
- Georgia contributes 4% of the total manmade ppb >= 85 ppb in Kentucky;
- The highest daily average 8-hr contribution from Georgia to Kentucky is 14 ppb; which is 16% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

Illinois's Contribution to Kentucky:

UAM-V zero-out modeling:
- Illinois contributes at least 5 ppb to 6% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Illinois is 18 ppb;
- The total contribution from Illinois is equivalent to 7% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- Illinois contributes at least 5 ppb to 10% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Illinois is 16 ppb;
- Illinois contributes 2% of the total manmade ppb >= 85 ppb in Kentucky;
- The highest daily average 8-hr contribution from Illinois to Kentucky is 10 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

Indiana's Contribution to Kentucky:

UAM-V zero-out modeling:
- Indiana contributes at least 10 ppb to 28% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Indiana is 31 ppb;
- The total contribution from Indiana is equivalent to 40% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- Indiana contributes at least 10 ppb to 36% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Indiana is 40 ppb;
- Indiana contributes 12% of the total manmade ppb >= 85 ppb in Kentucky;
- The highest daily average 8-hr contribution from Indiana to Kentucky is 18 ppb; which is 18% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

Missouri's Contribution to Kentucky:

UAM-V zero-out modeling:
- Missouri contributes at least 2 ppb to 8% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Missouri is 7 ppb;
- The total contribution from Missouri is equivalent to 4% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- Missouri contributes at least 5 ppb to 9% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Missouri is 11 ppb;
- The highest daily average 8-hr contribution from Missouri to Kentucky is 8 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

North Carolina's Contribution to Kentucky:

UAM-V zero-out modeling:
- North Carolina contributes at least 2 ppb to 11% of the 8-hr exceedences in Kentucky; the

maximum 8-hr contribution from North Carolina is 9 ppb;
- The total contribution from North Carolina is equivalent to 6% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- North Carolina contributes at least 2 ppb to 44% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from North Carolina is 12 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in Kentucky;
- The highest daily average 8-hr contribution from North Carolina to Kentucky is 5 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

Ohio's Contribution to Kentucky:

UAM-V zero-out modeling:
- Ohio contributes at least 10 ppb to 9% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Ohio is 40 ppb;
- The total contribution from Ohio is equivalent to 11% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- Ohio contributes at least 5 ppb to 14% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Ohio is 61 ppb;
- Ohio contributes 5% of the total manmade ppb >= 85 ppb in Kentucky;
- The highest daily average 8-hr contribution from Ohio to Kentucky is 12 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

South Carolina's Contribution to Kentucky:

UAM-V zero-out modeling:
- South Carolina contributes at least 2 ppb to 2% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from South Carolina is 4 ppb;
- The total contribution from South Carolina is equivalent to 3% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- South Carolina contributes at least 2 ppb to 25% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from South Carolina is 7 ppb;
- South Carolina contributes 2% of the total manmade ppb >= 85 ppb in Kentucky.

Tennessee's Contribution to Kentucky:

UAM-V zero-out modeling:
- Tennessee contributes at least 10 ppb to 26% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Tennessee is 68 ppb;
- The total contribution from Tennessee is equivalent to 35% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- Tennessee contributes at least 10 ppb to 49% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from Tennessee is 91 ppb;
- Tennessee contributes 20% of the total manmade ppb >= 85 ppb in Kentucky;
- The highest daily average 8-hr contribution from Tennessee to Kentucky is 52 ppb; which is 59% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

West Virginia's Contribution to Kentucky:

UAM-V zero-out modeling:
- West Virginia contributes at least 5 ppb to 4% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from West Virginia is 52 ppb;
- The total contribution from West Virginia is equivalent to 5% of the total ppb >= 85 ppb in Kentucky.

CAMx modeling:
- West Virginia contributes at least 2 ppb to 9% of the 8-hr exceedences in Kentucky; the maximum 8-hr contribution from West Virginia is 31 ppb;
- The highest daily average 8-hr contribution from West Virginia to Kentucky is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Kentucky on that day.

-- Maine

Connecticut/Rhode Island's Contribution to Maine:

CAMx modeling:

- Connecticut/Rhode Island contribute at least 5 ppb to 50% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from Connecticut/Rhode Island is 19 ppb;
- Connecticut/Rhode Island contribute 7% of the total manmade ppb >= 85 ppb in Maine;
- The highest daily average 8-hr contribution from Connecticut/Rhode Island to Maine is 7 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Maine on that day.

Maryland/DC/Delaware's Contribution to Maine:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 2 ppb to 56% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from Maryland/DC/Delaware is 7 ppb;
- Maryland/DC/Delaware contribute 3% of the total manmade ppb >= 85 ppb in Maine.

Massachusetts's Contribution to Maine:

UAM-V zero-out modeling:

- Massachusetts contributes at least 10 ppb to 82% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from Massachusetts is 51 ppb;
- The total contribution from Massachusetts is equivalent to 95% of the total ppb >= 85 ppb in Maine.

CAMx modeling:

- Massachusetts contributes at least 10 ppb to 84% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from Massachusetts is 67 ppb;
- Massachusetts contributes 33% of the total manmade ppb >= 85 ppb in Maine;
- The highest daily average 8-hr contribution from Massachusetts to Maine is 47 ppb; which is 54% of the average 8-hr ozone concentration >= 85 ppb in Maine on that day.

New Jersey's Contribution to Maine:

CAMx modeling:

- New Jersey contributes at least 5 ppb to 48% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from New Jersey is 21 ppb;
- New Jersey contributes 7% of the total manmade ppb >= 85 ppb in Maine;
- The highest daily average 8-hr contribution from New Jersey to Maine is 10 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in Maine on that day.

New York's Contribution to Maine:

CAMx modeling:

- New York contributes at least 10 ppb to 38% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from New York is 20 ppb;
- New York contributes 11% of the total manmade ppb >= 85 ppb in Maine;
- The highest daily average 8-hr contribution from New York to Maine is 12 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Maine on that day.

North Carolina's Contribution to Maine:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 5% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from North Carolina is 3 ppb;
- The total contribution from North Carolina is equivalent to 3% of the total ppb >= 85 ppb in Maine.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 8% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from North Carolina is 9 ppb.

Pennsylvania's Contribution to Maine:

CAMx modeling:

- Pennsylvania contributes at least 5 ppb to 44% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from Pennsylvania is 14 ppb;
- Pennsylvania contributes 6% of the total manmade ppb >= 85 ppb in Maine;
- The highest daily average 8-hr contribution from Pennsylvania to Maine is 8 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Maine on that day.

Virginia's Contribution to Maine:

UAM-V zero-out modeling:

- Virginia contributes at least 2 ppb to 16% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from Virginia is 6 ppb;
- The total contribution from Virginia is equivalent to 8% of the total ppb >= 85 ppb in Maine.

CAMx modeling:

- Virginia contributes at least 2 ppb to 28% of the 8-hr exceedences in Maine; the maximum 8-hr contribution from Virginia is 17 ppb;
- Virginia contributes 3% of the total manmade ppb >= 85 ppb in Maine;
- The highest daily average 8-hr contribution from Virginia to Maine is 6 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Maine on that day.

-- Maryland

Illinois's Contribution to Maryland:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 2% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Illinois is 3 ppb;
- The total contribution from Illinois is equivalent to 3% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- Illinois contributes at least 2 ppb to 31% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Illinois is 7 ppb;
- Illinois contributes 2% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Illinois to Maryland is 6 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

Indiana's Contribution to Maryland:

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 8% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Indiana is 5 ppb;
- The total contribution from Indiana is equivalent to 4% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- Indiana contributes at least 5 ppb to 8% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Indiana is 11 ppb;
- Indiana contributes 2% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Indiana to Maryland is 6 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

Kentucky's Contribution to Maryland:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 13% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Kentucky is 6 ppb;
- The total contribution from Kentucky is equivalent to 4% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 18% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Kentucky is 13 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Kentucky to Maryland is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

Michigan's Contribution to Maryland:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 12% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Michigan is 7 ppb;
- The total contribution from Michigan is equivalent to 4% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- Michigan contributes at least 2 ppb to 29% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Michigan is 10 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Michigan to Maryland is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

North Carolina's Contribution to Maryland:

UAM-V zero-out modeling:

- North Carolina contributes at least 5 ppb to 7% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from North Carolina is 27 ppb;
- The total contribution from North Carolina is equivalent to 5% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 13% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from North Carolina is 32 ppb;
- North Carolina contributes 3% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from North Carolina to Maryland is 15 ppb; which is 17% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

Ohio's Contribution to Maryland:

UAM-V zero-out modeling:

- Ohio contributes at least 5 ppb to 10% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Ohio is 8 ppb;
- The total contribution from Ohio is equivalent to 10% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- Ohio contributes at least 5 ppb to 42% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Ohio is 14 ppb;
- Ohio contributes 5% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Ohio to Maryland is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

Pennsylvania's Contribution to Maryland:

CAMx modeling:

- Pennsylvania contributes at least 5 ppb to 45% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Pennsylvania is 56 ppb;
- Pennsylvania contributes 7% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Pennsylvania to Maryland is 15 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

Tennessee's Contribution to Maryland:

UAM-V zero-out modeling:

- Tennessee contributes at least 2 ppb to 4% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Tennessee is 3 ppb;
- The total contribution from Tennessee is equivalent to 2 of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- Tennessee contributes at least 2 ppb to 28% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Tennessee is 8 ppb;
- Tennessee contributes 2% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Tennessee to Maryland is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

Virginia's Contribution to Maryland:

UAM-V zero-out modeling:

- Virginia contributes at least 10 ppb to 57% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Virginia is 63 ppb;
- The total contribution from Virginia is equivalent to 57% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- Virginia contributes at least 10 ppb to 81% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from Virginia is 84 ppb;
- Virginia contributes 30% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from Virginia to Maryland is 40 ppb; which is 42% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

West Virginia's Contribution to Maryland:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 32% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from West Virginia is 23 ppb;
- The total contribution from West Virginia is equivalent to 17% of the total ppb >= 85 ppb in Maryland.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 40% of the 8-hr exceedences in Maryland; the maximum 8-hr contribution from West Virginia is 26 ppb;
- West Virginia contributes 6% of the total manmade ppb >= 85 ppb in Maryland;
- The highest daily average 8-hr contribution from West Virginia to Maryland is 15 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in Maryland on that day.

-- Massachusetts

Connecticut/Rhode Island's Contribution to Massachusetts:

CAMx modeling:

- Connecticut/Rhode Island contribute at least 10 ppb to 48% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Connecticut/Rhode Island is 59 ppb;
- Connecticut/Rhode Island contribute 15% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from Connecticut/Rhode Island to Massachusetts is 38 ppb; which is 43% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

Maryland/DC/Delaware's Contribution to Massachusetts:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 5 ppb to 34% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Maryland/DC/Delaware is 17 ppb;
- Maryland/DC/Delaware contribute 5% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to Massachusetts is 10 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

Michigan's Contribution to Massachusetts:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 4% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Michigan is 5 ppb;
- The total contribution from Michigan is equivalent to 3% of the total ppb >= 85 ppb in Massachusetts.

CAMx modeling:

- Michigan contributes at least 2 ppb to 33% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Michigan is 8 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from Michigan to Massachusetts is 5 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

New Jersey's Contribution to Massachusetts:

CAMx modeling:

- New Jersey contributes at least 10 ppb to 59% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from New Jersey is 39 ppb;
- The total contribution from New Jersey contributes 16% of the total manmade ppb >= 85 ppb in Massachusetts.

New York's Contribution to Massachusetts:

CAMx modeling:

- New York contributes at least 10 ppb to 58% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from New York is 41 ppb;
- New York contributes 15% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from New York to Massachusetts is 19 ppb; which is 20% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

North Carolina's Contribution to Massachusetts:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 2% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from North Carolina is 7 ppb;
- The total contribution from North Carolina is equivalent to 2% of the total ppb >= 85 ppb in Massachusetts

CAMx modeling:
- North Carolina contributes at least 5 ppb to 9% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from North Carolina is 15 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in Massachusetts.

Ohio's Contribution to Massachusetts:

UAM-V zero-out modeling:
- Ohio contributes at least 2 ppb to 6% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Ohio is 4 ppb;
- The total contribution from Ohio is equivalent to 4% of the total ppb >= 85 ppb in Massachusetts.

CAMx modeling:
- Ohio contributes at least 5 ppb to 14% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Ohio is 10 ppb;
- Ohio contributes 2% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from Ohio to Massachusetts is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

Pennsylvania's Contribution to Massachusetts:

CAMx modeling:
- Pennsylvania contributes at least 10 ppb to 39% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Pennsylvania is 29 ppb;
- Pennsylvania contributes 11% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from Pennsylvania to Massachusetts is 17 ppb; which is 19% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

Virginia's Contribution to Massachusetts:

UAM-V zero-out modeling:
- Virginia contributes at least 5 ppb to 5% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Virginia is 13 ppb;
- The total contribution from Virginia is equivalent to 6% of the total ppb >= 85 ppb in Massachusetts.

CAMx modeling:
- Virginia contributes at least 5 ppb to 23% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from Virginia is 27 ppb;
- Virginia contributes 5% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from Virginia to Massachusetts is 11 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

West Virginia's Contribution to Massachusetts:

UAM-V zero-out modeling:
- West Virginia contributes at least 2 ppb to 18% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from West Virginia is 6 ppb;
- The total contribution from West Virginia is equivalent to 4% of the total ppb >= 85 ppb in Massachusetts.

CAMx modeling:
- West Virginia contributes at least 2 ppb to 29% of the 8-hr exceedences in Massachusetts; the maximum 8-hr contribution from West Virginia is 7 ppb;
- West Virginia contributes 2% of the total manmade ppb >= 85 ppb in Massachusetts;
- The highest daily average 8-hr contribution from West Virginia to Massachusetts is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Massachusetts on that day.

-- Michigan

Alabama's Contribution to Michigan:

UAM-V zero-out modeling:
- Alabama contributes at least 2 ppb to 10% of the 8-hr exceedences in Michigan; the maximum 8-

hr contribution from Alabama is 5 ppb;

- The total contribution from Alabama is equivalent to 5 of the total ppb >= 85 ppb in Michigan.

CAMx modeling:

- Alabama contributes at least 2 ppb to 42% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Alabama is 9 ppb;
- Alabama contributes 3% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Alabama to Michigan is 5 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

Georgia's Contribution to Michigan:

UAM-V zero-out modeling:

- Georgia contributes at least 2 ppb to 7% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Georgia is 3 ppb;
- The total contribution from Georgia is equivalent to 4% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:

- Georgia contributes at least 2 ppb to 39% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Georgia is 6 ppb;
- Georgia contributes 2% of the total manmade ppb >= 85 ppb in Michigan.

Illinois's Contribution to Michigan:

UAM-V zero-out modeling:

- Illinois contributes at least 10 ppb to 63% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Illinois is 61 ppb;
- The total contribution from Illinois is equivalent to 78% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:

- Illinois contributes at least 10 ppb to 80% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Illinois is 90 ppb;
- Illinois contributes 31% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Illinois to Michigan is 32 ppb; which is 35% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

Indiana's Contribution to Michigan:

UAM-V zero-out modeling:

- Indiana contributes at least 10 ppb to 34% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Indiana is 36 ppb;
- The total contribution from Indiana is equivalent to 43% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:

- Indiana contributes at least 10 ppb to 51% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Indiana is 51 ppb;
- Indiana contributes 18% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Indiana to Michigan is 29 ppb; which is 34% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

Kentucky's Contribution to Michigan:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 24% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Kentucky is 8 ppb;
- The total contribution from Kentucky is equivalent to 10% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 26% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Kentucky is 14 ppb;
- Kentucky contributes 5% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Kentucky to Michigan is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

Missouri's Contribution to Michigan:

UAM-V zero-out modeling:

- Missouri contributes at least 5 ppb to 21% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Missouri is 9 ppb;

- The total contribution from Missouri is equivalent to 22% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:
- Missouri contributes at least 5 ppb to 50% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Missouri is 18 ppb;
- Missouri contributes 7% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Missouri to Michigan is 11 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

Ohio's Contribution to Michigan:

UAM-V zero-out modeling:
- Ohio contributes at least 2 ppb to 16% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Ohio is 23 ppb;
- The total contribution from Ohio is equivalent to 6% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:
- Ohio contributes at least 5 ppb to 15% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Ohio is 31 ppb;
- Ohio contributes 3% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Ohio to Michigan is 15 ppb; which is 17% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

Tennessee's Contribution to Michigan:

UAM-V zero-out modeling:
- Tennessee contributes at least 2 ppb to 26% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Tennessee is 8 ppb;
- The total contribution from Tennessee is equivalent to 10% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:
- Tennessee contributes at least 5 ppb to 35% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Tennessee is 13 ppb;
- Tennessee contributes 5% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Tennessee to Michigan is 7 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

Wisconsin's Contribution to Michigan:

UAM-V zero-out modeling:
- Wisconsin contributes at least 2 ppb to 8% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Wisconsin is 16 ppb;
- The total contribution from Wisconsin is equivalent to 5% of the total ppb >= 85 ppb in Michigan.

CAMx modeling:
- Wisconsin contributes at least 10 ppb to 11% of the 8-hr exceedences in Michigan; the maximum 8-hr contribution from Wisconsin is 34 ppb;
- Wisconsin contributes 5% of the total manmade ppb >= 85 ppb in Michigan;
- The highest daily average 8-hr contribution from Wisconsin to Michigan is 12 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Michigan on that day.

-- Missouri

Alabama's Contribution to Missouri:

UAM-V zero-out modeling:
- Alabama contributes at least 5 ppb to 8% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Alabama is 10 ppb;
- The total contribution from Alabama is equivalent to 10% of the total ppb >= 85 ppb in Missouri.

CAMx modeling:
- Alabama contributes at least 5 ppb to 40% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Alabama is 16 ppb;
- Alabama contributes 6% of the total manmade ppb >= 85 ppb in Missouri;
- The highest daily average 8-hr contribution from Alabama to Missouri is 14 ppb; which is 16% of the average 8-hr ozone concentration >= 85 ppb in Missouri on that day.

Georgia's Contribution to Missouri:

UAM-V zero-out modeling:

- Georgia contributes at least 2 ppb to 13% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Georgia is 3 ppb;
- The total contribution from Georgia is equivalent to 6% of the total ppb >= 85 ppb in Missouri.

CAMx modeling:

- Georgia contributes at least 2 ppb to 40% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Georgia is 6 ppb;
- Georgia contributes 2% of the total manmade ppb >= 85 ppb in Missouri;
- The highest daily average 8-hr contribution from Georgia to Missouri is 5 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Missouri on that day.

Illinois's Contribution to Missouri:

UAM-V zero-out modeling:

- Illinois contributes at least 5 ppb to 40% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Illinois is 16 ppb;
- The total contribution from Illinois is equivalent to 28% of the total ppb >= 85 ppb in Missouri.

CAMx modeling:

- Illinois contributes at least 10 ppb to 21% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Illinois is 23 ppb;
- Illinois contributes 8% of the total manmade ppb >= 85 ppb in Missouri;
- The highest daily average 8-hr contribution from Illinois to Missouri is 20 ppb; which is 23% of the average 8-hr ozone concentration >= 85 ppb in Missouri on that day.

Indiana's Contribution to Missouri:

UAM-V zero-out modeling:

- Indiana contributes at least 5 ppb to 6% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Indiana is 9 ppb;
- The total contribution from Indiana is equivalent to 6% of the total ppb >= 85 ppb in Missouri.

CAMx modeling:

- Indiana contributes at least 5 ppb to 9% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Indiana is 14 ppb;
- Indiana contributes 2% of the total manmade ppb >= 85 ppb in Missouri;
- The highest daily average 8-hr contribution from Indiana to Missouri is 12 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in Missouri on that day.

Kentucky's Contribution to Missouri:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 31% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Kentucky is 5 ppb;
- The total contribution from Kentucky is equivalent to 11% of the total ppb >= 85 ppb in Missouri.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 18% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Kentucky is 9 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in Missouri;
- The highest daily average 8-hr contribution from Kentucky to Missouri is 6 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Missouri on that day.

Tennessee's Contribution to Missouri:

UAM-V zero-out modeling:

- Tennessee contributes at least 10 ppb to 13% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Tennessee is 19 ppb;
- The total contribution from Tennessee is equivalent to 21% of the total ppb >= 85 ppb in Missouri.

CAMx modeling:

- Tennessee contributes at least 10 ppb to 30% of the 8-hr exceedences in Missouri; the maximum 8-hr contribution from Tennessee is 30 ppb;
- Tennessee contributes 12% of the total manmade ppb >= 85 ppb in Missouri;
- The highest daily average 8-hr contribution from Tennessee to Missouri is 24 ppb; which is 25% of the average 8-hr ozone concentration >= 85 ppb in Missouri on that day.

-- New Hampshire

Connecticut/Rhode Island's Contribution to New Hampshire:

CAMx modeling:

- Connecticut/Rhode Island contribute at least 5 ppb to 62% of the 8-hr exceedences and at least 10 ppb to 28% of the 8-hr exceedences in New Hampshire; the maximum 8-hr contribution from Connecticut/Rhode Island is 25 ppb;
- Connecticut/Rhode Island contribute 9% of the total manmade ppb >= 85 ppb in New Hampshire;
- The highest daily average 8-hr contribution from Connecticut/Rhode Island to New Hampshire is 13 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in New Hampshire on that day.

Maryland/DC/Delaware's Contribution to New Hampshire:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 2 ppb to 50% of the 8-hr exceedences in New Hampshire; the maximum 8-hr contribution from Maryland/DC/Delaware is 5 ppb;
- Maryland/DC/Delaware contribute 3% of the total manmade ppb >= 85 ppb in New Hampshire;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to New Hampshire is 4 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in New Hampshire on that day.

Massachusetts's Contribution to New Hampshire

UAM-V zero-out modeling:

- Massachusetts contributes at least 10 ppb to 75% of the 8-hr exceedences in New Hampshire; the maximum 8-hr contribution from Massachusetts is 68 ppb;
- The total contribution from Massachusetts is equivalent to 87% of the total ppb >= 85 ppb in New Hampshire.

CAMx modeling:

- Massachusetts contributes at least 10 ppb to 73% of the 8-hr exceedences in New Hampshire; the maximum 8-hr contribution from Massachusetts is 84 ppb;
- Massachusetts contributes 30% of the total manmade ppb >= 85 ppb in New Hampshire;
- The highest daily average 8-hr contribution from Massachusetts to New Hampshire is 47 ppb; which is 52% of the average 8-hr ozone concentration >= 85 ppb in New Hampshire on that day.

New Jersey's Contribution to New Hampshire:

CAMx modeling:

- New Jersey contributes at least 5 ppb to 45% of the 8-hr exceedences and at least 10 ppb to 23% of the 8-hr exceedences in New Hampshire; the maximum 8-hr contribution from New Jersey is 26 ppb;
- The total contribution from New Jersey contributes 9% of the total manmade ppb >= 85 ppb in New Hampshire.

New York's Contribution to New Hampshire:

CAMx modeling:

- New York contributes at least 10 ppb to 48% of the 8-hr exceedences in New Hampshire; the maximum 8-hr contribution from New York is 21 ppb;
- New York contributes 12% of the total manmade ppb >= 85 ppb in New Hampshire;
- The highest daily average 8-hr contribution from New York to New Hampshire is 13 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in New Hampshire on that day.

Pennsylvania's Contribution to New Hampshire:

CAMx modeling:

- Pennsylvania contributes at least 5 ppb to 36% of the 8-hr exceedences and at least 10 ppb to 21% of the 8-hr exceedences in New Hampshire; the maximum 8-hr contribution from Pennsylvania is 18 ppb;
- Pennsylvania contributes 6% of the total manmade ppb >= 85 ppb in New Hampshire;
- The highest daily average 8-hr contribution from Pennsylvania to New Hampshire is 10 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in New Hampshire on that day.

-- New Jersey

Illinois's Contribution to New Jersey:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 3% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Illinois is 3 ppb;
- The total contribution from Illinois is equivalent to 3% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- Illinois contributes least 2 ppb to 37% of the 8-hr exceedences and at least 5 ppb to 10% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Illinois is 8 ppb;
- Illinois contributes 2% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from Illinois to New Jersey is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

Indiana's Contribution to New Jersey:

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 4% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Indiana is 3 ppb;
- The total contribution from Indiana is equivalent to 3% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- Indiana contributes least 2 ppb to 34% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Indiana is 8 ppb;
- Indiana contributes 2% of the total manmade ppb >= 85 ppb in New Jersey.

Kentucky's Contribution to New Jersey:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 7% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Kentucky is 4 ppb;
- The total contribution from Kentucky is equivalent to 3% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- Kentucky contributes least 2 ppb to 31% of the 8-hr exceedences and at least 5 ppb to 8% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Kentucky is 10 ppb;
- Kentucky contributes 2% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from Kentucky to New Jersey is 7 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

Maryland/DC/Delaware's Contribution to New Jersey:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 10 ppb to 60% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Maryland/DC/Delaware is 71 ppb;
- Maryland/DC/Delaware contribute 20% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to New Jersey is 31 ppb; which is 36% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

Michigan's Contribution to New Jersey:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 11% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Michigan is 7 ppb;
- The total contribution from Michigan is equivalent to 4% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- Michigan contributes least 2 ppb to 35% of the 8-hr exceedences and at least 5 ppb to 9% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Michigan is 10 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from Michigan to New Jersey is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

North Carolina's Contribution to New Jersey:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 9% of the 8-hr exceedences and at least 5 ppb to 3% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from North Carolina is 18 ppb;
- The total contribution from North Carolina is equivalent to 4% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- North Carolina contributes least 2 ppb to 11% of the 8-hr exceedences and at least 5 ppb to 4% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from North Carolina is 25 ppb;
- North Carolina contributes 3% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from North Carolina to New Jersey is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

New York's Contribution to New Jersey:

CAMx modeling:

- New York contributes at least 2 ppb to 7% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from New York is 24 ppb;
- The highest daily average 8-hr contribution from New York to New Jersey is 22 ppb; which is 25% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

Ohio's Contribution to New Jersey:

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 38% of the 8-hr exceedences and at least 5 ppb to 5% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Ohio is 9 ppb;
- The total contribution from Ohio is equivalent to 10% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- Ohio contributes least 2 ppb to 39% of the 8-hr exceedences and at least 5 ppb to 11% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Ohio is 17 ppb;
- Ohio contributes 6% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from Ohio to New Jersey is 11 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

Pennsylvania's Contribution to New Jersey:

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 71% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Pennsylvania is 62 ppb;
- Pennsylvania contributes 26% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from Pennsylvania to New Jersey is 31 ppb; which is 31% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

Virginia's Contribution to New Jersey:

UAM-V zero-out modeling:

- Virginia contributes at least 5 ppb to 22% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Virginia is 32 ppb;
- The total contribution from Virginia is equivalent to 19% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- Virginia contributes least 10 ppb to 27% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from Virginia is 38 ppb;
- Virginia contributes 9% of the total manmade ppb >= 85 ppb in New Jersey;
- The highest daily average 8-hr contribution from Virginia to New Jersey is 20 ppb; which is 21% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

West Virginia's Contribution to New Jersey:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 23% of the 8-hr exceedences and at least 10 ppb to 5% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from West Virginia is 15 ppb;
- The total contribution from West Virginia is equivalent to 18% of the total ppb >= 85 ppb in New Jersey.

CAMx modeling:

- West Virginia contributes least 5 ppb to 37% of the 8-hr exceedences and at least 10 ppb to 11% of the 8-hr exceedences in New Jersey; the maximum 8-hr contribution from West Virginia is 16 ppb;
- West Virginia contributes 5% of the total manmade ppb >= 85 ppb in New Jersey;

- The highest daily average 8-hr contribution from West Virginia to New Jersey is 9 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in New Jersey on that day.

-- New York

Illinois's Contribution to New York

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 9% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Illinois is 7 ppb;
- The total contribution from Illinois is equivalent to 2% of the total ppb >= 85 ppb in New York.

CAMx modeling:

- Illinois contributes at least 2 ppb to 24% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Illinois is 11 ppb;
- Illinois contributes 2% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from Illinois to New York is 4 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

Indiana's Contribution to New York

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 7% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Indiana is 6 ppb.
- The total contribution from Indiana is equivalent to 2% of the total ppb >= 85 ppb in New York.

CAMx modeling:

- Indiana contributes at least 2 ppb to 22% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Indiana is 11 ppb;
- Indiana contributes 2% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from Indiana to New York is 4 ppb; which is 4% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

Kentucky's Contribution to New York

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 3% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Kentucky is 4 ppb;
- The total contribution from Kentucky is equivalent to 2% to the population-weighted total ppb >= 85 ppb in New York.

CAMx modeling:

- Kentucky contributes at least 2 ppb to 16% of the 8-hr exceedences and at least 5 ppb to 7% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Kentucky is 12 ppb;
- The highest daily average 8-hr contribution from Kentucky to New York is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

Maryland/DC/Delaware's Contribution to New York:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 5 ppb to 49% of the 8-hr exceedences and at least 10 ppb to 20% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Maryland/DC/Delaware is 27 ppb;
- Maryland/DC/Delaware contribute 7% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to New York is 14 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

Michigan's Contribution to New York

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 11% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Michigan is 10 ppb;
- The total contribution from Michigan is equivalent to 3% of the total ppb >= 85 ppb in New York.

CAMx modeling:

- Michigan contributes at least 2 ppb to 38% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Michigan is 19 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from Michigan to New York is 5 ppb; which is 6% of

the average 8-hr ozone concentration >= 85 ppb in New York on that day.

New Jersey's Contribution to New York:

CAMx modeling:

- New Jersey contributes at least 10 ppb to 82% of the 8-hr exceedences in New York; the maximum 8-hr contribution from New Jersey is 64 ppb;
- New Jersey contributes 31% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from New Jersey to New York is 37 ppb; which is 40% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

North Carolina's Contribution to New York

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 3% of the 8-hr exceedences in New York; the maximum 8-hr contribution from North Carolina is 5 ppb;
- The total contribution from North Carolina is equivalent to 2% of the total ppb >= 85 ppb in New York.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 24% of the 8-hr exceedences in New York; the maximum 8-hr contribution from North Carolina is 16 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from North Carolina to New York is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

Ohio's Contribution to New York

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 21% of the 8-hr exceedences and at least 5 ppb to 4% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Ohio is 8 ppb;
- The total contribution from Ohio is equivalent to 5% of the total ppb >= 85 ppb in New York.

CAMx modeling:

- Ohio contributes at least 5 ppb to 22% of the 8-hr exceedences and at least 10 ppb to 5% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Ohio is 18 ppb;
- Ohio contributes 4% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from Ohio to New York is 8 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

Pennsylvania's Contribution to New York

CAMx modeling:

- Pennsylvania contributes at least 10 ppb to 69% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Pennsylvania is 55 ppb;
- Pennsylvania contributes 18% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from Pennsylvania to New York is 22 ppb; which is 23% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

Virginia's Contribution to New York

UAM-V zero-out modeling:

- Virginia contributes at least 5 ppb to 10% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Virginia is 10 ppb;
- The total contribution from Virginia is equivalent to 8% of the total ppb >= 85 ppb in New York.

CAMx modeling:

- Virginia contributes at least 5 ppb to 38% of the 8-hr exceedences in New York; the maximum 8-hr contribution from Virginia is 28 ppb;
- Virginia contributes 5% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from Virginia to New York is 10 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

West Virginia's Contribution to New York

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 11% of the 8-hr exceedences in New York; the maximum 8-hr contribution from West Virginia is 12 ppb;
- The total contribution from West Virginia is equivalent to 7% of the total ppb >= 85 ppb in New

York.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 17% of the 8-hr exceedences in New York; the maximum 8-hr contribution from West Virginia is 14 ppb;
- West Virginia contributes 3% of the total manmade ppb >= 85 ppb in New York;
- The highest daily average 8-hr contribution from West Virginia to New York is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in New York on that day.

-- North Carolina

Alabama's Contribution to North Carolina:

UAM-V zero-out modeling:

- Alabama contributes at least 2 ppb to 7% of the 8-hr exceedences and at least 5 ppb to 3% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Alabama is 10 ppb;
- The total contribution from Alabama is equivalent to 3% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- Alabama contributes least 5 ppb to 8% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Alabama is 29 ppb;
- The highest daily average 8-hr contribution from Alabama to North Carolina is 6 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

Georgia's Contribution to North Carolina:

UAM-V zero-out modeling:

- Georgia contributes at least 5 ppb to 8% of the 8-hr exceedences and at least 10 ppb to 4% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Georgia is 19 ppb;
- The total contribution from Georgia is equivalent to 6% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- Georgia contributes least 10 ppb to 9% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Georgia is 49 ppb;
- Georgia contributes 3% of the total manmade ppb >= 85 ppb in North Carolina;
- The highest daily average 8-hr contribution from Georgia to North Carolina is 17 ppb; which is 18% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

Kentucky's Contribution to North Carolina:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 21% of the 8-hr exceedences and at least 5 ppb to 5% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Kentucky is 14 ppb;
- The total contribution from Kentucky is equivalent to 8% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- Kentucky contributes least 5 ppb to 24% of the 8-hr exceedences and at least 10 ppb to 7% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Kentucky is 22 ppb;
- Kentucky contributes 4% of the total manmade ppb >= 85 ppb in North Carolina;
- The highest daily average 8-hr contribution from Kentucky to North Carolina is 9 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

Ohio's Contribution to North Carolina:

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 16% of the 8-hr exceedences and at least 5 ppb to 5% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Ohio is 12 ppb;
- The total contribution from Ohio is equivalent to 7% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- Ohio contributes least 5 ppb to 17% of the 8-hr exceedences and at least 10 ppb to 7% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Ohio is 29 ppb;
- Ohio contributes 4% of the total manmade ppb >= 85 ppb in North Carolina;
- The highest daily average 8-hr contribution from Ohio to North Carolina is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

South Carolina's Contribution to North Carolina:

UAM-V zero-out modeling:

- South Carolina contributes at least 10 ppb to 14% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from South Carolina is 38 ppb;
- The total contribution from South Carolina is equivalent to 21% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- South Carolina contributes least 10 ppb to 25% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from South Carolina is 50 ppb;
- South Carolina contributes 9% of the total manmade ppb >= 85 ppb in North Carolina;
- The highest daily average 8-hr contribution from South Carolina to North Carolina is 17 ppb; which is 18% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

Tennessee's Contribution to North Carolina:

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 14% of the 8-hr exceedences and at least 10 ppb to 6% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Tennessee is 58 ppb;
- The total contribution from Tennessee is equivalent to 11% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 25% of the 8-hr exceedences and at least 10 ppb to 6% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Tennessee is 54 ppb;
- Tennessee contributes 6% of the total manmade ppb >= 85 ppb in North Carolina;
- The highest daily average 8-hr contribution from Tennessee to North Carolina is 14 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

Virginia's Contribution to North Carolina:

UAM-V zero-out modeling:

- Virginia contributes at least 5 ppb to 21% of the 8-hr exceedences and at least 10 ppb to 6% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Virginia is 34 ppb;
- The total contribution from Virginia is equivalent to 22% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- Virginia contributes least 5 ppb to 33% of the 8-hr exceedences and at least 10 ppb to 11% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from Virginia is 35 ppb;
- Virginia contributes 6% of the total manmade ppb >= 85 ppb in North Carolina;
- The highest daily average 8-hr contribution from Virginia to North Carolina is 15 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

West Virginia's Contribution to North Carolina:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 15% of the 8-hr exceedences and at least 10 ppb to 4% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from West Virginia is 27 ppb;
- The total contribution from West Virginia is equivalent to 15% of the total ppb >= 85 ppb in North Carolina.

CAMx modeling:

- West Virginia contributes least 5 ppb to 16% of the 8-hr exceedences in North Carolina; the maximum 8-hr contribution from West Virginia is 16 ppb;
- West Virginia contributes 3% of the total manmade ppb >= 85 ppb in North Carolina;
- The highest daily average 8-hr contribution from West Virginia to North Carolina is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in North Carolina on that day.

-- Ohio

Alabama's Contribution to Ohio:

UAM-V zero-out modeling:

- Alabama contributes at least 5 ppb to 7% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Alabama is 14 ppb;
- The total contribution from Alabama is equivalent to 8% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Alabama contributes at least 5 ppb to 11% of the 8-hr exceedences and at least 10 ppb to 8% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Alabama is 22 ppb;
- Alabama contributes 3% of the total manmade ppb >= 85 ppb in Ohio;
- The highest daily average 8-hr contribution from Alabama to Ohio is 11 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

Illinois's Contribution to Ohio:

UAM-V zero-out modeling:

- Illinois contributes at least 5 ppb to 10% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Illinois is 11 ppb;
- The total contribution from Illinois is equivalent to 12% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Illinois contributes at least 5 ppb to 27% of the 8-hr exceedences and at least 10 ppb to 9% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Illinois is 18 ppb;
- Illinois contributes 4% of the total manmade ppb >= 85 ppb in Ohio;
- The highest daily average 8-hr contribution from Illinois to Ohio is 10 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

Indiana's Contribution to Ohio:

UAM-V zero-out modeling:

- Indiana contributes at least 5 ppb to 33% of the 8-hr exceedences and at least 10 ppb to 11% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Indiana is 21 ppb;
- The total contribution from Indiana is equivalent to 32% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Indiana contributes at least 10 ppb to 34% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Indiana is 31 ppb;
- Indiana contributes 11% of the total manmade ppb >= 85 ppb in Ohio;
- The highest daily average 8-hr contribution from Indiana to Ohio is 17 ppb; which is 19% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

Kentucky's Contribution to Ohio:

UAM-V zero-out modeling:

- Kentucky contributes at least 10 ppb to 31% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Kentucky is 51 ppb;
- The total contribution from Kentucky is equivalent to 50% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Kentucky contributes at least 10 ppb to 43% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Kentucky is 52 ppb;
- Kentucky contributes 15% of the total manmade ppb >= 85 ppb in Ohio;
- The highest daily average 8-hr contribution from Kentucky to Ohio is 25 ppb; which is 27% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

Michigan's Contribution to Ohio:

UAM-V zero-out modeling:

- Michigan contributes at least 10 ppb to 16% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Michigan is 45 ppb;
- The total contribution from Michigan is equivalent to 24% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Michigan contributes at least 10 ppb to 19% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Michigan is 42 ppb;
- Michigan contributes 6% of the total manmade ppb >= 85 ppb in Ohio;
- The highest daily average 8-hr contribution from Michigan to Ohio is 19 ppb; which is 21% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

Missouri's Contribution to Ohio:

UAM-V zero-out modeling:

- Missouri contributes at least 2 ppb to 4% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Missouri is 5 ppb;
- The total contribution from Missouri is equivalent to 2% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Missouri contributes at least 2 ppb to 12% of the 8-hr exceedences and at least 5 ppb to 2% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Missouri is 14 ppb;
- The highest daily average 8-hr contribution from Missouri to Ohio is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

North Carolina's Contribution to Ohio:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 7% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from North Carolina is 7 ppb;
- The total contribution from North Carolina is equivalent to 7% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 28% of the 8-hr exceedences and at least 5 ppb to 3% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from North Carolina is 9 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in Ohio.

Pennsylvania's Contribution to Ohio:

CAMx modeling:

- Pennsylvania contributes at least 2 ppb to 5% of the 8-hr exceedences and at least 5 ppb to 3% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Pennsylvania is 32 ppb;
- The highest daily average 8-hr contribution from Pennsylvania to Ohio is 8 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

Tennessee's Contribution to Ohio:

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 14% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Tennessee is 11 ppb;
- The total contribution from Tennessee is equivalent to 18% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 36% of the 8-hr exceedences and at least 10 ppb to 19% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Tennessee is 27 ppb;
- Tennessee contributes 7% of the total manmade ppb >= 85 ppb in Ohio;
- The highest daily average 8-hr contribution from Tennessee to Ohio is 13 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

Virginia's Contribution to Ohio:

UAM-V zero-out modeling:

- Virginia contributes at least 2 ppb to 6% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Virginia is 8 ppb;
- The total contribution from Virginia is equivalent to 7% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- Virginia contributes at least 2 ppb to 21% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from Virginia is 14 ppb;
- The highest daily average 8-hr contribution from Virginia to Ohio is 5 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

West Virginia's Contribution to Ohio:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 30% of the 8-hr exceedences and at least 10 ppb to 16% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from West Virginia is 53 ppb;
- The total contribution from West Virginia is equivalent to 30% of the total ppb >= 85 ppb in Ohio.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 27% of the 8-hr exceedences and at least 10 ppb to 13% of the 8-hr exceedences in Ohio; the maximum 8-hr contribution from West Virginia is 68

ppb;
- West Virginia contributes 8% of the total manmade ppb >= 85 ppb in Ohio;
- The highest daily average 8-hr contribution from West Virginia to Ohio is 30 ppb; which is 33% of the average 8-hr ozone concentration >= 85 ppb in Ohio on that day.

-- Pennsylvania

Alabama's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- Alabama contributes at least 2 ppb to 4% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Alabama is 5 ppb;
- The total contribution from Alabama is equivalent to 2% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- Alabama contributes at least 2 ppb to 14% of the 8-hr exceedences and at least 5 ppb to 5% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Alabama is 12 ppb;
- The highest daily average 8-hr contribution from Alabama to Pennsylvania is 7 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Illinois's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- Illinois contributes at least 2 ppb to 14% of the 8-hr exceedences and at least 5 ppb to 2% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Illinois is 10 ppb;
- The total contribution from Illinois is equivalent to 7% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- Illinois contributes at least 2 ppb to 35% of the 8-hr exceedences and at least 5 ppb to 18% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Illinois is 16 ppb;
- Illinois contributes 3% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Illinois to Pennsylvania is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Indiana's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- Indiana contributes at least 2 ppb to 19% of the 8-hr exceedences and at least 5 ppb to 6% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Indiana is 10 ppb;
- The total contribution from Indiana is equivalent to 10% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- Indiana contributes at least 5 ppb to 23% of the 8-hr exceedences and at least 10 ppb to 5% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Indiana is 14 ppb;
- Indiana contributes 4% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Indiana to Pennsylvania is 9 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Kentucky's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- Kentucky contributes at least 2 ppb to 28% of the 8-hr exceedences and at least 5 ppb to 9% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Kentucky is 12 ppb;
- The total contribution from Kentucky is equivalent to 13% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- Kentucky contributes at least 5 ppb to 33% of the 8-hr exceedences and at least 10 ppb to 11% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Kentucky is 20 ppb;
- Kentucky contributes 5% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Kentucky to Pennsylvania is 10 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Maryland/DC/Delaware's Contribution to Pennsylvania:

CAMx modeling:
- Maryland/DC/Delaware contribute at least 10 ppb to 17% of the 8-hr exceedences in

Pennsylvania; the maximum 8-hr contribution from Maryland/DC/Delaware is 50 ppb;

- Maryland/DC/Delaware contribute 6% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to Pennsylvania is 27 ppb; which is 30% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Michigan's Contribution to Pennsylvania:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 13% of the 8-hr exceedences and at least 5 ppb to 4% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Michigan is 24 ppb;
- The total contribution from Michigan is equivalent to 7% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:

- Michigan contributes at least 2 ppb to 23% of the 8-hr exceedences and at least 5 ppb to 11% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Michigan is 30 ppb;
- Michigan contributes 2% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Michigan to Pennsylvania is 8 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Missouri's Contribution to Pennsylvania:

UAM-V zero-out modeling:

- Missouri contributes at least 2 ppb to 3% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Missouri is 4 ppb;
- The total contribution from Missouri is equivalent to 2% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:

- Missouri contributes at least 2 ppb to 18% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Missouri is 8 ppb;
- The highest daily average 8-hr contribution from Missouri to Pennsylvania is 4 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

New Jersey's Contribution to Pennsylvania:

CAMx modeling:

- New Jersey contributes at least 2 ppb to 5% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from New Jersey is 40 ppb;
- The highest daily average 8-hr contribution from New Jersey to Pennsylvania is 17 ppb; which is 19% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

New York's Contribution to Pennsylvania:

CAMx modeling:

- New York contributes at least 2 ppb to 8% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from New York is 11 ppb;
- The highest daily average 8-hr contribution from New York to Pennsylvania is 5 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

North Carolina's Contribution to Pennsylvania:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 11% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from North Carolina is 5 ppb;
- The total contribution from North Carolina is equivalent to 8% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 28% of the 8-hr exceedences and at least 5 ppb to 4% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from North Carolina is 11 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from North Carolina to Pennsylvania is 11 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Ohio's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- Ohio contributes at least 5 ppb to 34% of the 8-hr exceedences and at least 10 ppb to 11% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Ohio is 48 ppb;
- The total contribution from Ohio is equivalent to 33% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- Ohio contributes at least 10 ppb to 48% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Ohio is 55 ppb;
- Ohio contributes 15% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Ohio to Pennsylvania is 18 ppb; which is 20% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Tennessee's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- Tennessee contributes at least 2 ppb to 4% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Tennessee is 4 ppb;
- The total contribution from Tennessee is equivalent to 5% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- Tennessee contributes at least 2 ppb to 40% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Tennessee is 13 ppb;
- Tennessee contributes 2% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Tennessee to Pennsylvania is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

Virginia's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- Virginia contributes at least 5 ppb to 12% of the 8-hr exceedences and at least 10 ppb to 5% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Virginia is 23 ppb;
- The total contribution from Virginia is equivalent to 19% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- Virginia contributes at least 5 ppb to 24% of the 8-hr exceedences and at least 10 ppb to 10% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from Virginia is 34 ppb;
- Virginia contributes 5% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from Virginia to Pennsylvania is 14 ppb; which is 16% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

West Virginia's Contribution to Pennsylvania:

UAM-V zero-out modeling:
- West Virginia contributes at least 10 ppb to 30% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from West Virginia is 45 ppb;
- The total contribution from West Virginia is equivalent to 47% of the total ppb >= 85 ppb in Pennsylvania.

CAMx modeling:
- West Virginia contributes at least 10 ppb to 31% of the 8-hr exceedences in Pennsylvania; the maximum 8-hr contribution from West Virginia is 63 ppb;
- West Virginia contributes 12% of the total manmade ppb >= 85 ppb in Pennsylvania;
- The highest daily average 8-hr contribution from West Virginia to Pennsylvania is 26 ppb; which is 28% of the average 8-hr ozone concentration >= 85 ppb in Pennsylvania on that day.

-- Rhode Island

Illinois's Contribution to Rhode Island:

UAM-V zero-out modeling:
- Illinois contributes at least 2 ppb to 3% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Illinois is 3 ppb;
- The total contribution from Illinois is equivalent to 4% of the total ppb >= 85 ppb in Rhode Island.

CAMx modeling:
- Illinois contributes at least 2 ppb to 18% of the 8-hr exceedences and at least 5 ppb to 2% of the

8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Illinois is 6 ppb;

- Illinois contributes 3% of the total manmade ppb >= 85 ppb in Rhode Island in one episode;
- The highest daily average 8-hr contribution from Illinois to Rhode Island is 5 ppb; which is 4% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

Maryland/DC/Delaware's Contribution to Rhode Island:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 5 ppb to 34% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Maryland/DC/Delaware is 15 ppb;
- Maryland/DC/Delaware contribute 5% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to Rhode Island is 9 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

New Jersey's Contribution to Rhode Island:

CAMx modeling:

- New Jersey contributes at least 10 ppb to 61% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from New Jersey is 36 ppb;
- New Jersey contributes 17% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from New Jersey to Rhode Island is 19 ppb; which is 20% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

New York's Contribution to Rhode Island:

CAMx modeling:

- New York contributes at least 10 ppb to 84% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from New York is 34 ppb;
- New York contributes 20% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from New York to Rhode Island is 25 ppb; which is 27% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

North Carolina's Contribution to Rhode Island:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 3% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from North Carolina is 3 ppb;
- The total contribution from North Carolina is equivalent to 3% of the total ppb >= 85 ppb in Rhode Island.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 14% of the 8-hr exceedences and at least 5 ppb to 8% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from North Carolina is 10 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from North Carolina to Rhode Island is 6 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

Ohio's Contribution to Rhode Island:

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 33% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Ohio is 4 ppb;
- The total contribution from Ohio is equivalent to 14% of the total ppb >= 85 ppb in Rhode Island.

CAMx modeling:

- Ohio contributes at least 5 ppb to 29% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Ohio is 11 ppb;
- Ohio contributes 4% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from Ohio to Rhode Island is 9 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

Pennsylvania's Contribution to Rhode Island:

CAMx modeling:

- Pennsylvania contributes at least at least 5 ppb to 82% of the 8-hr exceedences and at least 10 ppb to 39% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Pennsylvania is 24 ppb;

- Pennsylvania contributes 12% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from Pennsylvania to Rhode Island is 21 ppb; which is 23% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

Virginia's Contribution to Rhode Island:

UAM-V zero-out modeling:

- Virginia contributes at least 2 ppb to 22% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Virginia is 6 ppb;
- The total contribution from Virginia is equivalent to 11% of the total ppb >= 85 ppb in Rhode Island.

CAMx modeling:

- Virginia contributes at least 5 ppb to 24% of the 8-hr exceedences and at least 10 ppb to 7% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from Virginia is 19 ppb;
- Virginia contributes 4% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from Virginia to Rhode Island is 11 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

West Virginia's Contribution to Rhode Island:

UAM-V zero-out modeling:

- West Virginia contributes at least 2 ppb to 38% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from West Virginia is 4 ppb;
- The total contribution from West Virginia is equivalent to 13% of the total ppb >= 85 ppb in Rhode Island.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 16% of the 8-hr exceedences in Rhode Island; the maximum 8-hr contribution from West Virginia is 7 ppb;
- West Virginia contributes 2% of the total manmade ppb >= 85 ppb in Rhode Island;
- The highest daily average 8-hr contribution from West Virginia to Rhode Island is 6 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Rhode Island on that day.

-- South Carolina

Alabama's Contribution to South Carolina:

UAM-V zero-out modeling:

- Alabama contributes at least 2 ppb to 14% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Alabama is 6 ppb;
- The total contribution from Alabama is equivalent to 5% of the total ppb >= 85 ppb in South Carolina.

CAMx modeling:

- Alabama contributes at least 5 ppb to 22% of the 8-hr exceedences and at least 10 ppb to 5% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Alabama is 20 ppb;
- Alabama contributes 4% of the total manmade ppb >= 85 ppb in South Carolina;
- The highest daily average 8-hr contribution from Alabama to South Carolina is 10 ppb; which is 11% of the average 8-hr ozone concentration >= 85 ppb in South Carolina on that day.

Georgia's Contribution to South Carolina:

UAM-V zero-out modeling:

- Georgia contributes at least 10 ppb to 19% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Georgia is 29 ppb;
- The total contribution from Georgia is equivalent to 19% of the total ppb >= 85 ppb in South Carolina.

CAMx modeling:

- Georgia contributes at least 5 ppb to 51% of the 8-hr exceedences and at least 10 ppb to 13% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Georgia is 61 ppb;
- Georgia contributes 15% of the total manmade ppb >= 85 ppb in South Carolina;
- The highest daily average 8-hr contribution from Georgia to South Carolina is 33 ppb; which is 36% of the average 8-hr ozone concentration >= 85 ppb in South Carolina on that day.

Kentucky's Contribution to South Carolina:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 15% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Kentucky is 5 ppb;
- The total contribution from Kentucky is equivalent to 7% of the total ppb >= 85 ppb in South Carolina.

CAMx modeling:

- Kentucky contributes at least 2 ppb to 46% of the 8-hr exceedences and at least 5 ppb to 9% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Kentucky is 10 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in South Carolina;
- The highest daily average 8-hr contribution from Kentucky to South Carolina is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in South Carolina on that day.

North Carolina's Contribution to South Carolina:

UAM-V zero-out modeling:

- North Carolina contributes at least 5 ppb to 49% of the 8-hr exceedences and at least 10 ppb to 31% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from North Carolina is 44 ppb;
- The total contribution from North Carolina is equivalent to 43% of the total ppb >= 85 ppb in South Carolina.

CAMx modeling:

- North Carolina contributes at least 10 ppb to 39% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from North Carolina is 45 ppb;
- North Carolina contributes 13% of the total manmade ppb >= 85 ppb in South Carolina;
- The highest daily average 8-hr contribution from North Carolina to South Carolina is 33 ppb; which is 37% of the average 8-hr ozone concentration >= 85 ppb in South Carolina on that day.

Tennessee's Contribution to South Carolina:

UAM-V zero-out modeling:

- Tennessee contributes at least 5 ppb to 35% of the 8-hr exceedences and at least 10 ppb to 16% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Tennessee is 25 ppb;
- The total contribution from Tennessee is equivalent to 27% of the total ppb >= 85 ppb in South Carolina.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 54% of the 8-hr exceedences and at least 10 ppb to 37% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Tennessee is 26 ppb;
- Tennessee contributes 10% of the total manmade ppb >= 85 ppb in South Carolina;
- The highest daily average 8-hr contribution from Tennessee to South Carolina is 14 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in South Carolina on that day.

Virginia's Contribution to South Carolina:

UAM-V zero-out modeling:

- Virginia contributes at least 2 ppb to 9% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Virginia is 4 ppb;
- The total contribution from Virginia is equivalent to 6% of the total ppb >= 85 ppb in South Carolina.

CAMx modeling:

- Virginia contributes at least 2 ppb to 22% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from Virginia is 6 ppb;
- The highest daily average 8-hr contribution from Virginia to South Carolina is 4 ppb; which is 4% of the average 8-hr ozone concentration >= 85 ppb in South Carolina on that day.

West Virginia's Contribution to South Carolina:

UAM-V zero-out modeling:

- West Virginia contributes at least 2 ppb to 11% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from West Virginia is 5 ppb;
- The total contribution from West Virginia is equivalent to 7% of the total ppb >= 85 ppb in South Carolina.

CAMx modeling:

- West Virginia contributes at least 2 ppb to 23% of the 8-hr exceedences in South Carolina; the maximum 8-hr contribution from West Virginia is 6 ppb.

-- Tennessee

Alabama's Contribution to Tennessee:

UAM-V zero-out modeling:

- Alabama contributes at least 5 ppb to 12% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Alabama is 52 ppb;
- The total contribution from Alabama is equivalent to 10% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- Alabama contributes at least 10 ppb to 20% of the 8-hr exceedences and at least 10 ppb to 8% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Alabama is 76 ppb;
- Alabama contributes 7% of the total manmade ppb >= 85 ppb in Tennessee;
- The highest daily average 8-hr contribution from Alabama to Tennessee is 21 ppb; which is 24% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

Georgia's Contribution to Tennessee:

UAM-V zero-out modeling:

- Georgia contributes at least 5 ppb to 11% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Georgia is 23 ppb;
- The total contribution from Georgia is equivalent to 9% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- Georgia contributes at least 5 ppb to 25% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Georgia is 45 ppb;
- Georgia contributes 5% of the total manmade ppb >= 85 ppb in Tennessee;
- The highest daily average 8-hr contribution from Georgia to Tennessee is 16 ppb; which is 16% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

Illinois's Contribution to Tennessee:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 7% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Illinois is 5 ppb;
- The total contribution from Illinois is equivalent to 3% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- Illinois contributes at least 2 ppb to 11% of the 8-hr exceedences and at least 5 ppb to 5% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Illinois is 17 ppb;
- The highest daily average 8-hr contribution from Illinois to Tennessee is 8 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

Indiana's Contribution to Tennessee:

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 7% of the 8-hr exceedences and at least 5 ppb to 2% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Indiana is 10 ppb;
- The total contribution from Indiana is equivalent to 3% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- Indiana contributes at least 5 ppb to 5% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Indiana is 13 ppb;
- The highest daily average 8-hr contribution from Indiana to Tennessee is 6 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

Kentucky's Contribution to Tennessee:

UAM-V zero-out modeling:

- Kentucky contributes at least 5 ppb to 23% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Kentucky is 27 ppb;
- The total contribution from Kentucky is equivalent to 19% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- Kentucky contributes at least 10 ppb to 26% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Kentucky is 52 ppb;

- Kentucky contributes 8% of the total manmade ppb >= 85 ppb in Tennessee;
- The highest daily average 8-hr contribution from Kentucky to Tennessee is 16 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

Missouri's Contribution to Tennessee:

UAM-V zero-out modeling:

- Missouri contributes at least 2 ppb to 4% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Missouri is 5 ppb;
- The total contribution from Missouri is equivalent to 2% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- Missouri contributes at least 2 ppb to 15% of the 8-hr exceedences and at least 5 ppb to 3% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Missouri is 11 ppb;
- The highest daily average 8-hr contribution from Missouri to Tennessee is 6 ppb; which is 6% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

North Carolina's Contribution to Tennessee:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 14% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from North Carolina is 16 ppb;
- The total contribution from North Carolina is equivalent to 6% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 14% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from North Carolina is 34 ppb;
- North Carolina contributes 3% of the total manmade ppb >= 85 ppb in Tennessee.
- The highest daily average 8-hr contribution from North Carolina to Tennessee is 12 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

Ohio's Contribution to Tennessee:

UAM-V zero-out modeling:

- Ohio contributes at least 5 ppb to 5% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Ohio is 16 ppb;
- The total contribution from Ohio is equivalent to 5% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- Ohio contributes at least 5 ppb to 9% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from Ohio is 34 ppb;
- Ohio contributes 3% of the total manmade ppb >= 85 ppb in Tennessee.
- The highest daily average 8-hr contribution from Ohio to Tennessee is 8 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

South Carolina's Contribution to Tennessee:

UAM-V zero-out modeling:

- South Carolina contributes at least 2 ppb to 10% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from South Carolina is 14 ppb;
- The total contribution from South Carolina is equivalent to 4% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- South Carolina contributes at least 5 ppb to 13% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from South Carolina is 21 ppb;
- South Carolina contributes 3% of the total manmade ppb >= 85 ppb in Tennessee.
- The highest daily average 8-hr contribution from South Carolina to Tennessee is 12 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in Tennessee on that day.

West Virginia's Contribution to Tennessee:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 4% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from West Virginia is 43 ppb;
- The total contribution from West Virginia is equivalent to 5% of the total ppb >= 85 ppb in Tennessee.

CAMx modeling:

- West Virginia contributes at least 2 ppb to 11% of the 8-hr exceedences and at least 5 ppb to 4% of the 8-hr exceedences in Tennessee; the maximum 8-hr contribution from West Virginia is 20 ppb;

-- Virginia

Alabama's Contribution to Virginia:

UAM-V zero-out modeling:

- Alabama contributes at least 2 ppb to 5% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Alabama is 6 ppb;

CAMx modeling:

- Alabama contributes at least 5 ppb to 8% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Alabama is 11 ppb;
- The highest daily average 8-hr contribution from Alabama to Virginia is 8 ppb; which is 9% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

Georgia's Contribution to Virginia:

UAM-V zero-out modeling:

- Georgia contributes at least 2 ppb to 6% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Georgia is 5 ppb;

CAMx modeling:

- Georgia contributes at least 5 ppb to 9% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Georgia is 14 ppb;
- The highest daily average 8-hr contribution from Georgia to Virginia is 8 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

Indiana's Contribution to Virginia:

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 3% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Indiana is 3 ppb;
- The total contribution from Indiana is equivalent to 2% of the total ppb >= 85 ppb in Virginia.

CAMx modeling:

- Indiana contributes at least 2 ppb to 23% of the 8-hr exceedences and at least 5 ppb to 7% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Indiana is 10 ppb;
- Indiana contributes 2% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from Indiana to Virginia is 5 ppb; which is 5% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

Kentucky's Contribution to Virginia:

UAM-V zero-out modeling:

- Kentucky contributes at least 2 ppb to 15% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Kentucky is 8 ppb;
- The total contribution from Kentucky is equivalent to 4% of the total ppb >= 85 ppb in Virginia.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 14% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Kentucky is 21 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from Kentucky to Virginia is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

Maryland/DC/Delaware's Contribution to Virginia:

CAMx modeling:

- Maryland/DC/Delaware contribute at least 5 ppb to 45% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Maryland/DC/Delaware is 60 ppb;
- Maryland/DC/Delaware contribute 11% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from Maryland/DC/Delaware to Virginia is 19 ppb; which is 21% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

North Carolina's Contribution to Virginia:

UAM-V zero-out modeling:

- North Carolina contributes at least 5 ppb to 19% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from North Carolina is 45 ppb;
- The total contribution from North Carolina is equivalent to 12% of the total ppb >= 85 ppb in Virginia.

CAMx modeling:

- North Carolina contributes at least 5 ppb to 28% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from North Carolina is 52 ppb;
- North Carolina contributes 8% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from North Carolina to Virginia is 41 ppb; which is 45% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

Ohio's Contribution to Virginia:

UAM-V zero-out modeling:

- Ohio contributes at least 2 ppb to 19% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Ohio is 6 ppb;
- The total contribution from Ohio is equivalent to 5% of the total ppb >= 85 ppb in Virginia.

CAMx modeling:

- Ohio contributes at least 5 ppb to 24% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Ohio is 11 ppb;
- Ohio contributes 3% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from Ohio to Virginia is 8 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

Pennsylvania's Contribution to Virginia:

CAMx modeling:

- Pennsylvania contributes at least 5 ppb to 45% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Pennsylvania is 26 ppb;
- Pennsylvania contributes 5% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from Pennsylvania to Virginia is 9 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

South Carolina's Contribution to Virginia:

UAM-V zero-out modeling:

- South Carolina contributes at least 2 ppb to 6% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from South Carolina is 4 ppb;

CAMx modeling:

- South Carolina contributes at least 2 ppb to 12% of the 8-hr exceedences and at least 5 ppb to 6% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from South Carolina is 11 ppb;
- The highest daily average 8-hr contribution from South Carolina to Virginia is 4 ppb; which is 4% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

Tennessee's Contribution to Virginia:

UAM-V zero-out modeling:

- Tennessee contributes at least 2 ppb to 7% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Tennessee is 5 ppb;
- The total contribution from Tennessee is equivalent to 2% of the total ppb >= 85 ppb in Virginia.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 12% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from Tennessee is 11 ppb;
- Tennessee contributes 2% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from Tennessee to Virginia is 7 ppb; which is 7% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

West Virginia's Contribution to Virginia:

UAM-V zero-out modeling:

- West Virginia contributes at least 5 ppb to 23% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from West Virginia is 31 ppb;
- The total contribution from West Virginia is equivalent to 13% of the total ppb >= 85 ppb in

Virginia.

CAMx modeling:

- West Virginia contributes at least 5 ppb to 28% of the 8-hr exceedences in Virginia; the maximum 8-hr contribution from West Virginia is 25 ppb;
- West Virginia contributes 4% of the total manmade ppb >= 85 ppb in Virginia;
- The highest daily average 8-hr contribution from West Virginia to Virginia is 13 ppb; which is 15% of the average 8-hr ozone concentration >= 85 ppb in Virginia on that day.

-- West Virginia

Illinois's Contribution to West Virginia:

UAM-V zero-out modeling:

- Illinois contributes at least 2 ppb to 25% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Illinois is 9 ppb;
- The total contribution from Illinois is equivalent to 9% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- Illinois contributes at least 5 ppb to 18% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Illinois is 11 ppb;
- Illinois contributes 3% of the total manmade ppb >= 85 ppb in West Virginia;
- The highest daily average 8-hr contribution from Illinois to West Virginia is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

Indiana's Contribution to West Virginia:

UAM-V zero-out modeling:

- Indiana contributes at least 2 ppb to 46% of the 8-hr exceedences and at least 5 ppb to 8% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Indiana is 10 ppb;
- The total contribution from Indiana is equivalent to 16% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- Indiana contributes at least 5 ppb to 42% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Indiana is 18 ppb;
- Indiana contributes 5% of the total manmade ppb >= 85 ppb in West Virginia;
- The highest daily average 8-hr contribution from Indiana to West Virginia is 13 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

Kentucky's Contribution to West Virginia:

UAM-V zero-out modeling:

- Kentucky contributes at least 10 ppb to 40% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Kentucky is 40 ppb;
- The total contribution from Kentucky is equivalent to 41% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- Kentucky contributes at least 5 ppb to 69% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Kentucky is 64 ppb;
- Kentucky contributes 20% of the total manmade ppb >= 85 ppb in West Virginia;
- The highest daily average 8-hr contribution from Kentucky to West Virginia is 29 ppb; which is 30% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

Michigan's Contribution to West Virginia:

UAM-V zero-out modeling:

- Michigan contributes at least 2 ppb to 20% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Michigan is 12 ppb;
- The total contribution from Michigan is equivalent to 9% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- Michigan contributes at least 5 ppb to 17% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Michigan is 18 ppb;
- Michigan contributes 3% of the total manmade ppb >= 85 ppb in West Virginia.

- The highest daily average 8-hr contribution from Michigan to West Virginia is 12 ppb; which is 12% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

North Carolina's Contribution to West Virginia:

UAM-V zero-out modeling:

- North Carolina contributes at least 2 ppb to 7% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from North Carolina is 6 ppb;
- The total contribution from North Carolina is equivalent to 4% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- North Carolina contributes at least 2 ppb to 29% of the 8-hr exceedences and at least 5 ppb to 9% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from North Carolina is 11 ppb;
- North Carolina contributes 2% of the total manmade ppb >= 85 ppb in West Virginia.
- The highest daily average 8-hr contribution from North Carolina to West Virginia is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

Ohio's Contribution to West Virginia:

UAM-V zero-out modeling:

- Ohio contributes at least 10 ppb to 40% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Ohio is 39 ppb;
- The total contribution from Ohio is equivalent to 54% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- Ohio contributes at least 10 ppb to 76% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Ohio is 52 ppb;
- Ohio contributes 26% of the total manmade ppb >= 85 ppb in West Virginia.
- The highest daily average 8-hr contribution from Ohio to West Virginia is 36 ppb; which is 37% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

Tennessee's Contribution to West Virginia:

UAM-V zero-out modeling:

- Tennessee contributes at least 2 ppb to 15% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Tennessee is 9 ppb;
- The total contribution from Tennessee is equivalent to 7% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- Tennessee contributes at least 5 ppb to 21% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Tennessee is 18 ppb;
- Tennessee contributes 4% of the total manmade ppb >= 85 ppb in West Virginia.
- The highest daily average 8-hr contribution from Tennessee to West Virginia is 13 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

Virginia's Contribution to West Virginia:

UAM-V zero-out modeling:

- Virginia contributes at least 2 ppb to 10% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Virginia is 7 ppb;
- The total contribution from Virginia is equivalent to 5% of the total ppb >= 85 ppb in West Virginia.

CAMx modeling:

- Virginia contributes at least 5 ppb to 10% of the 8-hr exceedences in West Virginia; the maximum 8-hr contribution from Virginia is 13 ppb;
- Virginia contributes 2% of the total manmade ppb >= 85 ppb in West Virginia.
- The highest daily average 8-hr contribution from Virginia to West Virginia is 9 ppb; which is 10% of the average 8-hr ozone concentration >= 85 ppb in West Virginia on that day.

-- Wisconsin

Illinois's Contribution to Wisconsin:

UAM-V zero-out modeling:

- Illinois contributes at least 10 ppb to 94% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Illinois is 44 ppb;

- The total contribution from Illinois is equivalent to 100% of the total ppb >= 85 ppb in Wisconsin.

CAMx modeling:

- Illinois contributes at least 10 ppb to 99% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Illinois is 46 ppb;
- Illinois contributes 42% of the total manmade ppb >= 85 ppb in Wisconsin;
- The highest daily average 8-hr contribution from Illinois to Wisconsin is 44 ppb; which is 50% of the average 8-hr ozone concentration >= 85 ppb in Wisconsin on that

Indiana's Contribution to Wisconsin:

UAM-V zero-out modeling:

- Indiana contributes at least 5 ppb to 11% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Indiana is 8 ppb;
- The total contribution from Indiana is equivalent to 11% of the total ppb >= 85 ppb in Wisconsin.

CAMx modeling:

- Indiana contributes at least 10 ppb to 15% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Indiana is 13 ppb;
- Indiana contributes 4% of the total manmade ppb >= 85 ppb in Wisconsin;
- The highest daily average 8-hr contribution from Indiana to Wisconsin is 12 ppb; which is 14% of the average 8-hr ozone concentration >= 85 ppb in Wisconsin on that day.

Kentucky's Contribution to Wisconsin:

UAM-V zero-out modeling:

- Kentucky contributes at least 5 ppb to 7% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Kentucky is 6 ppb;
- The total contribution from Kentucky is equivalent to 10% of the total ppb >= 85 ppb in Wisconsin.

CAMx modeling:

- Kentucky contributes at least 10 ppb to 15% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Kentucky is 13 ppb;
- Kentucky contributes 3% of the total manmade ppb >= 85 ppb in Wisconsin;
- The highest daily average 8-hr contribution from Kentucky to Wisconsin is 11 ppb; which is 13% of the average 8-hr ozone concentration >= 85 ppb in Wisconsin on that day.

Missouri's Contribution to Wisconsin:

UAM-V zero-out modeling:

- Missouri contributes at least 2 ppb to 57% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Missouri is 7 ppb;
- The total contribution from Missouri is equivalent to 36% of the total ppb >= 85 ppb in Wisconsin.

CAMx modeling:

- Missouri contributes at least 5 ppb to 77% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Missouri is 18 ppb;
- Missouri contributes 12% of the total manmade ppb >= 85 ppb in Wisconsin;
- The highest daily average 8-hr contribution from Missouri to Wisconsin is 17 ppb; which is 20% of the average 8-hr ozone concentration >= 85 ppb in Wisconsin on that day.

Tennessee's Contribution to Wisconsin:

UAM-V zero-out modeling:

- Tennessee contributes at least 2 ppb to 13% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Tennessee is 3 ppb;
- The total contribution from Tennessee is equivalent to 9% of the total ppb >= 85 ppb in Wisconsin.

CAMx modeling:

- Tennessee contributes at least 2 ppb to 16% of the 8-hr exceedences in Wisconsin; the maximum 8-hr contribution from Tennessee is 7 ppb;
- Tennessee contributes 2% of the total manmade ppb >= 85 ppb in Wisconsin;
- The highest daily average 8-hr contribution from Tennessee to Wisconsin is 7 ppb; which is 8% of the average 8-hr ozone concentration >= 85 ppb in Wisconsin on that day.

States Not Making a Significant Contribution for the 8-Hr NAAQS

Alabama -– 8 hr

- Indiana, Massachusetts, Michigan, Virginia, and West Virginia have no contributions more than 2 ppb to 8-hr exceedences in Alabama in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Alabama in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Alabama in the CAMx modeling;
- Missouri contributes 1% or less to the total ppb reduced and population weighted total ppb reduced >= 85 ppb in Alabama in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Alabama in the CAMx modeling;
- Ohio contributes less than 1% to the 8-hr exceedences in the range of 2-5 ppb in Alabama in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Alabama in the CAMx modeling.

Connecticut -– 8 hr

- Alabama, Georgia, Kentucky, Missouri, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Connecticut in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Connecticut in the CAMx modeling;
- Indiana and Massachusetts contribute 1% or less to the 8-hr exceedences in the range of 2-5 ppb in Connecticut in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Connecticut in the CAMx modeling.

District of Columbia -– 8 hr

- Georgia, Indiana, Massachusetts, Missouri, North Carolina, South Carolina, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in the District of Columbia in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in the District of Columbia in the CAMx modeling;
- Alabama contributes only one value of the 8-hr exceedences in the range of 2-5 ppb and 1% to the total ppb >= 85 ppb in the District of Columbia in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in the District of Columbia in the CAMx modeling;
- Connecticut/Rhode Island, New Jersey and New York contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in the District of Columbia in the CAMx modeling.

Delaware -– 8 hr

- Alabama, Georgia, Massachusetts, Missouri, South Carolina, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Delaware in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Delaware in the CAMx modeling;
- Connecticut/Rhode Island, New Jersey and New York contribute less than 1% to the total manmade ppb >= 85 ppb and/or have no contributions more than 2 ppb to 8-hr exceedences in Delaware in the CAMx modeling.

Georgia -– 8 hr

- Indiana, Massachusetts, Michigan, Ohio, Virginia, West Virginia, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Georgia in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Georgia in the CAMx modeling;
- Illinois and Missouri contribute 1% or less to the total ppb >= 85 ppb in Georgia in the UAM-V

zero-out modeling and contribute less than 1% to the total manmade ppb >= 85 ppb in Georgia in the CAMx modeling;
- Connecticut/Rhode Island, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Georgia in the CAMx modeling.

Illinois -– 8 hr
- Massachusetts, North Carolina, South Carolina, Virginia, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Illinois in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Illinois in the CAMx modeling;
- Michigan, Ohio and West Virgiania contribute less than 1% to the 8-hr exceedences in the range of 2-5 ppb in Illinois in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Illinois in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, and New York contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Illinois in the CAMx modeling.

Indiana -– 8 hr
- Massachusetts and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Indiana in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Indiana in the CAMx modeling;
- Michigan contributes less than 1% to the 8-hr exceedences in the range of 2-5 ppb in Indiana in the UAM-V zero-out modeling and contribute less than 1% to the total manmade ppb >= 85 ppb in Indiana in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Indiana in the CAMx modeling;
- Virginia contributes 1% or less to the total manmade ppb >= 85 ppb in Indiana and have 3 ppb or less of the highest daily average contribuiton to 8-hr ozone concentration >= 85 ppb in Indiana in the CAMx modeling.

Kentucky -– 8 hr
- Massachusetts and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Kentucky in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Kentucky in the CAMx modeling;
- Michigan contributes less than 1% to the total manmade ppb >= 85 ppb in Kentucky and have 2 ppb or less of the highest daily average contribuiton to 8-hr ozone concentration >= 85 ppb in the CAMx modeling;
- Virginia contributes less than 1% to the 8-hr exceedences in the range of 2-5 ppb in Kentucky in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Kentucky in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Kentucky in the CAMx modeling.

Massachusetts -– 8 hr
- Alabama, Georgia, Kentucky, Missouri, Tennessee, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Massachusetts in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Massachusetts in the CAMx modeling;
- Illinois contributes 1% or less to the 8-hr exceedences in the range of 2-5 ppb in Massachusetts in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in

Massachusetts in the CAMx modeling.

Maryland -– 8 hr • Massachusetts, Missouri, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Maryland in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Maryland in the CAMx modeling;

- Alabama and South Carolina contribute 1% or less to the total ppb and the population-weighted total ppb >= 85 ppb in Maryland in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Maryland in the CAMx modeling;
- Connecticut/Rhode Island, New Jersey, and New York contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Maryland in the CAMx modeling.

Maine -– 8 hr • Alabama, Georgia, Illinois, Indiana, kentucky, Missouri, Ohio, South Carolina, Tennessee, West Virginia, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Maine in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Maine in the CAMx modeling;

- Michigan contributes 1% or less to the 8-hr exceedences in the range of 2-5 ppb in Maine in the UAM-V zero-out modeling and contributes less than 5 ppb of the maximum 8-hr contribution to 8-hr ozone concentration >= 85 ppb in Maine in the CAMx modeling.

Michigan -– 8 hr • Massachusetts, North Carolina, South Carolina, and Virginia have no contributions more than 2 ppb to 8-hr exceedences in Michigan in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Michigan in the CAMx modeling;

- West Virginia contributes 1% or less to the 8-hr exceedences in the range of 2-5 ppb in Michigan in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Michigan in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Michigan in the CAMx modeling.

Missouri -– 8 hr • Massachusetts, Michigan, North Carolina, Ohio, South Carolina, Virginia, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Missouri in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Missouri in the CAMx modeling;

- West Virginia contributes 1% or less to the 8-hr exceedences in the range of 2-5 ppb in Missouri in the UAM-V zero-out modeling and has no contributions more than 2 ppb to 8-hr exceedences in Missouri in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Missouri in the CAMx modeling.

North Carolina -– 8 hr • Massachusetts and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in North Carolina in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in North Carolina in the CAMx modeling;

- Illinois and Missouri contribute less than 1% to the 8-hr exceedences in the range of 2-5 ppb in North Carolina in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in North Carolina in the CAMx modeling;
- Indiana and Michigan contribute 1% or less to the total manmade ppb >= 85 ppb in North Carolina and have 3 ppb or less of the highest daily average contribuiton to 8-hr ozone concentration >= 85

ppb in the CAMx modeling;

- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in North Carolina in the CAMx modeling.

New Hampshire -– 8 hr

- Alabama, Georgia, Illinois, Indiana, Kentucky, Michigan, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in New Hampshire in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in New Hampshire in the CAMx modeling;
- West Virginia contribute only 1% to the total ppb and the population-weighted total ppb >= 85 ppb in New Hampshire in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in New Hampshire in the CAMx modeling.

New Jersey -– 8 hr

- Alabama, Georgia, Massachusetts, Missouri and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in New Jersey in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in New Jersey in the CAMx modeling;
- South Carolina and Tennessee contribute contribute less than 1% to the 8-hr exceedences in the range of 2-5 ppb in New Jersey and only 1% to the total ppb and the population-weighted total ppb >= 85 ppb in New Jersey in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in New Jersey in the CAMx modeling.

New York -– 8 hr

- Alabama, Georgia, Massachusetts, Missouri and South Carolina have no contributions more than 2 ppb to 8-hr exceedences in New York in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in New York in the CAMx modeling;
- Wisconsin contribute contribute only 1% to the total ppb and the population-weighted total ppb >= 85 ppb in New York in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in New York in the CAMx modeling;
- Tennessee contribute contribute less than 1% to the 8-hr exceedences in the range of 2-5 ppb in New York in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in New York in the CAMx modeling.

Ohio -– 8 hr

- Georgia and Massachusetts have no contributions more than 2 ppb to 8-hr exceedences in Ohio in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Ohio in the CAMx modeling;
- South Carolina and Wisconsin contribute less than 1% to the 8-hr exceedences in the range of 2-5 ppb in Ohio in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Ohio in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey and New York contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Ohio in the CAMx modeling.

Pennsylvania -– 8 hr

- Georgia, Massachusetts, and South Carolina have no contributions more than 2 ppb to 8-hr exceedences in Pennsylvania in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Pennsylvania in the CAMx modeling;
- Wisconsin contribute less than 1% to the 8-hr exceedences in the range of 2-5 ppb in

Pennsylvania in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in Pennsylvania in the CAMx modeling;

- Connecticut/Rhode Island contribute less than 1% to the total manmade ppb >= 85 ppb and has no contribution more than 2 ppb to 8-hr exceedences in Pennsylvania in the CAMx modeling.

Rhode Island -– 8 hr

- Alabama, Georgia, Indiana, Kentucky, Massachusetts, Michigan, Missouri, South Carolina, Tennessee, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Rhode Island in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Rhode Island in the CAMx modeling;

South Carolina -– 8 hr

- Illinois, Massachusetts, Michigan, Missouri and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in South Carolina in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in South Carolina in the CAMx modeling;
- Indiana and Ohio contribute less than 1% to the 8-hr exceedences in the range of 2-5 ppb in South Carolina in the UAM-V zero-out modeling and contribute 1% or less to the total manmade ppb >= 85 ppb in South Carolina in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in South Carolina in the CAMx modeling.

Tennessee -– 8 hr

- Massachusetts and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Tennessee in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Tennessee in the CAMx modeling;
- Michigan contributes less than 1% to the 8-hr exceedences in the range of 2-5 ppb in Tennessee in the UAM-V zero-out modeling and contribute less than 1% to the total manmade ppb >= 85 ppb in Tennessee in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, New York, and Pennsylvania contribute less than 1% to the total manmade ppb >= 85 ppb and have no contributions more than 2 ppb to 8-hr exceedences in Tennessee in the CAMx modeling;
- Virginia contributes 1% or less to the total manmade ppb >= 85 ppb and has 2 ppb or less of the highest daily average contribuiton to 8-hr ozone concentration >= 85 ppb in Tennessee in the CAMx modeling.

Virginia -– 8 hr

- Missouri, Massachusetts and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in Virginia in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Virginia in the CAMx modeling;
- Illinois contributes less than 1% to the 8-hr exceedences in the range of 2-5 ppb in Virginia in the UAM-V zero-out modeling and contribute less than 1% to the total manmade ppb >= 85 ppb in Virginia in the CAMx modeling;
- Michigan contributes 1% or less to the total manmade ppb >= 85 ppb in Virginia and have 3 ppb or less of the highest daily average contribuiton to 8-hr ozone concentration >= 85 ppb in Virginia in the CAMx modeling;
- Connecticut/Rhode Island, New Jersey, and New York contribute 1% or less to the total manmade ppb >= 85 ppb in Virginia and contribute 3 ppb or less of the maximum 8-hr contribution to 8-hr ozone concentration >= 85 ppb in Virginia in the CAMx modeling.

Wisconsin -– 8 hr

- Alabama, Georgia, Massachusetts, Michigan, North Carolina, Ohio, South Carolina, Virginia and West Virginia have no contributions more than 2 ppb to 8-hr exceedences in Wisconsin in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in Wisconsin in the CAMx modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, and New York contribute 1% or less to the total manmade ppb >= 85 ppb in Wisconsin and contribute less than 1 ppb of the maximum 8-hr contribution to 8-hr ozone concentration >= 85 ppb in Wisconsin in the CAMx modeling.

West Virginia -– 8 hr

- Georgia, Missouri, Massachusetts, South Carolina, and Wisconsin have no contributions more than 2 ppb to 8-hr exceedences in West Virginia in the UAM-V zero-out modeling and/or contribute 1% or less to the total manmade ppb >= 85 ppb in West Virginia in the CAMx modeling;
- Alabama contributes 1% or less to the total ppb and the population-weighted total ppb >= 85 ppb in New York and contribute 1% or less to the exceedences of ozone >= 85 ppb in the UAM-V zero-out modeling;
- Connecticut/Rhode Island, Maryland/D.C./Delaware, New Jersey, and New York contribute 1% or less to the total manmade ppb >= 85 ppb in West Virginia and contribute 3 ppb or less of the highest daily average contribution to 8-hr ozone concentration >= 85 ppb in West Virginia in the CAMx modeling.

APPENDIX E
1-HOUR AND 8-HOUR PERCENT CONTRIBUTION TABLES

Table E-1. Percent Contribution from Upwind States to 1-Hour Nonattainment in Atlanta.

Downwind Area: **Atlanta**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	79	NA[4]
Total Amount from all "Upwind" States	21	NA
Contributions from Individual Upwind States		
AL	8	15
TN	4	4
MS	2	3
KY	1	2
LA	1	2
NC	1	2
SC	1	2
TX	1	2
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-2. Percent Contribution from Upwind States to 1-Hour Nonattainment in Baltimore.

Downwind Area: **Baltimore**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	44	NA[4]
Total Amount from all "Upwind" States	56	NA
Contributions from Individual Upwind States		
VA	24	35
PA	7	8
OH	4	7
WV	4	15
IL	2	3
IN	2	3
KY	2	5
MI	2	5
NC	2	2
GA	1	1
TN	1	4
Total Amount from All Other States, combined	5	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-3. Percent Contribution from Upwind States to 1-Hour Nonattainment in Birmingham.

Downwind Area: **Birmingham**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	79	NA[4]
Total Amount from all "Upwind" States	21	NA
Contributions from Individual Upwind States		
TN	5	6
MS	4	6
GA	3	10
KY	2	2
LA	2	2
IN	1	1
SC	1	3
TX	1	1
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-4. Percent Contribution from Upwind States to 1-Hour Nonattainment in Boston.

Downwind Area: **Boston**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	55	NA[4]
Total Amount from all "Upwind" States	45	NA
Contributions from Individual Upwind States		
NY	9	13
CT/RI	8	9
NJ	7	17
PA	5	9
MD/DC/DE	2	3
OH	2	5
VA	2	8
IN	1	2
KY	1	2
MI	1	1
NC	1	2
WV	1	3
Total Amount from All Other States, combined	5	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-5. Percent Contribution from Upwind States to 1-Hour Nonattainment in Chicago/Milwaukee.

Downwind Area: **Chicago/Milwaukee**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	79	NA[4]
Total Amount from all "Upwind" States	21	NA
Contributions from Individual Upwind States		
MO	8	8
WI	3	3
AL	1	1
MS	1	1
TN	1	1
Total Amount from All Other States, combined	7	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-6. Percent Contribution from Upwind States to 1-Hour Nonattainment in Cincinnati.

Downwind Area: **Cincinnati**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	61	NA[4]
Total Amount from all "Upwind" States	39	NA
Contributions from Individual Upwind States		
IN	11	18
TN	8	23
AL	6	8
LA	2	3
MS	2	3
NC	2	5
VA	2	3
FL	1	1
GA	1	2
PA	1	1
SC	1	2
WV	1	4
Total Amount from All Other States, combined	1	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-7. Percent Contribution from Upwind States to 1-Hour Nonattainment in Greater Connecticut.

Downwind Area: **Greater Connecticut**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	17	NA[4]
Total Amount from all "Upwind" States	83	NA
Contributions from Individual Upwind States		
NJ	26	29
NY	26	27
PA	10	14
VA	4	7
MD/DC/DE	3	3
OH	2	9
WV	2	6
IL	1	2
IN	1	2
MI	1	2
NC	1	4
Total Amount from All Other States, combined	6	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-8. Percent Contribution from Upwind States to 1-Hour Nonattainment in Lake Michigan.

Downwind Area: **Lake Michigan**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	NA[4]	NA
Total Amount from all "Upwind" States	100	NA
Contributions from Individual Upwind States		
IL	59	59
IN	9	10
MO	9	10
WI	4	5
TN	2	10
AL	1	7
GA	1	5
KY	1	5
MS	1	2
TX	1	2
Total Amount from All Other States, combined	12	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-9. Percent Contribution from Upwind States to 1-Hour Nonattainment in Louisville.

Downwind Area: **Louisville**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	75	NA[4]
Total Amount from all "Upwind" States	25	NA
Contributions from Individual Upwind States		
TN	14	24
AL	2	3
GA	2	2
NC	2	3
IL	1	1
OH	1	1
SC	1	2
VA	1	1
Total Amount from All Other States, combined	1	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-10. Percent Contribution from Upwind States to 1-Hour Nonattainment in Memphis.

Downwind Area: **Memphis**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	52	NA[4]
Total Amount from all "Upwind" States	48	NA
Contributions from Individual Upwind States		
AL	6	14
GA	5	13
LA	4	6
TX	4	8
SC	2	5
FL	1	4
NC	1	4
Total Amount from All Other States, combined	25	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-11. Percent Contribution from Upwind States to 1-Hour Nonattainment in New York City.

Downwind Area: **New York City**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	55	NA[4]
Total Amount from all "Upwind" States	45	NA
Contributions from Individual Upwind States		
PA	18	19
MD/DC/DE	5	6
OH	4	6
VA	4	8
WV	3	7
IL	2	3
IN	1	2
KY	1	3
MI	1	4
MO	1	2
NC	1	2
TN	1	1
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-12. Percent Contribution from Upwind States to 1-Hour Nonattainment in Philadelphia.

Downwind Area: **Philadelphia**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	68	NA[4]
Total Amount from all "Upwind" States	32	NA
Contributions from Individual Upwind States		
VA	7	22
OH	5	8
WV	5	10
IL	3	3
IN	2	3
AL	1	1
GA	1	1
KY	1	3
MI	1	2
MO	1	1
NC	1	2
TN	1	2
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-13. Percent Contribution from Upwind States to 1-Hour Nonattainment in Pittsburgh.

Downwind Area: **Pittsburgh**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	43	NA[4]
Total Amount from all "Upwind" States	57	NA
Contributions from Individual Upwind States		
WV	28	28
OH	18	18
NC	4	4
VA	3	3
SC	1	1
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-14. Percent Contribution from Upwind States to 1-Hour Nonattainment in Portland, ME.

Downwind Area: **Portland, ME**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	2	NA[4]
Total Amount from all "Upwind" States	98	NA
Contributions from Individual Upwind States		
MA	56	58
NY	6	12
CT/RI	6	6
NH/VT	5	7
PA	5	7
NJ	4	6
MD/DC/DE	3	4
VA	3	5
NC	2	3
OH	2	3
IN	1	1
MI	1	1
WV	1	2
Total Amount from All Other States, combined	5	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-15. Percent Contribution from Upwind States to 1-Hour Nonattainment in Rhode Island.

Downwind Area: **Rhode Island**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	5	NA[4]
Total Amount from all "Upwind" States	95	NA
Contributions from Individual Upwind States		
NJ	30	30
NY	24	28
PA	12	19
VA	7	9
OH	6	6
WV	4	5
MD/DC/DE	3	3
IN	2	3
KY	2	4
NC	2	2
IL	1	5
MI	1	4
Total Amount from All Other States, combined	1	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-16. Percent Contribution from Upwind States to 1-Hour Nonattainment in Southwestern Michigan.

Downwind Area: **Southwestern Michigan**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	1	NA[4]
Total Amount from all "Upwind" States	99	NA
Contributions from Individual Upwind States		
IL	54	54
MO	12	12
IN	10	10
TX	3	3
WI	3	3
KY	1	1
Total Amount from All Other States, combined	16	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-17 Percent Contribution from Upwind States to 1-Hour Nonattainment in St. Louis.

Downwind Area: **St. Louis**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	83	NA[4]
Total Amount from all "Upwind" States	17	NA
Contributions from Individual Upwind States		
AL	4	5
TN	3	3
GA	2	3
SC	2	2
IN	1	5
KY	1	5
NC	1	2
OH	1	3
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-18. Percent Contribution from Upwind States to 1-Hour Nonattainment in Washington, DC.

Downwind Area: **Washington, DC**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	76	NA[4]
Total Amount from all "Upwind" States	24	NA
Contributions from Individual Upwind States		
PA	8	10
OH	3	7
MI	2	2
NC	2	2
WV	2	17
IL	1	3
IN	1	5
KY	1	5
NY	1	1
TN	1	4
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-19. Percent Contribution from Upwind States to 1-Hour Nonattainment in Western Massachusetts.

Downwind Area: **Western Massachusetts**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	6	NA[4]
Total Amount from all "Upwind" States	94	NA
Contributions from Individual Upwind States		
CT/RI	35	41
NY	18	20
NJ	16	20
PA	7	11
VA	4	6
MD/DC/DE	3	3
WV	2	6
MI	1	2
NC	1	3
OH	1	3
Total Amount from All Other States, combined	6	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the area listed.
4. Not applicable.

Table E-20. Percent Contribution from Upwind States to 8-Hour Nonattainment in Alabama.

Downwind Area: **Alabama**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	65	76
Total Amount from all "Upwind" States	35	NA[4]
Contributions from Individual Upwind States		
GA	10	18
TN	7	8
MS	4	8
SC	3	6
KY	2	2
LA	2	4
FL	1	2
IL	1	1
MO	1	1
NC	1	3
TX	1	2
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-21. Percent Contribution from Upwind States to 8-Hour Nonattainment in Connecticut.

Downwind Area: **Connecticut**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	12	35
Total Amount from all "Upwind" States	88	NA[4]
Contributions from Individual Upwind States		
NY	24	33
NJ	23	24
PA	14	19
MD/DC/DE	6	7
VA	4	7
OH	3	8
MI	2	5
NC	2	4
WV	2	5
IL	1	3
IN	1	2
KY	1	1
MO	1	2
WI	1	1
Total Amount from All Other States, combined	15	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-22. Percent Contribution from Upwind States to 8-Hour Nonattainment in District of Columbia.

Downwind Area: **District of Columbia**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	17	22
Total Amount from all "Upwind" States	83	NA[4]
Contributions from Individual Upwind States		
VA	47	53
PA	6	10
WV	6	19
OH	5	10
KY	3	7
IL	2	4
IN	2	4
MI	2	10
TN	2	6
AL	1	5
GA	1	2
MO	1	3
NC	1	2
NY	1	1
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-23. Percent Contribution from Upwind States to 8-Hour Nonattainment in Delaware.

Downwind Area: **Delaware**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	34	44
Total Amount from all "Upwind" States	66	NA[4]
Contributions from Individual Upwind States		
VA	23	28
PA	7	9
OH	6	8
WV	6	11
NC	4	6
IN	3	5
KY	3	6
IL	2	3
MI	2	3
TN	2	4
AL	1	2
GA	1	2
MO	1	2
SC	1	1
WI	1	1
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-24. Percent Contribution from Upwind States to 8-Hour Nonattainment in Georgia.

Downwind Area: **Georgia**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	67	86
Total Amount from all "Upwind" States	33	NA[4]
Contributions from Individual Upwind States		
AL	11	17
TN	6	8
SC	4	9
LA	2	3
MS	2	4
FL	1	2
KY	1	3
NC	1	3
TX	1	2
Total Amount from All Other States, combined	4	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-25. Percent Contribution from Upwind States to 8-Hour Nonattainment in Illinois.

Downwind Area: **Illinois**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	26	33
Total Amount from all "Upwind" States	74	NA[4]
Contributions from Individual Upwind States		
MO	38	60
TN	7	13
AL	4	18
GA	3	6
KY	3	6
IN	2	3
MS	2	5
TX	2	17
LA	1	4
NC	1	2
OH	1	1
SC	1	2
Total Amount from All Other States, combined	9	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-26. Percent Contribution from Upwind States to 8-Hour Nonattainment in Indiana.

Downwind Area: **Indiana**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	27	35
Total Amount from all "Upwind" States	73	NA[4]
Contributions from Individual Upwind States		
KY	27	35
TN	15	22
IL	5	9
AL	4	6
GA	4	6
LA	2	6
MO	2	5
MS	2	6
NC	2	4
OH	2	3
SC	2	3
FL	1	2
VA	1	1
WV	1	2
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-27. Percent Contribution from Upwind States to 8-Hour Nonattainment in Kentucky.

Downwind Area: **Kentucky**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	39	45
Total Amount from all "Upwind" States	61	NA[4]
Contributions from Individual Upwind States		
TN	20	35
IN	12	16
AL	5	12
OH	5	9
GA	4	6
IL	2	8
NC	2	4
SC	2	2
LA	1	5
MO	1	7
MS	1	3
TX	1	8
VA	1	1
WV	1	3
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-28. Percent Contribution from Upwind States to 8-Hour Nonattainment in Maine.

Downwind Area: **Maine**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	7	8
Total Amount from all "Upwind" States	93	NA[4]
Contributions from Individual Upwind States		
MA	33	42
NH/VT	11	11
NY	11	12
CT/RI	7	8
NJ	7	8
PA	6	8
MD/DC/DE	3	3
VA	3	6
MI	2	3
IN	1	2
NC	1	3
OH	1	4
Total Amount from All Other States, combined	7	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-29. Percent Contribution from Upwind States to 8-Hour Nonattainment in Maryland.

Downwind Area: **Maryland**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	32	37
Total Amount from all "Upwind" States	68	NA[4]
Contributions from Individual Upwind States		
VA	30	32
PA	7	9
WV	6	11
OH	5	8
KY	3	5
NC	3	5
IL	2	3
IN	2	3
MI	2	4
TN	2	4
AL	1	3
GA	1	2
MO	1	1
NY	1	1
SC	1	1
WI	1	1
Total Amount from All Other States, combined	0	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-30. Percent Contribution from Upwind States to 8-Hour Nonattainment in Massachusetts.

Downwind Area: **Massachusetts**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	14	19
Total Amount from all "Upwind" States	86	NA[4]
Contributions from Individual Upwind States		
NJ	16	21
CT/RI	15	56
NY	15	17
PA	11	15
MD/DC/DE	5	7
VA	5	10
MI	2	8
NC	2	4
OH	2	6
WV	2	5
IL	1	4
IN	1	2
KY	1	1
NH/VT	1	1
Total Amount from All Other States, combined	7	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-31. Percent Contribution from Upwind States to 8-Hour Nonattainment in Michigan

Downwind Area: **Michigan**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	7	9
Total Amount from all "Upwind" States	93	NA[4]
Contributions from Individual Upwind States		
IL	31	35
IN	18	27
MO	7	13
KY	5	9
TN	5	9
WI	5	5
AL	3	5
OH	3	5
GA	2	4
IA	1	1
LA	1	2
MS	1	3
NC	1	2
SC	1	2
TX	1	11
WV	1	2
Total Amount from All Other States, combined	7	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-32. Percent Contribution from Upwind States to 8-Hour Nonattainment in Missouri.

Downwind Area: **Missouri**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	35	69
Total Amount from all "Upwind" States	65	NA[4]
Contributions from Individual Upwind States		
TN	12	21
IL	8	13
TX	7	15
AL	6	9
KY	3	5
GA	2	4
IN	2	2
LA	2	4
MS	2	3
NC	1	1
OH	1	1
SC	1	1
Total Amount from All Other States, combined	18	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-33. Percent Contribution from Upwind States to 8-Hour Nonattainment in New Hampshire.

Downwind Area: **New Hampshire**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	18	20
Total Amount from all "Upwind" States	82	NA[4]
Contributions from Individual Upwind States		
MA	30	49
NY	12	12
CT/RI	9	14
NJ	9	9
PA	6	11
MD/DC/DE	3	3
MI	2	3
VA	2	4
OH	1	5
Total Amount from All Other States, combined	8	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-34. Percent Contribution from Upwind States to 8-Hour Nonattainment in New Jersey.

Downwind Area: **New Jersey**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	15	21
Total Amount from all "Upwind" States	85	NA[4]
Contributions from Individual Upwind States		
PA	26	32
MD/DC/DE	20	22
VA	9	11
OH	6	7
WV	5	8
NC	3	4
IL	2	3
IN	2	4
KY	2	4
MI	2	4
AL	1	1
GA	1	1
MO	1	2
NY	1	1
TN	1	2
WI	1	1
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-35. Percent Contribution from Upwind States to 8-Hour Nonattainment in New York.

Downwind Area: **New York**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	14	32
Total Amount from all "Upwind" Emissions	86	NA[4]
Contributions from Individual Upwind States		
NJ	31	36
PA	18	21
MD/DC/DE	7	8
VA	5	7
OH	4	7
WV	3	5
IL	2	3
IN	2	3
MI	2	4
NC	2	4
CT/RI	1	2
KY	1	2
MO	1	2
TN	1	1
WI	1	1
Total Amount from All Other States, combined	5	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-36. Percent Contribution from Upwind States to 8-Hour Nonattainment in North Carolina.

Downwind Area: **North Carolina**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	55	68
Total Amount from all "Upwind" States	45	NA[4]
Contributions from Individual Upwind States		
SC	9	10
TN	6	11
VA	6	9
KY	4	5
OH	4	6
GA	3	6
WV	3	3
PA	2	3
AL	1	8
IL	1	1
IN	1	2
MD/DC/DE	1	1
MI	1	2
TX	1	2
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-37. Percent Contribution from Upwind States to 8-Hour Nonattainment in Ohio.

Downwind Area: **Ohio**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	33	36
Total Amount from all "Upwind" States	67	NA[4]
Contributions from Individual Upwind States		
KY	15	27
IN	11	18
WV	8	12
TN	7	13
MI	6	11
IL	4	8
AL	3	9
GA	2	3
NC	2	3
FL	1	2
LA	1	3
MO	1	3
MS	1	3
PA	1	2
SC	1	2
VA	1	2
Total Amount from All Other States, combined	2	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-38. Percent Contribution from Upwind States to 8-Hour Nonattainment in Pennsylvania.

Downwind Area: **Pennsylvania**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	35	45
Total Amount from all "Upwind" States	65	NA[4]
Contributions from Individual Upwind States		
OH	15	21
WV	12	16
MD/DC/DE	6	8
KY	5	10
VA	5	6
IN	4	9
IL	3	6
MI	2	3
NC	2	3
TN	2	4
AL	1	3
GA	1	1
LA	1	2
MO	1	3
MS	1	1
NJ	1	9
NY	1	3
SC	1	1
Total Amount from All Other States, combined	1	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-39. Percent Contribution from Upwind States to 8-Hour Nonattainment in Rhode Island.

Downwind Area: **Rhode Island**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	22	44
Total Amount from all "Upwind" States	78	NA[4]
Contributions from Individual Upwind States		
NY	20	26
NJ	17	20
PA	12	16
MD/DC/DE	5	7
OH	4	10
VA	4	7
MI	2	5
NC	2	3
WV	2	6
IL	1	3
IN	1	3
KY	1	1
MO	1	2
WI	1	1
Total Amount from All Other States, combined	15	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-40. Percent Contribution from Upwind States to 8-Hour Nonattainment in South Carolina.

Downwind Area: **South Carolina**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	45	53
Total Amount from all "Upwind" States	55	NA[4]
Contributions from Individual Upwind States		
GA	15	16
NC	13	31
TN	10	12
AL	4	4
KY	3	5
LA	1	1
MS	1	1
OH	1	3
TX	1	2
VA	1	3
WV	1	3
Total Amount from All Other States, combined	4	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-41. Percent Contribution from Upwind States to 8-Hour Nonattainment in Tennessee

Downwind Area: **Tennessee**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	54	58
Total Amount from all "Upwind" States	46	NA[4]
Contributions from Individual Upwind States		
KY	8	15
AL	7	22
GA	5	11
NC	3	5
OH	3	7
SC	3	18
TX	3	6
IL	1	2
IN	1	2
LA	1	5
MO	1	2
VA	1	2
WV	1	3
Total Amount from All Other States, combined	13	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-42. Percent Contribution from Upwind States to 8-Hour Nonattainment in Virginia.

Downwind Area: **Virginia**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	52	66
Total Amount from all "Upwind" States	48	NA[4]
Contributions from Individual Upwind States		
MD/DC/DE	11	20
NC	8	17
PA	5	6
WV	4	8
KY	3	3
OH	3	6
IN	2	3
TN	2	3
AL	1	3
GA	1	2
IL	1	2
MI	1	2
NJ	1	1
NY	1	2
SC	1	1
Total Amount from All Other States, combined	3	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-43. Percent Contribution from Upwind States to 8-Hour Nonattainment in West Virginia.

Downwind Area: **West Virginia**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	26	33
Total Amount from all "Upwind" States	74	NA[4]
Contributions from Individual Upwind States		
OH	26	30
KY	20	29
IN	5	8
TN	4	11
IL	3	8
MI	3	5
NC	2	3
VA	2	3
AL	1	6
GA	1	2
MO	1	4
PA	1	1
SC	1	1
TX	1	5
Total Amount from All Other States, combined	5	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

Table E-44. Percent Contribution from Upwind States to 8-Hour Nonattainment in Wisconsin.

Downwind Area: **Wisconsin**	Percent of Total Manmade Emissions Over 4 Episodes[1]	Highest Single-Episode Percent Contribution[2]
Amount due to "Local" Emissions[3]	13	17
Total Amount from all "Upwind" States	87	NA[4]
Contributions from Individual Upwind States		
IL	42	56
MO	12	16
IN	4	18
IA	3	4
KY	3	17
TX	3	9
TN	2	6
GA	1	2
LA	1	6
OH	1	6
Total Amount from All Other States, combined	15	NA

1. These values are based on CAMx Metric 3 calculated across all 4 episodes.
2. These values are based on CAMX Metric 3 calculated for episode individually. These values do not add up to 100 percent.
3. Total contribution from the State listed.
4. Not applicable.

APPENDIX F
EVALUATION OF CONTRIBUTIONS -- TABLES OF METRICS
1-HOUR UAM-V: UPWIND STATES TO DOWNWIND STATES

The tables in this Appendix contain information on the UAM-V metrics used for the evaluation of contributions. Tables are provided only for those downwind States which contain grid cells with expected exceedences in the Base Case. The headings in the table relate to the metrics as follows:

Percent total ppb reduced >= 125 ppb	Metric 3
Percent pop-wgt total ppb reduced >= 125 ppb	Metric 4
Number of exceedences reduced >= 2 ppb	Metrics 1 & 2
Percent exceedences reduced >= 2 ppb	Metrics 1 & 2
Number of exceedences reduced >= 5 ppb	Metrics 1 & 2
Percent exceedences reduced >= 5 ppb	Metrics 1 & 2
Number of exceedences reduced >= 10 ppb	Metrics 1 & 2
Percent exceedences reduced >= 10 ppb	Metrics 1 & 2
max 1-hr contribution, ppb	Metric 2

(Note: Some of the maximum contribution values may appear to be inconsistent with the number of exceedences above a certain cut-point. For example, a contribution of 9.999........ is interpreted as being less that 10 ppb for the purpose of counting the number of exceedence reduced; however, this value is rounded to 10 ppb in the presentation of maximum "ppb" contribution in these tables.)

Downwind State: Alabama UAM-V State Zero-Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 88

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	100%	100%	88	100%	88	100%	88	100%	140.8
GA	12%	14%	25	28%	16	18%	10	11%	17
IL	0%	0%	0	0%	0	0%	0	0%	0.4
IN	1%	1%	0	0%	0	0%	0	0%	1.2
KY	2%	2%	4	5%	0	0%	0	0%	3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	0%	0%	0	0%	0	0%	0	0%	0.5
NC	1%	1%	0	0%	0	0%	0	0%	0.7
OH	0%	0%	0	0%	0	0%	0	0%	0.2
SC	2%	2%	3	3%	2	2%	2	2%	10.5
TN	14%	11%	33	38%	18	20%	5	6%	13.6
VA	0%	0%	0	0%	0	0%	0	0%	0.2
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	0.3

Downwind State: Connecticut UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			186						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.3
GA	0%	0%	0	0%	0	0%	0	0%	0.3
IL	2%	2%	0	0%	0	0%	0	0%	2
IN	2%	2%	0	0%	0	0%	0	0%	1.7
KY	0%	0%	0	0%	0	0%	0	0%	0.7
MA	0%	0%	0	0%	0	0%	0	0%	1.1
MI	3%	3%	5	3%	0	0%	0	0%	2.7
MO	1%	0%	0	0%	0	0%	0	0%	0.4
NC	2%	3%	1	1%	0	0%	0	0%	2.1
OH	5%	4%	38	20%	0	0%	0	0%	5
SC	1%	1%	0	0%	0	0%	0	0%	1
TN	0%	0%	0	0%	0	0%	0	0%	0.4
VA	9%	9%	64	34%	2	1%	0	0%	5.7
WI	1%	1%	0	0%	0	0%	0	0%	1.1
WV	8%	7%	45	24%	16	9%	0	0%	8

Downwind State: Delaware UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			7						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	1%	0%	0	0%	0	0%	0	0%	0.1
GA	1%	0%	0	0%	0	0%	0	0%	0.2
IL	5%	11%	0	0%	0	0%	0	0%	1.1
IN	5%	11%	0	0%	0	0%	0	0%	1.8
KY	2%	0%	0	0%	0	0%	0	0%	0.8
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	3%	0%	0	0%	0	0%	0	0%	0.6
MO	0%	0%	0	0%	0	0%	0	0%	0.1
NC	1%	0%	0	0%	0	0%	0	0%	0.3
OH	15%	33%	4	57%	0	0%	0	0%	4.1
SC	1%	0%	0	0%	0	0%	0	0%	0.1
TN	2%	0%	0	0%	0	0%	0	0%	0.5
VA	59%	67%	7	100%	7	100%	5	71%	24.1
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	24%	44%	7	100%	1	14%	0	0%	6.5

Downwind State: District of Columbia UAM-V State Zero-Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 3

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.1
GA	0%	0%	0	0%	0	0%	0	0%	0.2
IL	1%	1%	0	0%	0	0%	0	0%	0.4
IN	2%	2%	0	0%	0	0%	0	0%	1.8
KY	1%	1%	0	0%	0	0%	0	0%	1.2
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	1%	0	0%	0	0%	0	0%	0.7
MO	0%	0%	0	0%	0	0%	0	0%	0
NC	2%	2%	0	0%	0	0%	0	0%	1.1
OH	2%	2%	0	0%	0	0%	0	0%	2
SC	0%	0%	0	0%	0	0%	0	0%	0.1
TN	0%	0%	0	0%	0	0%	0	0%	0.3
VA	66%	66%	2	67%	2	67%	2	67%	69.3
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	7%	7%	1	33%	1	33%	0	0%	5.7

Downwind State: Georgia UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			218						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	14%	10%	97	44%	66	30%	27	12%	29.4
GA	100%	100%	218	100%	218	100%	218	100%	191.2
IL	0%	0%	3	1%	0	0%	0	0%	2.3
IN	0%	0%	0	0%	0	0%	0	0%	1
KY	2%	2%	16	7%	7	3%	3	1%	11.4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	0%	0%	0	0%	0	0%	0	0%	1.7
NC	1%	1%	11	5%	0	0%	0	0%	4.1
OH	0%	0%	0	0%	0	0%	0	0%	0.6
SC	4%	3%	32	15%	13	6%	10	5%	16
TN	8%	6%	77	35%	23	11%	1	0%	11.4
VA	0%	0%	0	0%	0	0%	0	0%	0.6
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	1.2

Downwind State: Illinois UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				13					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	2%	1%	0	0%	0	0%	0	0%	1.8
GA	2%	1%	0	0%	0	0%	0	0%	1.4
IL	100%	100%	13	100%	13	100%	13	100%	100.6
IN	3%	1%	0	0%	0	0%	0	0%	1.9
KY	3%	1%	2	15%	0	0%	0	0%	3.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	0%	0	0%	0	0%	0	0%	0.6
MO	27%	14%	12	92%	7	54%	7	54%	61.7
NC	1%	0%	0	0%	0	0%	0	0%	1.1
OH	1%	0%	0	0%	0	0%	0	0%	1.2
SC	1%	0%	0	0%	0	0%	0	0%	0.9
TN	2%	1%	0	0%	0	0%	0	0%	1.5
VA	0%	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	0.1

Downwind State: Indiana UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				7					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	3%	0%	0	0%	0	0%	0	0%	0.4
GA	3%	14%	0	0%	0	0%	0	0%	0.6
IL	42%	14%	2	29%	2	29%	2	29%	40.8
IN	87%	100%	7	100%	5	71%	5	71%	52.3
KY	65%	100%	5	71%	5	71%	4	57%	67
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	23%	0%	2	29%	0	0%	0	0%	3.7
NC	23%	57%	1	14%	0	0%	0	0%	4.9
OH	0%	0%	0	0%	0	0%	0	0%	0.2
SC	13%	29%	1	14%	0	0%	0	0%	3.2
TN	35%	43%	3	43%	2	29%	2	29%	13.7
VA	13%	14%	1	14%	0	0%	0	0%	2.4
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	3%	14%	0	0%	0	0%	0	0%	0.6

Downwind State: Kentucky UAM-V State Zero-Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 36

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	3%	6%	0	0%	0	0%	0	0%	1.4
GA	5%	8%	0	0%	0	0%	0	0%	1.4
IL	4%	6%	0	0%	0	0%	0	0%	1.5
IN	58%	48%	30	83%	30	83%	24	67%	26.4
KY	100%	100%	36	100%	36	100%	36	100%	77
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.1
MO	1%	1%	0	0%	0	0%	0	0%	0.4
NC	9%	14%	3	8%	0	0%	0	0%	3.2
OH	2%	8%	2	6%	2	6%	2	6%	27.4
SC	5%	7%	0	0%	0	0%	0	0%	1.6
TN	37%	46%	19	53%	14	39%	6	17%	14.8
VA	5%	8%	0	0%	0	0%	0	0%	1.9
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	2%	4%	0	0%	0	0%	0	0%	1.6

Downwind State: Louisiana UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				11					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	10%	0%	0	0%	0	0%	0	0%	1.9
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	3%	0%	0	0%	0	0%	0	0%	0.7
IN	0%	0%	0	0%	0	0%	0	0%	0.2
KY	2%	0%	0	0%	0	0%	0	0%	0.4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	9%	0%	0	0%	0	0%	0	0%	1.1
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	12%	0%	1	9%	0	0%	0	0%	2.5
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind State: Maine UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				6					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	3%	0%	0	0%	0	0%	0	0%	0.3
IN	6%	0%	0	0%	0	0%	0	0%	0.5
KY	0%	0%	0	0%	0	0%	0	0%	0.1
MA	100%	100%	6	100%	6	100%	6	100%	53.2
MI	6%	0%	0	0%	0	0%	0	0%	0.8
MO	0%	0%	0	0%	0	0%	0	0%	0
NC	6%	0%	0	0%	0	0%	0	0%	0.7
OH	13%	0%	0	0%	0	0%	0	0%	1
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	0	0%	0	0%	0	0%	0
VA	9%	0%	0	0%	0	0%	0	0%	0.9
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	9%	0%	0	0%	0	0%	0	0%	1

Downwind State: Maryland UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				246					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	1%	0%	1	0%	0	0%	0	0%	2.6
GA	1%	0%	0	0%	0	0%	0	0%	1
IL	3%	2%	6	2%	0	0%	0	0%	2.6
IN	4%	3%	22	9%	0	0%	0	0%	4.1
KY	3%	3%	18	7%	0	0%	0	0%	4.3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	5%	3%	30	12%	6	2%	0	0%	6.8
MO	1%	0%	0	0%	0	0%	0	0%	1
NC	2%	2%	1	0%	1	0%	1	0%	12.3
OH	11%	8%	110	45%	7	3%	0	0%	6.8
SC	0%	0%	0	0%	0	0%	0	0%	1.3
TN	2%	1%	1	0%	0	0%	0	0%	2.4
VA	68%	69%	229	93%	198	80%	170	69%	76.9
WI	1%	1%	0	0%	0	0%	0	0%	1.8
WV	15%	14%	110	45%	58	24%	16	7%	16.4

Downwind State: Massachusetts UAM-V State Zero-Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 110

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.2
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	1%	0%	0	0%	0	0%	0	0%	0.7
IN	2%	1%	0	0%	0	0%	0	0%	1.7
KY	1%	0%	0	0%	0	0%	0	0%	1.7
MA	81%	93%	78	71%	77	70%	75	68%	113
MI	3%	2%	1	1%	0	0%	0	0%	2.4
MO	0%	0%	0	0%	0	0%	0	0%	0.4
NC	1%	1%	0	0%	0	0%	0	0%	1.8
OH	5%	2%	13	12%	0	0%	0	0%	2.8
SC	0%	0%	0	0%	0	0%	0	0%	0.2
TN	0%	0%	0	0%	0	0%	0	0%	0.4
VA	6%	4%	11	10%	4	4%	0	0%	7.4
WI	1%	1%	0	0%	0	0%	0	0%	1
WV	5%	1%	7	6%	0	0%	0	0%	4.3

Downwind State: Michigan UAM-V State Zero-Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 16

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	100%	100%	16	100%	16	100%	16	100%	60.1
IN	25%	15%	8	50%	7	44%	4	25%	21.2
KY	1%	0%	0	0%	0	0%	0	0%	0.3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	-9%	-37%	0	0%	0	0%	0	0%	1
MO	64%	77%	16	100%	13	81%	0	0%	5.8
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	0	0%	0	0%	0	0%	0.1
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind State: Missouri UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			4						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	16%	16%	0	0%	0	0%	0	0%	1.9
GA	12%	12%	0	0%	0	0%	0	0%	1.5
IL	-39%	-23%	1	25%	0	0%	0	0%	2.4
IN	8%	7%	0	0%	0	0%	0	0%	1.5
KY	16%	15%	2	50%	0	0%	0	0%	3.5
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	4%	3%	0	0%	0	0%	0	0%	0.5
MO	100%	100%	4	100%	4	100%	4	100%	74.3
NC	8%	7%	0	0%	0	0%	0	0%	0.8
OH	8%	4%	0	0%	0	0%	0	0%	1
SC	8%	7%	0	0%	0	0%	0	0%	0.9
TN	12%	12%	0	0%	0	0%	0	0%	1.1
VA	0%	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	1%	0	0%	0	0%	0	0%	0.1

Downwind State: Mississippi UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				1					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	0%	0%	0	0%	0	0%	0	0%	0.3
IN	0%	0%	0	0%	0	0%	0	0%	0
KY	0%	0%	0	0%	0	0%	0	0%	0
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	0%	0%	1	100%	0	0%	0	0%	2.6
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	1	100%	1	100%	1	100%	63.9
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind State: New Hampshire UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			17						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	1%	0%	0	0%	0	0%	0	0%	0.2
IN	2%	2%	0	0%	0	0%	0	0%	0.7
KY	1%	0%	0	0%	0	0%	0	0%	0.2
MA	100%	100%	17	100%	17	100%	17	100%	69.2
MI	2%	2%	0	0%	0	0%	0	0%	0.8
MO	0%	0%	0	0%	0	0%	0	0%	0
NC	1%	0%	0	0%	0	0%	0	0%	0.4
OH	3%	2%	0	0%	0	0%	0	0%	1.2
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	0	0%	0	0%	0	0%	0
VA	2%	2%	0	0%	0	0%	0	0%	0.5
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	2%	2%	0	0%	0	0%	0	0%	0.8

Downwind State: New Jersey UAM-V State Zero-Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 168

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	1%	1%	0	0%	0	0%	0	0%	0.4
GA	1%	2%	0	0%	0	0%	0	0%	0.4
IL	6%	7%	1	1%	0	0%	0	0%	2.5
IN	4%	4%	2	1%	0	0%	0	0%	2.4
KY	2%	1%	6	4%	0	0%	0	0%	2.8
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	5%	7%	2	1%	1	1%	0	0%	5.8
MO	1%	2%	0	0%	0	0%	0	0%	0.7
NC	4%	7%	9	5%	0	0%	0	0%	4.4
OH	12%	9%	56	33%	0	0%	0	0%	4.4
SC	1%	3%	0	0%	0	0%	0	0%	1.1
TN	2%	2%	0	0%	0	0%	0	0%	0.6
VA	18%	19%	66	39%	33	20%	7	4%	19.3
WI	1%	3%	0	0%	0	0%	0	0%	1.4
WV	17%	10%	85	51%	22	13%	0	0%	9.6

Downwind State: New York UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				270					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	1%	0	0%	0	0%	0	0%	0.4
GA	0%	1%	0	0%	0	0%	0	0%	0.4
IL	3%	5%	11	4%	0	0%	0	0%	2.9
IN	3%	4%	14	5%	0	0%	0	0%	2.7
KY	2%	2%	11	4%	0	0%	0	0%	2.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	3%	4%	9	3%	0	0%	0	0%	3.2
MO	1%	1%	0	0%	0	0%	0	0%	0.7
NC	3%	3%	2	1%	0	0%	0	0%	3.3
OH	9%	9%	83	31%	1	0%	0	0%	5.4
SC	1%	1%	0	0%	0	0%	0	0%	1.1
TN	1%	1%	0	0%	0	0%	0	0%	0.5
VA	11%	10%	101	37%	25	9%	0	0%	10
WI	1%	2%	0	0%	0	0%	0	0%	1.3
WV	10%	12%	80	30%	30	11%	3	1%	11.3

Downwind State: Ohio UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				8					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	0%	0%	0	0%	0	0%	0	0%	0
IN	2%	-11%	4	50%	0	0%	0	0%	4
KY	85%	86%	8	100%	8	100%	7	88%	54.3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.1
MO	0%	0%	0	0%	0	0%	0	0%	0
NC	13%	25%	5	63%	0	0%	0	0%	3.8
OH	91%	92%	7	88%	7	88%	7	88%	53.1
SC	1%	3%	0	0%	0	0%	0	0%	1.2
TN	16%	29%	5	63%	1	13%	0	0%	5.5
VA	16%	28%	6	75%	0	0%	0	0%	5
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	3%	6%	0	0%	0	0%	0	0%	1.6

Downwind State: Pennsylvania UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			43						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.2
GA	0%	1%	0	0%	0	0%	0	0%	0.5
IL	2%	6%	0	0%	0	0%	0	0%	1.6
IN	2%	4%	1	2%	0	0%	0	0%	2.2
KY	0%	0%	0	0%	0	0%	0	0%	0.8
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	2%	2%	0	0%	0	0%	0	0%	1.6
MO	0%	1%	0	0%	0	0%	0	0%	0.3
NC	8%	6%	6	14%	0	0%	0	0%	3.7
OH	7%	12%	6	14%	0	0%	0	0%	4.8
SC	1%	1%	0	0%	0	0%	0	0%	1
TN	1%	1%	0	0%	0	0%	0	0%	0.4
VA	36%	28%	31	72%	15	35%	1	2%	16.3
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	10%	18%	11	26%	6	14%	5	12%	40.4

Downwind State: Rhode Island UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				19					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.1
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	5%	5%	0	0%	0	0%	0	0%	1.3
IN	5%	5%	0	0%	0	0%	0	0%	1.8
KY	2%	0%	0	0%	0	0%	0	0%	1.4
MA	0%	0%	0	0%	0	0%	0	0%	0.7
MI	2%	5%	0	0%	0	0%	0	0%	0.8
MO	1%	0%	0	0%	0	0%	0	0%	0.3
NC	3%	5%	0	0%	0	0%	0	0%	0.9
OH	16%	20%	8	42%	0	0%	0	0%	3.5
SC	0%	0%	0	0%	0	0%	0	0%	0.1
TN	0%	0%	0	0%	0	0%	0	0%	0.2
VA	17%	20%	7	37%	1	5%	0	0%	7.8
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	15%	20%	7	37%	0	0%	0	0%	4.5

Downwind State: Tennessee UAM-V State Zero-Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 22

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	21%	21%	8	36%	4	18%	0	0%	7.3
GA	18%	21%	4	18%	4	18%	0	0%	8.3
IL	4%	16%	1	5%	1	5%	0	0%	5.2
IN	1%	0%	0	0%	0	0%	0	0%	0.1
KY	4%	8%	0	0%	0	0%	0	0%	1.1
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	3%	13%	1	5%	0	0%	0	0%	4.3
NC	3%	3%	0	0%	0	0%	0	0%	1.2
OH	0%	0%	0	0%	0	0%	0	0%	0.3
SC	7%	5%	2	9%	0	0%	0	0%	3.1
TN	100%	100%	22	100%	22	100%	22	100%	100.4
VA	1%	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	0.4

Downwind State: Texas UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				87					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.6
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	0%	0%	0	0%	0	0%	0	0%	0.2
IN	0%	0%	0	0%	0	0%	0	0%	0
KY	0%	0%	0	0%	0	0%	0	0%	0
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	1%	0%	0	0%	0	0%	0	0%	0.4
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	0	0%	0	0%	0	0%	0.2
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind State: Virginia UAM-V State Zero-Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			69						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.2
GA	0%	0%	0	0%	0	0%	0	0%	0.3
IL	1%	1%	0	0%	0	0%	0	0%	1.5
IN	1%	2%	0	0%	0	0%	0	0%	1.8
KY	1%	2%	2	3%	0	0%	0	0%	4.7
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	2%	0	0%	0	0%	0	0%	1.8
MO	0%	0%	0	0%	0	0%	0	0%	0.6
NC	2%	2%	0	0%	0	0%	0	0%	1.4
OH	2%	3%	5	7%	0	0%	0	0%	3.5
SC	0%	0%	0	0%	0	0%	0	0%	0.1
TN	0%	0%	0	0%	0	0%	0	0%	0.8
VA	86%	69%	67	97%	66	96%	65	94%	101
WI	0%	0%	0	0%	0	0%	0	0%	0.3
WV	4%	7%	9	13%	4	6%	2	3%	12.7

APPENDIX G
EVALUATION OF CONTRIBUTIONS -- TABLES OF METRICS
1-HOUR CAMX: UPWIND STATES TO DOWNWIND STATES

The tables in this Appendix contain information on the CAMx metrics used for the evaluation of contributions. Tables are provided only for those downwind States which contain grid cells with expected exceedences in the Base Case. For example, Mississippi is not included in this Appendix because there were no predicted exceedences in the Base Case using CAMx, but it is included in Appendix F because there were predicted exceedences using UAM-V. The headings in the table relate to the metrics as follows:

Average percent contribution (4-episode)	Metric 4
Highest daily average contribution (ppb)	Metric 3
Highest daily average contribution (%)	Metric 3
Number of exceedences reduced >= 2 ppb	Metrics 1 & 2
Percent exceedences reduced >= 2 ppb	Metrics 1 & 2
Number of exceedences reduced >= 5 ppb	Metrics 1 & 2
Percent exceedences reduced >= 5 ppb	Metrics 1 & 2
Number of exceedences reduced >= 10 ppb	Metrics 1 & 2
Percent exceedences reduced >= 10 ppb	Metrics 1 & 2
Max 1-hr contribution ppb	Metric 2

(Note: Some of the maximum contribution values may appear to be inconsistent with the number of exceedences above a certain cut-point. For example, a contribution of 9.999........ is interpreted as being less that 10 ppb for the purpose of counting the number of exceedence reduced; however, this value is rounded to 10 ppb in the presentation of maximum "ppb" contribution in these tables.)

Downwind State : Alabama ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 876										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	79%	117	85%	876	100%	876	100%	876	100%	149.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	3	2%	137	15%	0	0%	0	0%	3.7
GA	3%	24	18%	236	26%	231	26%	141	16%	51.1
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	1	1%	1	0%	0	0%	0	0%	2
IN	1%	3	2%	107	12%	0	0%	0	0%	4
KY	2%	7	5%	247	28%	186	21%	0	0%	9.8
LA	2%	9	7%	344	39%	119	13%	0	0%	9.2
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.1
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.2
MO	0%	2	2%	25	2%	0	0%	0	0%	2.8
MS	4%	12	9%	471	53%	381	43%	263	30%	14.2
NC	0%	3	3%	118	13%	0	0%	0	0%	4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.1
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.3
NY	0%	0	0%	0	0%	0	0%	0	0%	0.4
OH	0%	1	0%	0	0%	0	0%	0	0%	1.6
PA	0%	0	0%	0	0%	0	0%	0	0%	0.3
SC	1%	18	14%	147	16%	58	6%	15	1%	20.9
TN	5%	17	12%	396	45%	354	40%	260	29%	25.9
TX	1%	3	2%	145	16%	0	0%	0	0%	3.5
VA	0%	0	0%	0	0%	0	0%	0	0%	0.6
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	0%	0	0%	0	0%	0	0%	0	0%	0.6
West	1%	7	6%	112	12%	67	7%	0	0%	8.1
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind State : Connecticut ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 844										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.6
CT/RI	13%	38	30%	625	74%	526	62%	408	48%	64.9
FL	0%	2	1%	72	8%	0	0%	0	0%	3.9
GA	0%	1	1%	0	0%	0	0%	0	0%	1.2
IA	0%	1	1%	0	0%	0	0%	0	0%	1.4
IL	1%	5	4%	211	25%	144	17%	0	0%	7.7
IN	1%	3	2%	175	20%	0	0%	0	0%	3.9
KY	0%	2	1%	1	0%	0	0%	0	0%	2.1
LA	0%	0	0%	0	0%	0	0%	0	0%	0.8
MA	0%	0	0%	0	0%	0	0%	0	0%	1.9
MD/DC/DE	3%	13	10%	617	73%	255	30%	27	3%	13
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	5	4%	320	37%	13	1%	0	0%	5.9
MO	1%	2	2%	102	12%	0	0%	0	0%	3.5
MS	0%	0	0%	0	0%	0	0%	0	0%	0.5
NC	1%	5	4%	185	21%	93	11%	0	0%	9.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.3
NJ	29%	45	35%	844	100%	844	100%	839	99%	65
NY	26%	39	28%	844	100%	844	100%	838	99%	64.5
OH	2%	11	8%	297	35%	170	20%	50	5%	14.9
PA	11%	23	18%	844	100%	827	97%	548	64%	35.6
SC	0%	2	1%	71	8%	0	0%	0	0%	3
TN	0%	2	1%	0	0%	0	0%	0	0%	1.9
TX	0%	0	0%	0	0%	0	0%	0	0%	0.2
VA	4%	10	7%	532	63%	317	37%	67	7%	14.9
WI	0%	2	1%	55	6%	0	0%	0	0%	2.7
WV	2%	10	8%	266	31%	160	18%	18	2%	12
West	0%	1	1%	0	0%	0	0%	0	0%	1.3
Canada	2%	7	5%	381	45%	248	29%	0	0%	9.1

Downwind State : Delaware ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 67										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	1%	1	1%	0	0%	0	0%	0	0%	1
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	1%	1	1%	0	0%	0	0%	0	0%	1.2
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	4%	4	3%	67	100%	14	20%	0	0%	6.2
IN	3%	4	3%	50	74%	28	41%	0	0%	6.2
KY	2%	2	2%	37	55%	0	0%	0	0%	4.8
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	54%	63	45%	67	100%	67	100%	67	100%	99.6
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	2	2%	38	56%	0	0%	0	0%	3.4
MO	1%	1	0%	0	0%	0	0%	0	0%	1.3
MS	0%	0	0%	0	0%	0	0%	0	0%	0.1
NC	1%	1	1%	14	20%	0	0%	0	0%	3.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.7
NY	0%	0	0%	0	0%	0	0%	0	0%	0.3
OH	6%	7	5%	67	100%	50	74%	0	0%	9.7
PA	4%	5	4%	34	50%	16	23%	10	14%	32.4
SC	0%	1	0%	0	0%	0	0%	0	0%	0.8
TN	2%	2	2%	42	62%	0	0%	0	0%	2.9
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	13%	15	11%	66	98%	58	86%	50	74%	26.6
WI	0%	0	0%	0	0%	0	0%	0	0%	0.7
WV	7%	8	6%	67	100%	59	88%	12	17%	11.2
West	0%	0	0%	0	0%	0	0%	0	0%	0.2
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.8

Downwind State : District of Columbia ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 13										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	0%	0	0%	0	0%	0	0%	0.8
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	0%	1	1%	0	0%	0	0%	0	0%	1.2
IA	0%	0	0%	0	0%	0	0%	0	0%	0
IL	1%	3	2%	6	46%	0	0%	0	0%	3.2
IN	2%	6	4%	6	46%	4	30%	0	0%	8.3
KY	2%	6	4%	6	46%	3	23%	0	0%	8.9
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	29%	73	50%	12	92%	10	76%	8	61%	80.6
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	3	2%	5	38%	0	0%	0	0%	3.7
MO	0%	0	0%	0	0%	0	0%	0	0%	0.3
MS	0%	0	0%	0	0%	0	0%	0	0%	0.1
NC	2%	5	3%	11	84%	2	15%	0	0%	6.1
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	1	1%	0	0%	0	0%	0	0%	0.8
NY	1%	2	1%	0	0%	0	0%	0	0%	1.8
OH	3%	8	6%	6	46%	6	46%	0	0%	9.6
PA	6%	17	12%	7	53%	7	53%	5	38%	18.6
SC	0%	1	0%	0	0%	0	0%	0	0%	0.8
TN	1%	3	2%	4	30%	0	0%	0	0%	3.3
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	45%	87	57%	13	100%	13	100%	13	100%	106.6
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	4%	8	5%	9	69%	6	46%	0	0%	9.9
West	0%	0	0%	0	0%	0	0%	0	0%	0
Canada	1%	2	2%	2	15%	0	0%	0	0%	2.3

Downwind State : Georgia ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 2046										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	8%	31	23%	1427	69%	1051	51%	880	43%	39
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	3	2%	28	1%	0	0%	0	0%	3
GA	79%	127	82%	2046	100%	2046	100%	2046	100%	201.8
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	2	2%	67	3%	0	0%	0	0%	2.3
IN	0%	2	1%	56	2%	0	0%	0	0%	2.7
KY	1%	11	8%	511	24%	147	7%	58	2%	13.7
LA	1%	8	6%	669	32%	192	9%	0	0%	8.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.6
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	1.1
MO	0%	3	2%	112	5%	0	0%	0	0%	3.6
MS	2%	9	6%	808	39%	456	22%	23	1%	10.7
NC	1%	7	5%	285	13%	26	1%	0	0%	7.6
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.5
NY	0%	1	0%	0	0%	0	0%	0	0%	0.7
OH	0%	2	1%	86	4%	3	0%	0	0%	5.5
PA	0%	1	1%	0	0%	0	0%	0	0%	1.3
SC	1%	23	18%	627	30%	230	11%	23	1%	24.9
TN	4%	11	8%	1470	71%	860	42%	259	12%	20.4
TX	1%	5	4%	443	21%	13	0%	0	0%	5.7
VA	0%	1	1%	0	0%	0	0%	0	0%	1.5
WI	0%	0	0%	0	0%	0	0%	0	0%	0.4
WV	0%	1	1%	0	0%	0	0%	0	0%	1.6
West	1%	6	5%	241	11%	46	2%	0	0%	7.2
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.3

Downwind State : Illinois ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 25										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	2%	5	4%	8	32%	8	32%	0	0%	5.6
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0
GA	1%	3	2%	8	32%	0	0%	0	0%	3.2
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	59%	84	61%	25	100%	25	100%	25	100%	98.6
IN	4%	6	5%	12	48%	8	32%	5	20%	16.6
KY	0%	0	0%	0	0%	0	0%	0	0%	0.4
LA	0%	0	0%	0	0%	0	0%	0	0%	0.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0
MO	23%	59	46%	25	100%	25	100%	9	36%	70.5
MS	1%	2	1%	0	0%	0	0%	0	0%	1.7
NC	1%	2	1%	0	0%	0	0%	0	0%	2
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.2
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	0%	0	0%	0	0%	0	0%	0	0%	0
PA	0%	0	0%	0	0%	0	0%	0	0%	0.5
SC	1%	2	2%	8	32%	0	0%	0	0%	2.2
TN	2%	3	3%	8	32%	0	0%	0	0%	3.6
TX	0%	0	0%	0	0%	0	0%	0	0%	0.2
VA	0%	0	0%	0	0%	0	0%	0	0%	0.4
WI	2%	4	3%	12	48%	5	20%	0	0%	7.3
WV	0%	0	0%	0	0%	0	0%	0	0%	0.1
West	3%	5	4%	17	68%	13	52%	0	0%	5.6
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.1

Downwind State : Indiana ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 17										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	2%	3	2%	13	76%	0	0%	0	0%	3.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0
GA	1%	2	2%	2	11%	0	0%	0	0%	2.4
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	4%	30	24%	4	23%	2	11%	2	11%	30.3
IN	24%	49	38%	17	100%	17	100%	17	100%	51.2
KY	39%	50	38%	15	88%	15	88%	15	88%	59
LA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.3
MO	2%	11	9%	2	11%	2	11%	2	11%	11.3
MS	0%	2	1%	0	0%	0	0%	0	0%	1.9
NC	1%	3	3%	2	11%	0	0%	0	0%	3.4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.1
NY	0%	0	0%	0	0%	0	0%	0	0%	0.1
OH	0%	0	0%	0	0%	0	0%	0	0%	0.4
PA	0%	1	1%	0	0%	0	0%	0	0%	0.7
SC	0%	2	2%	2	11%	0	0%	0	0%	2.1
TN	24%	33	25%	15	88%	15	88%	13	76%	36.8
TX	0%	0	0%	0	0%	0	0%	0	0%	0.1
VA	0%	1	1%	0	0%	0	0%	0	0%	1.4
WI	0%	2	2%	2	11%	0	0%	0	0%	2.5
WV	0%	0	0%	0	0%	0	0%	0	0%	0.5
West	1%	6	5%	2	11%	2	11%	0	0%	5.9
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind State : Kentucky ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 157										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	2%	6	4%	60	38%	30	19%	0	0%	6.7
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	2%	4	3%	53	33%	4	2%	0	0%	5.6
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	1%	2	2%	13	8%	0	0%	0	0%	3.4
IN	16%	30	23%	150	95%	134	85%	110	70%	39.5
KY	59%	72	55%	157	100%	157	100%	157	100%	86.8
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	0%	1	0%	0	0%	0	0%	0	0%	0.9
MS	0%	0	0%	0	0%	0	0%	0	0%	0.2
NC	2%	5	4%	85	54%	1	0%	0	0%	5.2
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.1
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	1%	67	51%	17	10%	2	1%	2	1%	69.1
PA	0%	1	1%	0	0%	0	0%	0	0%	1.3
SC	2%	3	2%	70	44%	0	0%	0	0%	3.1
TN	13%	34	24%	157	100%	119	75%	72	45%	37.5
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	1%	3	2%	2	1%	0	0%	0	0%	3
WI	0%	0	0%	0	0%	0	0%	0	0%	0.1
WV	0%	4	3%	2	1%	0	0%	0	0%	4.4
West	0%	1	0%	0	0%	0	0%	0	0%	0.8
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind State : Louisiana ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 59										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	1%	7	6%	7	11%	7	11%	0	0%	8.2
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	0%	2	1%	1	1%	0	0%	0	0%	2.2
IA	0%	0	0%	0	0%	0	0%	0	0%	0.6
IL	0%	2	1%	0	0%	0	0%	0	0%	1.8
IN	0%	2	1%	0	0%	0	0%	0	0%	1.8
KY	0%	3	3%	7	11%	0	0%	0	0%	3.4
LA	70%	79	60%	59	100%	59	100%	59	100%	90.7
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	2%	2	2%	44	74%	0	0%	0	0%	3.3
MS	14%	19	15%	59	100%	59	100%	59	100%	22
NC	0%	0	0%	0	0%	0	0%	0	0%	0.1
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0.1
PA	0%	NA	NA	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0.1
TN	1%	5	4%	7	11%	7	11%	0	0%	5.4
TX	3%	4	3%	50	84%	24	40%	0	0%	7.4
VA	0%	0	0%	0	0%	0	0%	0	0%	0
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	0%	0	0%	0	0%	0	0%	0	0%	0
West	6%	7	5%	52	88%	52	88%	0	0%	7.8
Canada	0%	0	0%	0	0%	0	0%	0	0%	0

Downwind State : Maine ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 50										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0.1
CT/RI	6%	7	6%	50	100%	38	76%	2	4%	10.8
FL	0%	0	0%	0	0%	0	0%	0	0%	0.8
GA	0%	0	0%	0	0%	0	0%	0	0%	0.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	1	0%	0	0%	0	0%	0	0%	0.9
IN	1%	1	1%	0	0%	0	0%	0	0%	1.6
KY	0%	1	0%	0	0%	0	0%	0	0%	0.6
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	56%	67	51%	50	100%	50	100%	50	100%	79
MD/DC/DE	3%	4	3%	49	98%	11	22%	0	0%	6.6
ME	2%	3	2%	21	42%	5	10%	0	0%	9.6
MI	1%	3	2%	1	2%	0	0%	0	0%	3
MO	0%	0	0%	0	0%	0	0%	0	0%	0.1
MS	0%	0	0%	0	0%	0	0%	0	0%	0
NC	2%	3	2%	23	46%	2	4%	0	0%	5.4
NH/VT	4%	8	6%	37	74%	19	38%	5	10%	17.5
NJ	4%	9	7%	41	82%	20	40%	0	0%	8.6
NY	6%	14	11%	47	94%	20	40%	19	38%	16
OH	2%	4	3%	30	60%	0	0%	0	0%	4.2
PA	5%	10	8%	50	100%	31	62%	1	2%	10.3
SC	0%	1	0%	0	0%	0	0%	0	0%	1.9
TN	0%	0	0%	0	0%	0	0%	0	0%	0.1
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	3%	6	4%	29	58%	17	34%	2	4%	12.1
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	1%	2	2%	25	50%	0	0%	0	0%	2.5
West	0%	0	0%	0	0%	0	0%	0	0%	0.3
Canada	2%	5	4%	20	40%	14	28%	0	0%	6

Downwind State : Maryland ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 1507										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	6	4%	9	0%	6	0%	0	0%	7.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	2	2%	8	0%	0	0%	0	0%	2.5
GA	1%	3	2%	26	1%	0	0%	0	0%	3.8
IA	0%	1	1%	0	0%	0	0%	0	0%	1.2
IL	2%	6	5%	824	54%	94	6%	0	0%	6.7
IN	2%	6	5%	598	39%	387	25%	0	0%	8.8
KY	2%	8	6%	596	39%	320	21%	2	0%	10.2
LA	0%	1	1%	0	0%	0	0%	0	0%	1.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	42%	65	50%	1501	99%	1489	98%	1462	97%	126.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	8	6%	696	46%	99	6%	0	0%	9.5
MO	0%	4	3%	65	4%	0	0%	0	0%	3.8
MS	0%	1	1%	0	0%	0	0%	0	0%	0.9
NC	2%	11	9%	553	36%	199	13%	97	6%	20.2
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	1	1%	0	0%	0	0%	0	0%	1.5
NY	1%	2	2%	155	10%	0	0%	0	0%	2.4
OH	4%	12	10%	1051	69%	769	51%	72	4%	13.5
PA	7%	21	15%	907	60%	795	52%	471	31%	86.5
SC	0%	1	1%	21	1%	0	0%	0	0%	4.4
TN	1%	7	6%	580	38%	9	0%	0	0%	7.4
TX	0%	3	2%	19	1%	0	0%	0	0%	3.1
VA	28%	43	33%	1497	99%	1445	95%	1356	89%	116.2
WI	0%	3	2%	18	1%	0	0%	0	0%	3.2
WV	4%	17	13%	858	56%	658	43%	168	11%	20.3
West	0%	5	4%	60	3%	2	0%	0	0%	5
Canada	1%	2	2%	82	5%	0	0%	0	0%	2.8

Downwind State : Massachusetts ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 476										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.4
CT/RI	9%	15	11%	438	92%	367	77%	194	40%	61.4
FL	0%	0	0%	0	0%	0	0%	0	0%	1.3
GA	0%	1	0%	0	0%	0	0%	0	0%	0.9
IA	0%	1	1%	10	2%	0	0%	0	0%	2.3
IL	1%	3	3%	26	5%	2	0%	0	0%	5.9
IN	1%	4	3%	51	10%	4	0%	0	0%	5.3
KY	1%	6	4%	38	7%	27	5%	0	0%	6.7
LA	0%	0	0%	0	0%	0	0%	0	0%	0.3
MA	50%	81	61%	412	86%	408	85%	406	85%	118.6
MD/DC/DE	2%	5	4%	338	71%	59	12%	0	0%	9.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0.3
MI	1%	4	3%	129	27%	15	3%	0	0%	6.1
MO	0%	2	1%	18	3%	0	0%	0	0%	3
MS	0%	1	0%	0	0%	0	0%	0	0%	0.7
NC	1%	3	2%	68	14%	6	1%	0	0%	7.1
NH/VT	2%	9	6%	116	24%	78	16%	31	6%	43
NJ	7%	25	19%	388	81%	259	54%	121	25%	42.1
NY	10%	21	16%	464	97%	370	77%	239	50%	34
OH	2%	7	5%	169	35%	77	16%	0	0%	8.2
PA	6%	13	10%	408	85%	245	51%	135	28%	17.9
SC	0%	1	1%	2	0%	0	0%	0	0%	4
TN	0%	2	1%	10	2%	0	0%	0	0%	2.4
TX	0%	0	0%	0	0%	0	0%	0	0%	0.4
VA	2%	10	7%	225	47%	81	17%	27	5%	19.9
WI	0%	2	2%	84	17%	0	0%	0	0%	2.9
WV	1%	4	3%	145	30%	20	4%	0	0%	7.1
West	0%	2	2%	43	9%	0	0%	0	0%	2.8
Canada	2%	6	4%	248	52%	112	23%	3	0%	10.6

Downwind State : Michigan ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 159										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	NA	NA	0	0%	0	0%	0	0%	0
GA	0%	NA	NA	0	0%	0	0%	0	0%	0
IA	0%	1	0%	0	0%	0	0%	0	0%	1.3
IL	54%	57	43%	159	100%	159	100%	159	100%	78.1
IN	11%	16	12%	134	84%	92	57%	69	43%	32.7
KY	0%	2	1%	7	4%	0	0%	0	0%	2.5
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	1%	1	1%	21	13%	4	2%	0	0%	5.9
MO	12%	12	9%	159	100%	159	100%	151	94%	16.4
MS	0%	0	0%	0	0%	0	0%	0	0%	0.1
NC	0%	NA	NA	0	0%	0	0%	0	0%	0
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	NA	NA	0	0%	0	0%	0	0%	0
PA	0%	NA	NA	0	0%	0	0%	0	0%	0
SC	0%	NA	NA	0	0%	0	0%	0	0%	0
TN	0%	0	0%	0	0%	0	0%	0	0%	0.7
TX	3%	4	3%	107	67%	0	0%	0	0%	4.4
VA	0%	NA	NA	0	0%	0	0%	0	0%	0
WI	2%	5	4%	38	23%	21	13%	11	6%	18.3
WV	0%	NA	NA	0	0%	0	0%	0	0%	0
West	16%	18	14%	159	100%	159	100%	152	95%	20.4
Canada	0%	NA	NA	0	0%	0	0%	0	0%	0

Downwind State : Missouri ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 6										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	3%	6	4%	3	50%	3	50%	0	0%	5.8
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0
GA	1%	3	2%	3	50%	0	0%	0	0%	3.1
IA	0%	0	0%	0	0%	0	0%	0	0%	0
IL	7%	9	7%	6	100%	4	66%	0	0%	8.9
IN	3%	6	4%	3	50%	3	50%	0	0%	5.9
KY	3%	5	4%	3	50%	2	33%	0	0%	5.1
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	1	1%	0	0%	0	0%	0	0%	1.3
MO	77%	81	64%	6	100%	6	100%	6	100%	82.6
MS	0%	1	0%	0	0%	0	0%	0	0%	0.6
NC	1%	2	1%	0	0%	0	0%	0	0%	1.8
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.2
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	1%	3	2%	3	50%	0	0%	0	0%	2.7
PA	0%	0	0%	0	0%	0	0%	0	0%	0.5
SC	1%	2	2%	3	50%	0	0%	0	0%	2.2
TN	2%	3	2%	3	50%	0	0%	0	0%	3.2
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	0%	0	0%	0	0%	0	0%	0	0%	0.4
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	0%	0	0%	0	0%	0	0%	0	0%	0.1
West	0%	1	0%	0	0%	0	0%	0	0%	0.6
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind State : New Hampshire ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 74										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0.1
CT/RI	7%	9	6%	74	100%	64	86%	17	22%	17.2
FL	0%	0	0%	0	0%	0	0%	0	0%	0.6
GA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	1	0%	0	0%	0	0%	0	0%	1
IN	0%	1	1%	0	0%	0	0%	0	0%	1.9
KY	0%	1	0%	0	0%	0	0%	0	0%	0.8
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	53%	73	54%	74	100%	74	100%	74	100%	86.2
MD/DC/DE	2%	4	3%	59	79%	2	2%	0	0%	5.4
ME	1%	2	1%	17	22%	4	5%	0	0%	8.9
MI	1%	3	2%	4	5%	0	0%	0	0%	3.5
MO	0%	0	0%	0	0%	0	0%	0	0%	0.1
MS	0%	0	0%	0	0%	0	0%	0	0%	0
NC	1%	2	2%	10	13%	0	0%	0	0%	3.9
NH/VT	12%	50	39%	63	85%	48	64%	32	43%	79.4
NJ	4%	8	6%	62	83%	41	55%	0	0%	8.9
NY	8%	14	11%	72	97%	49	66%	43	58%	17.2
OH	1%	4	3%	21	28%	0	0%	0	0%	4.7
PA	4%	10	8%	74	100%	25	33%	3	4%	10.7
SC	0%	0	0%	0	0%	0	0%	0	0%	1.4
TN	0%	0	0%	0	0%	0	0%	0	0%	0.1
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	2%	4	3%	17	22%	6	8%	0	0%	8.9
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	1%	2	2%	17	22%	0	0%	0	0%	2.9
West	0%	0	0%	0	0%	0	0%	0	0%	0.3
Canada	3%	5	4%	52	70%	28	37%	0	0%	6.2

Downwind State : New Jersey ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 862										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	1%	1	1%	0	0%	0	0%	0	0%	1.6
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	3	2%	24	2%	0	0%	0	0%	3.7
GA	1%	1	1%	2	0%	0	0%	0	0%	2.8
IA	0%	2	1%	0	0%	0	0%	0	0%	1.7
IL	3%	6	5%	560	64%	288	33%	0	0%	7.5
IN	2%	3	3%	344	39%	34	3%	0	0%	6.4
KY	1%	8	6%	145	16%	20	2%	0	0%	9.7
LA	0%	1	1%	0	0%	0	0%	0	0%	1.6
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	17%	26	19%	773	89%	647	75%	480	55%	82.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	6	5%	472	54%	6	0%	0	0%	7.6
MO	1%	3	2%	22	2%	0	0%	0	0%	2.8
MS	0%	1	0%	0	0%	0	0%	0	0%	0.7
NC	1%	8	6%	86	9%	28	3%	3	0%	11.1
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	30%	59	44%	806	93%	770	89%	746	86%	80.1
NY	1%	5	4%	153	17%	51	5%	12	1%	16.9
OH	4%	9	7%	622	72%	471	54%	44	5%	13.1
PA	25%	38	29%	810	93%	739	85%	705	81%	71
SC	0%	2	2%	17	1%	0	0%	0	0%	2.3
TN	1%	3	2%	237	27%	0	0%	0	0%	4.6
TX	0%	0	0%	0	0%	0	0%	0	0%	0.4
VA	4%	14	11%	559	64%	334	38%	132	15%	25.1
WI	0%	2	2%	47	5%	0	0%	0	0%	3.2
WV	4%	12	10%	574	66%	463	53%	105	12%	14.6
West	0%	4	3%	2	0%	0	0%	0	0%	4.4
Canada	1%	6	4%	145	16%	82	9%	0	0%	8

Downwind State : New York ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 1224										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.6
CT/RI	0%	2	1%	86	7%	36	2%	13	1%	15.8
FL	0%	2	2%	31	2%	0	0%	0	0%	3.8
GA	0%	1	1%	0	0%	0	0%	0	0%	1.8
IA	0%	1	1%	0	0%	0	0%	0	0%	1.9
IL	2%	6	5%	408	33%	216	17%	0	0%	8.8
IN	2%	4	3%	478	39%	65	5%	0	0%	6.1
KY	2%	7	5%	263	21%	207	16%	0	0%	8.8
LA	0%	0	0%	0	0%	0	0%	0	0%	1.2
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	3%	12	9%	752	61%	366	29%	82	6%	28.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	5	4%	432	35%	17	1%	0	0%	6.5
MO	1%	3	2%	93	7%	0	0%	0	0%	3.4
MS	0%	0	0%	0	0%	0	0%	0	0%	0.5
NC	1%	6	4%	329	26%	49	4%	1	0%	10
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	38%	56	43%	1224	100%	1224	100%	1224	100%	82
NY	18%	42	33%	1051	85%	962	78%	851	69%	67.7
OH	5%	9	7%	893	72%	689	56%	114	9%	14.6
PA	17%	25	19%	1224	100%	1224	100%	1178	96%	49.1
SC	0%	2	2%	34	2%	0	0%	0	0%	2.7
TN	1%	2	2%	167	13%	0	0%	0	0%	4.6
TX	0%	2	2%	1	0%	0	0%	0	0%	2.1
VA	3%	10	8%	638	52%	420	34%	119	9%	19.4
WI	0%	2	1%	74	6%	0	0%	0	0%	3.2
WV	3%	10	8%	674	55%	340	27%	96	7%	14.6
West	0%	4	3%	16	1%	0	0%	0	0%	4.7
Canada	1%	6	4%	221	18%	165	13%	0	0%	8.8

Downwind State : Ohio ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 30										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	7%	20	16%	12	40%	12	40%	12	40%	20.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	1%	2	2%	5	16%	0	0%	0	0%	2.6
GA	1%	4	3%	12	40%	0	0%	0	0%	3.7
IA	0%	0	0%	0	0%	0	0%	0	0%	0.3
IL	0%	4	3%	2	6%	0	0%	0	0%	3.9
IN	11%	22	17%	30	100%	28	93%	18	60%	22.7
KY	22%	27	21%	30	100%	30	100%	30	100%	30.5
LA	2%	6	5%	12	40%	9	30%	0	0%	7.7
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.2
MO	0%	2	1%	0	0%	0	0%	0	0%	1.6
MS	2%	7	5%	12	40%	12	40%	0	0%	8.1
NC	2%	5	4%	16	53%	5	16%	0	0%	5.6
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0.3
OH	39%	67	52%	30	100%	30	100%	30	100%	68.6
PA	1%	1	1%	0	0%	0	0%	0	0%	1.3
SC	1%	3	2%	3	10%	0	0%	0	0%	2.5
TN	6%	21	16%	30	100%	14	46%	5	16%	20.8
TX	0%	1	0%	0	0%	0	0%	0	0%	0.6
VA	2%	4	3%	16	53%	0	0%	0	0%	4.7
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	1%	4	3%	4	13%	0	0%	0	0%	4.5
West	0%	1	1%	0	0%	0	0%	0	0%	1.3
Canada	0%	1	1%	0	0%	0	0%	0	0%	1

Downwind State : Pennsylvania ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 157										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.2
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	0%	1	1%	0	0%	0	0%	0	0%	1.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.5
IL	1%	6	5%	32	20%	32	20%	0	0%	7.2
IN	1%	4	3%	33	21%	14	8%	0	0%	6.7
KY	0%	4	3%	16	10%	0	0%	0	0%	4.3
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	12%	54	42%	121	77%	99	63%	92	58%	57.7
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	3	3%	14	8%	0	0%	0	0%	3.6
MO	0%	2	1%	0	0%	0	0%	0	0%	1.9
MS	0%	0	0%	0	0%	0	0%	0	0%	0.2
NC	2%	5	4%	101	64%	11	7%	0	0%	5.3
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	12%	21	17%	108	68%	102	64%	83	52%	38.9
NY	1%	3	3%	10	6%	0	0%	0	0%	3.5
OH	5%	18	14%	64	40%	64	40%	31	19%	25.4
PA	48%	58	44%	151	96%	150	95%	150	95%	98.2
SC	0%	1	1%	0	0%	0	0%	0	0%	1.4
TN	1%	3	2%	27	17%	0	0%	0	0%	3.3
TX	0%	0	0%	0	0%	0	0%	0	0%	0.1
VA	8%	25	19%	125	79%	99	63%	82	52%	28.8
WI	0%	0	0%	0	0%	0	0%	0	0%	0.6
WV	6%	27	21%	79	50%	51	32%	25	15%	36
West	0%	2	1%	0	0%	0	0%	0	0%	1.7
Canada	1%	5	4%	3	1%	2	1%	0	0%	5.5

Downwind State : Rhode Island ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 48										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.2
CT/RI	5%	7	6%	35	72%	25	52%	10	20%	14.3
FL	0%	0	0%	0	0%	0	0%	0	0%	0.6
GA	0%	1	1%	0	0%	0	0%	0	0%	1
IA	0%	1	1%	0	0%	0	0%	0	0%	0.9
IL	1%	5	4%	3	6%	3	6%	0	0%	5.6
IN	2%	4	3%	13	27%	0	0%	0	0%	4.7
KY	2%	6	5%	11	22%	11	22%	0	0%	6.8
LA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MA	0%	0	0%	0	0%	0	0%	0	0%	0.2
MD/DC/DE	3%	7	5%	36	75%	6	12%	0	0%	7.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	5	4%	3	6%	0	0%	0	0%	4.8
MO	0%	2	2%	2	4%	0	0%	0	0%	2
MS	0%	0	0%	0	0%	0	0%	0	0%	0.3
NC	2%	2	2%	21	43%	0	0%	0	0%	4.4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	30%	38	29%	48	100%	48	100%	48	100%	47.7
NY	24%	37	26%	48	100%	48	100%	48	100%	44.7
OH	6%	8	6%	48	100%	39	81%	1	2%	10.3
PA	12%	20	16%	48	100%	48	100%	48	100%	22.4
SC	0%	1	0%	0	0%	0	0%	0	0%	0.6
TN	0%	2	1%	4	8%	0	0%	0	0%	2.5
TX	0%	0	0%	0	0%	0	0%	0	0%	0.1
VA	7%	13	10%	34	70%	33	68%	20	41%	18.1
WI	0%	1	1%	0	0%	0	0%	0	0%	1.2
WV	4%	6	4%	44	91%	19	39%	0	0%	8.1
West	0%	1	0%	0	0%	0	0%	0	0%	0.7
Canada	0%	1	1%	0	0%	0	0%	0	0%	1

Downwind State : Tennessee ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 61										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	6%	18	13%	32	52%	20	32%	19	31%	19.5
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	1%	5	4%	3	4%	0	0%	0	0%	4.8
GA	5%	17	13%	22	36%	19	31%	19	31%	18.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.5
IL	0%	5	4%	2	3%	2	3%	0	0%	5.3
IN	0%	1	0%	0	0%	0	0%	0	0%	0.7
KY	0%	3	3%	2	3%	0	0%	0	0%	3.4
LA	4%	7	5%	37	60%	36	59%	0	0%	8.2
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	0%	2	1%	0	0%	0	0%	0	0%	1.7
MS	5%	10	8%	56	91%	37	60%	6	9%	12.8
NC	1%	4	3%	3	4%	0	0%	0	0%	4.2
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	0%	1	0%	0	0%	0	0%	0	0%	0.6
PA	0%	0	0%	0	0%	0	0%	0	0%	0.3
SC	2%	6	4%	22	36%	19	31%	0	0%	6.7
TN	47%	62	48%	61	100%	61	100%	61	100%	69.3
TX	4%	10	8%	37	60%	34	55%	11	18%	11.2
VA	0%	1	1%	0	0%	0	0%	0	0%	0.7
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	0%	1	0%	0	0%	0	0%	0	0%	0.6
West	25%	36	29%	61	100%	61	100%	53	86%	43.4
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.1

Downwind State : Texas ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 431										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	0%	0	0%	0	0%	0	0%	0.7
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	3	2%	19	4%	0	0%	0	0%	2.8
GA	0%	0	0%	0	0%	0	0%	0	0%	0.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	0	0%	0	0%	0	0%	0	0%	0.6
IN	0%	0	0%	0	0%	0	0%	0	0%	0.1
KY	0%	0	0%	0	0%	0	0%	0	0%	0.1
LA	4%	8	7%	355	82%	182	42%	27	6%	12.1
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0
MO	0%	0	0%	0	0%	0	0%	0	0%	1
MS	0%	1	1%	0	0%	0	0%	0	0%	1.1
NC	0%	0	0%	0	0%	0	0%	0	0%	0.1
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0
PA	0%	0	0%	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0.1
TN	0%	0	0%	0	0%	0	0%	0	0%	0.4
TX	93%	113	84%	431	100%	431	100%	431	100%	152.2
VA	0%	0	0%	0	0%	0	0%	0	0%	0
WI	0%	0	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0	0%	0	0%	0	0%	0	0%	0
West	2%	4	3%	270	62%	71	16%	0	0%	6.9
Canada	0%	NA	NA	0	0%	0	0%	0	0%	0

Downwind State : Virginia ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grid-hours) = 417										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.3
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	0%	1	1%	0	0%	0	0%	0	0%	1.5
IA	0%	0	0%	0	0%	0	0%	0	0%	0.5
IL	1%	3	3%	92	22%	7	1%	0	0%	5.5
IN	1%	7	5%	56	13%	35	8%	0	0%	9.1
KY	1%	8	6%	39	9%	31	7%	14	3%	11.7
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	28%	48	31%	415	99%	411	98%	393	94%	76.5
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	4	3%	122	29%	14	3%	0	0%	5.4
MO	0%	4	3%	17	4%	0	0%	0	0%	4
MS	0%	0	0%	0	0%	0	0%	0	0%	0.2
NC	2%	6	5%	175	41%	22	5%	6	1%	12.7
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	1	1%	0	0%	0	0%	0	0%	1.3
NY	1%	2	2%	6	1%	0	0%	0	0%	2.1
OH	2%	9	6%	110	26%	70	16%	3	0%	10.5
PA	9%	16	11%	378	90%	376	90%	202	48%	37.7
SC	0%	1	1%	0	0%	0	0%	0	0%	1.2
TN	0%	3	2%	34	8%	0	0%	0	0%	4.2
TX	0%	1	0%	0	0%	0	0%	0	0%	0.7
VA	50%	77	53%	417	100%	417	100%	414	99%	123.3
WI	0%	1	1%	0	0%	0	0%	0	0%	1.4
WV	2%	8	6%	194	46%	76	18%	4	0%	10.8
West	0%	5	4%	17	4%	0	0%	0	0%	4.9
Canada	1%	2	1%	78	18%	0	0%	0	0%	3.1

APPENDIX H
EVALUATION OF CONTRIBUTIONS -- TABLES OF METRICS
1-HOUR UAM-V: UPWIND STATES TO DOWNWIND NONATTAINMENT AREAS

The tables in this Appendix contain information on the UAM-V metrics used for the evaluation of contributions. Tables are provided only for those nonattainment areas with predicted exceedences in the Base Case. The headings in the table relate to the metrics as follows:

Percent total ppb reduced >= 125 ppb	Metric 3
Percent pop-wgt total ppb reduced >= 125 ppb	Metric 4
Number of exceedences reduced >= 2 ppb	Metrics 1 & 2
Percent exceedences reduced >= 2 ppb	Metrics 1 & 2
Number of exceedences reduced >= 5 ppb	Metrics 1 & 2
Percent exceedences reduced >= 5 ppb	Metrics 1 & 2
Number of exceedences reduced >= 10 ppb	Metrics 1 & 2
Percent exceedences reduced >= 10 ppb	Metrics 1 & 2
max 1-hr contribution, ppb	Metric 2

(Note: Some of the maximum contribution values may appear to be inconsistent with the number of exceedences above a certain cut-point. For example, a contribution of 9.999........ is interpreted as being less that 10 ppb for the purpose of counting the number of exceedence reduced; however, this value is rounded to 10 ppb in the presentation of maximum "ppb" contribution in these tables.)

Downwind Nonattainment Area: Atlanta UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				218					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	14%	10%	97	44%	66	30%	27	12%	29.4
GA	100%	100%	218	100%	218	100%	218	100%	191.2
IL	0%	0%	3	1%	0	0%	0	0%	2.3
IN	0%	0%	0	0%	0	0%	0	0%	1
KY	2%	2%	16	7%	7	3%	3	1%	11.4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	0%	0%	0	0%	0	0%	0	0%	1.7
NC	1%	1%	11	5%	0	0%	0	0%	4.1
OH	0%	0%	0	0%	0	0%	0	0%	0.6
SC	4%	3%	32	15%	13	6%	10	5%	16
TN	8%	6%	77	35%	23	11%	1	0%	11.4
VA	0%	0%	0	0%	0	0%	0	0%	0.6
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	1.2

Downwind Nonattainment Area: Baltimore UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			175						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	1	1%	0	0%	0	0%	2.6
GA	1%	0%	0	0%	0	0%	0	0%	0.9
IL	3%	2%	5	3%	0	0%	0	0%	2.2
IN	4%	3%	17	10%	0	0%	0	0%	4.1
KY	3%	3%	12	7%	0	0%	0	0%	3.5
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	5%	2%	24	14%	4	2%	0	0%	5.3
MO	1%	0%	0	0%	0	0%	0	0%	0.9
NC	2%	2%	0	0%	0	0%	0	0%	1.4
OH	11%	8%	85	49%	6	3%	0	0%	6.8
SC	0%	0%	0	0%	0	0%	0	0%	0.4
TN	2%	1%	1	1%	0	0%	0	0%	2.4
VA	66%	64%	160	91%	137	78%	112	64%	65.6
WI	1%	1%	0	0%	0	0%	0	0%	1.5
WV	15%	13%	84	48%	41	23%	11	6%	15.7

Downwind Nonattainment Area: Baton Rouge UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			11						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	10%	0%	0	0%	0	0%	0	0%	1.9
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	3%	0%	0	0%	0	0%	0	0%	0.7
IN	0%	0%	0	0%	0	0%	0	0%	0.2
KY	2%	0%	0	0%	0	0%	0	0%	0.4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	9%	0%	0	0%	0	0%	0	0%	1.1
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	12%	0%	1	9%	0	0%	0	0%	2.5
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area: Birmingham UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			88						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	100%	100%	88	100%	88	100%	88	100%	140.8
GA	12%	14%	25	28%	16	18%	10	11%	17
IL	0%	0%	0	0%	0	0%	0	0%	0.4
IN	1%	1%	0	0%	0	0%	0	0%	1.2
KY	2%	2%	4	5%	0	0%	0	0%	3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	0%	0%	0	0%	0	0%	0	0%	0.5
NC	1%	1%	0	0%	0	0%	0	0%	0.7
OH	0%	0%	0	0%	0	0%	0	0%	0.2
SC	2%	2%	3	3%	2	2%	2	2%	10.5
TN	14%	11%	33	38%	18	20%	5	6%	13.6
VA	0%	0%	0	0%	0	0%	0	0%	0.2
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	0.3

Downwind Nonattainment Area: Boston UAM-V State Zero Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 113

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.2
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	1%	0%	0	0%	0	0%	0	0%	0.7
IN	2%	1%	0	0%	0	0%	0	0%	1.7
KY	1%	0%	0	0%	0	0%	0	0%	1.7
MA	89%	98%	94	83%	93	82%	91	81%	113
MI	2%	2%	1	1%	0	0%	0	0%	2.4
MO	0%	0%	0	0%	0	0%	0	0%	0.4
NC	1%	1%	0	0%	0	0%	0	0%	1.8
OH	5%	2%	13	12%	0	0%	0	0%	2.8
SC	0%	0%	0	0%	0	0%	0	0%	0.2
TN	0%	0%	0	0%	0	0%	0	0%	0.4
VA	5%	3%	11	10%	4	4%	0	0%	7.4
WI	1%	1%	0	0%	0	0%	0	0%	1
WV	4%	1%	4	4%	0	0%	0	0%	3.9

Downwind Nonattainment Area: Chicago-Milwaukee UAM-V State Zero Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 8

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	1%	0%	0	0%	0	0%	0	0%	0.1
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	100%	100%	8	100%	8	100%	8	100%	100.6
IN	7%	1%	2	25%	1	13%	1	13%	27.8
KY	0%	0%	0	0%	0	0%	0	0%	0
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	15%	11%	7	88%	0	0%	0	0%	4.3
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	1%	0%	0	0%	0	0%	0	0%	0.2
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area: Cincinnati UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			12						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.1
GA	1%	1%	0	0%	0	0%	0	0%	0.2
IL	1%	0%	0	0%	0	0%	0	0%	0.5
IN	6%	-4%	6	50%	2	17%	0	0%	9.8
KY	87%	91%	12	100%	12	100%	11	92%	57.3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	0%	0	0%	0	0%	0	0%	0.1
MO	0%	0%	0	0%	0	0%	0	0%	0.4
NC	17%	29%	8	67%	0	0%	0	0%	3.8
OH	83%	83%	9	75%	9	75%	9	75%	53.1
SC	3%	7%	0	0%	0	0%	0	0%	1.6
TN	20%	33%	9	75%	2	17%	0	0%	9.1
VA	17%	28%	6	50%	0	0%	0	0%	5
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	4%	9%	0	0%	0	0%	0	0%	1.6

Downwind Nonattainment Area: Dallas UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				6					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	0%	0%	0	0%	0	0%	0	0%	0
IN	0%	0%	0	0%	0	0%	0	0%	0
KY	0%	0%	0	0%	0	0%	0	0%	0
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	0%	0%	0	0%	0	0%	0	0%	0.2
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	0	0%	0	0%	0	0%	0
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area: Greater Connecticut UAM-V State Zero Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 127

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.2
GA	0%	0%	0	0%	0	0%	0	0%	0.2
IL	2%	2%	0	0%	0	0%	0	0%	1.8
IN	2%	1%	0	0%	0	0%	0	0%	1.5
KY	0%	0%	0	0%	0	0%	0	0%	0.7
MA	0%	0%	0	0%	0	0%	0	0%	1.1
MI	3%	3%	0	0%	0	0%	0	0%	1.2
MO	0%	0%	0	0%	0	0%	0	0%	0.4
NC	2%	3%	1	1%	0	0%	0	0%	2.1
OH	6%	4%	26	20%	0	0%	0	0%	4.2
SC	1%	1%	0	0%	0	0%	0	0%	1
TN	0%	0%	0	0%	0	0%	0	0%	0.3
VA	9%	9%	37	29%	1	1%	0	0%	5.7
WI	1%	0%	0	0%	0	0%	0	0%	0.9
WV	10%	9%	40	31%	12	9%	0	0%	6.6

Downwind Nonattainment Area: Houston UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				81					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.6
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	0%	0%	0	0%	0	0%	0	0%	0.2
IN	0%	0%	0	0%	0	0%	0	0%	0
KY	0%	0%	0	0%	0	0%	0	0%	0
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	1%	0%	0	0%	0	0%	0	0%	0.4
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	0	0%	0	0%	0	0%	0.2
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area: Lake Michigan UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			408						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	1%	0%	14	3%	0	0%	0	0%	4
GA	1%	0%	2	0%	0	0%	0	0%	2.1
IL	100%	0%	408	100%	408	100%	408	100%	111
IN	13%	0%	136	33%	90	22%	59	14%	39.8
KY	2%	0%	17	4%	10	2%	0	0%	6.5
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.7
MO	22%	0%	373	91%	95	23%	0	0%	7.7
NC	1%	0%	0	0%	0	0%	0	0%	1.4
OH	0%	0%	0	0%	0	0%	0	0%	1.4
SC	1%	0%	0	0%	0	0%	0	0%	1.4
TN	6%	0%	84	21%	59	14%	0	0%	7.7
VA	0%	0%	0	0%	0	0%	0	0%	0.7
WI	1%	0%	18	4%	5	1%	1	0%	10
WV	0%	0%	0	0%	0	0%	0	0%	1.8

Downwind Nonattainment Area: Louisville UAM-V State Zero Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 37

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	4%	7%	0	0%	0	0%	0	0%	1.4
GA	5%	8%	0	0%	0	0%	0	0%	1.4
IL	4%	8%	0	0%	0	0%	0	0%	1.5
IN	62%	56%	33	89%	32	86%	28	76%	52.3
KY	100%	100%	37	100%	37	100%	36	97%	77
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	1%	1%	0	0%	0	0%	0	0%	0.3
NC	8%	11%	1	3%	0	0%	0	0%	4.9
OH	0%	0%	0	0%	0	0%	0	0%	0.2
SC	5%	7%	1	3%	0	0%	0	0%	3.2
TN	37%	45%	18	49%	15	41%	8	22%	14.8
VA	4%	4%	1	3%	0	0%	0	0%	2.4
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	2%	2%	0	0%	0	0%	0	0%	0.6

Downwind Nonattainment Area: Memphis UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			23						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	21%	21%	8	35%	4	17%	0	0%	7.3
GA	18%	21%	4	17%	4	17%	0	0%	8.3
IL	4%	16%	1	4%	1	4%	0	0%	5.2
IN	1%	0%	0	0%	0	0%	0	0%	0.1
KY	4%	8%	0	0%	0	0%	0	0%	1.1
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	3%	13%	2	9%	0	0%	0	0%	4.3
NC	3%	3%	0	0%	0	0%	0	0%	1.2
OH	0%	0%	0	0%	0	0%	0	0%	0.3
SC	7%	5%	2	9%	0	0%	0	0%	3.1
TN	100%	100%	23	100%	23	100%	23	100%	100.4
VA	1%	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	0.4

Downwind Nonattainment Area: Metro DC UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) = 134									
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	1.9
GA	0%	0%	0	0%	0	0%	0	0%	1
IL	2%	1%	1	1%	0	0%	0	0%	2.6
IN	2%	2%	5	4%	0	0%	0	0%	4.1
KY	1%	2%	8	6%	0	0%	0	0%	4.7
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	2%	3%	6	4%	2	1%	0	0%	6.8
MO	0%	0%	0	0%	0	0%	0	0%	1
NC	2%	2%	1	1%	1	1%	1	1%	12.3
OH	4%	5%	23	17%	1	1%	0	0%	5.4
SC	0%	0%	0	0%	0	0%	0	0%	1.3
TN	1%	1%	0	0%	0	0%	0	0%	1.9
VA	83%	72%	129	96%	120	90%	117	87%	101
WI	0%	1%	0	0%	0	0%	0	0%	1.8
WV	7%	10%	27	20%	17	13%	7	5%	16.4

Downwind Nonattainment Area: New York City UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =			418						
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	1%	0	0%	0	0%	0	0%	0.4
GA	0%	1%	0	0%	0	0%	0	0%	0.4
IL	3%	5%	12	3%	0	0%	0	0%	2.9
IN	3%	4%	15	4%	0	0%	0	0%	2.7
KY	2%	2%	16	4%	0	0%	0	0%	2.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	3%	5%	14	3%	0	0%	0	0%	3.2
MO	1%	1%	0	0%	0	0%	0	0%	0.7
NC	3%	4%	7	2%	0	0%	0	0%	3.6
OH	8%	8%	117	28%	1	0%	0	0%	5.4
SC	1%	1%	0	0%	0	0%	0	0%	1.1
TN	1%	1%	0	0%	0	0%	0	0%	0.5
VA	11%	12%	161	39%	36	9%	0	0%	10
WI	1%	2%	0	0%	0	0%	0	0%	1.4
WV	9%	10%	117	28%	38	9%	3	1%	11.3

Downwind Nonattainment Area: Philadelphia UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				133					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	1%	0	0%	0	0%	0	0%	0.3
GA	1%	1%	0	0%	0	0%	0	0%	0.5
IL	5%	7%	0	0%	0	0%	0	0%	1.8
IN	4%	4%	2	2%	0	0%	0	0%	2.4
KY	2%	1%	1	1%	0	0%	0	0%	2.8
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	3%	4%	2	2%	1	1%	0	0%	5.8
MO	1%	1%	0	0%	0	0%	0	0%	0.7
NC	4%	5%	5	4%	0	0%	0	0%	4.4
OH	13%	13%	48	36%	0	0%	0	0%	4.8
SC	1%	1%	0	0%	0	0%	0	0%	1
TN	2%	2%	0	0%	0	0%	0	0%	0.6
VA	32%	26%	80	60%	54	41%	21	16%	24.1
WI	0%	1%	0	0%	0	0%	0	0%	1
WV	19%	18%	75	56%	25	19%	0	0%	9.6

Downwind Nonattainment Area: Pittsburgh UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				5					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	0%	0%	0	0%	0	0%	0	0%	0
IN	0%	0%	0	0%	0	0%	0	0%	0
KY	0%	0%	0	0%	0	0%	0	0%	0
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	7%	5%	0	0%	0	0%	0	0%	0.1
MO	0%	0%	0	0%	0	0%	0	0%	0
NC	57%	36%	5	100%	0	0%	0	0%	2.6
OH	64%	55%	3	60%	0	0%	0	0%	3.3
SC	21%	9%	0	0%	0	0%	0	0%	0.6
TN	0%	0%	0	0%	0	0%	0	0%	0
VA	43%	32%	0	0%	0	0%	0	0%	2
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	100%	100%	5	100%	5	100%	5	100%	40.4

Downwind Nonattainment Area: Portland ME UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				6					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	3%	0%	0	0%	0	0%	0	0%	0.3
IN	6%	0%	0	0%	0	0%	0	0%	0.5
KY	0%	0%	0	0%	0	0%	0	0%	0.1
MA	100%	100%	6	100%	6	100%	6	100%	53.2
MI	6%	0%	0	0%	0	0%	0	0%	0.8
MO	0%	0%	0	0%	0	0%	0	0%	0
NC	6%	0%	0	0%	0	0%	0	0%	0.7
OH	13%	0%	0	0%	0	0%	0	0%	1
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	0%	0%	0	0%	0	0%	0	0%	0
VA	9%	0%	0	0%	0	0%	0	0%	0.9
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	9%	0%	0	0%	0	0%	0	0%	1

Downwind Nonattainment Area: Rhode Island UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				19					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.1
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	5%	5%	0	0%	0	0%	0	0%	1.3
IN	5%	5%	0	0%	0	0%	0	0%	1.8
KY	2%	0%	0	0%	0	0%	0	0%	1.4
MA	0%	0%	0	0%	0	0%	0	0%	0.7
MI	2%	5%	0	0%	0	0%	0	0%	0.8
MO	1%	0%	0	0%	0	0%	0	0%	0.3
NC	3%	5%	0	0%	0	0%	0	0%	0.9
OH	16%	20%	8	42%	0	0%	0	0%	3.5
SC	0%	0%	0	0%	0	0%	0	0%	0.1
TN	0%	0%	0	0%	0	0%	0	0%	0.2
VA	17%	20%	7	37%	1	5%	0	0%	7.8
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	15%	20%	7	37%	0	0%	0	0%	4.5

Downwind Nonattainment Area: St Louis UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				11					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	13%	15%	0	0%	0	0%	0	0%	1.9
GA	11%	11%	0	0%	0	0%	0	0%	1.5
IL	36%	-4%	8	73%	7	64%	7	64%	46.9
IN	9%	8%	0	0%	0	0%	0	0%	1.8
KY	16%	14%	4	36%	0	0%	0	0%	3.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	4%	3%	0	0%	0	0%	0	0%	0.6
MO	100%	100%	11	100%	11	100%	11	100%	74.3
NC	7%	8%	0	0%	0	0%	0	0%	1.1
OH	7%	5%	0	0%	0	0%	0	0%	1.2
SC	7%	8%	0	0%	0	0%	0	0%	0.9
TN	11%	11%	0	0%	0	0%	0	0%	1.5
VA	0%	1%	0	0%	0	0%	0	0%	0.1
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	2%	1%	0	0%	0	0%	0	0%	0.1

Downwind Nonattainment Area: SW Michigan UAM-V State Zero Out Modeling									
	Contributions to 1-Hr Designated + Modeled Receptors								
Base case: Total Number of Exceedences (grids-days) =				22					
Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0
IL	100%	100%	22	100%	22	100%	22	100%	60.1
IN	25%	15%	11	50%	7	32%	4	18%	21.2
KY	1%	0%	0	0%	0	0%	0	0%	0.3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	-6%	-37%	0	0%	0	0%	0	0%	1
MO	64%	77%	22	100%	16	73%	0	0%	5.8
NC	0%	0%	0	0%	0	0%	0	0%	0
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0
TN	1%	0%	0	0%	0	0%	0	0%	0.1
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	1%	0%	0	0%	0	0%	0	0%	1
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area: Western Massachusetts UAM-V State Zero Out Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base case: Total Number of Exceedences (grids-days) = 14

Upwind State	Percent total ppb reduced >= 125 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	max 1-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	1%	0%	0	0%	0	0%	0	0%	0.1
IN	1%	0%	0	0%	0	0%	0	0%	0.1
KY	1%	0%	0	0%	0	0%	0	0%	0.2
MA	-30%	-15%	1	7%	1	7%	1	7%	21.7
MI	13%	11%	0	0%	0	0%	0	0%	1.5
MO	0%	0%	0	0%	0	0%	0	0%	0
NC	4%	2%	0	0%	0	0%	0	0%	0.7
OH	4%	2%	0	0%	0	0%	0	0%	0.8
SC	1%	0%	0	0%	0	0%	0	0%	0.2
TN	0%	0%	0	0%	0	0%	0	0%	0
VA	12%	7%	0	0%	0	0%	0	0%	1.4
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	12%	2%	3	21%	0	0%	0	0%	4.3

APPENDIX I
EVALUATION OF CONTRIBUTIONS -- TABLES OF METRICS
1-HOUR CAMX: UPWIND STATES TO DOWNWIND NONATTAINMENT AREAS

The tables in this Appendix contain information on the CAMx metrics used for the evaluation of contributions. Tables are provided only for those nonattainment areas with predicted exceedences in the Base Case. The headings in the table relate to the metrics as follows:

Average percent contribution (4-episode)	Metric 4
Highest daily average contribution (ppb)	Metric 3
Highest daily average contribution (%)	Metric 3
Number of exceedences reduced >= 2 ppb	Metrics 1 & 2
Percent exceedences reduced >= 2 ppb	Metrics 1 & 2
Number of exceedences reduced >= 5 ppb	Metrics 1 & 2
Percent exceedences reduced >= 5 ppb	Metrics 1 & 2
Number of exceedences reduced >= 10 ppb	Metrics 1 & 2
Percent exceedences reduced >= 10 ppb	Metrics 1 & 2
Max 1-hr contribution, ppb	Metric 2

(Note: Some of the maximum contribution values may appear to be inconsistent with the number of exceedences above a certain cut-point. For example, a contribution of 9.999........ is interpreted as being less that 10 ppb for the purpose of counting the number of exceedence reduced; however, this value is rounded to 10 ppb in the presentation of maximum "ppb" contribution in these tables.)

Downwind Nonattainment Area : Atlanta ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 2046										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	8%	31	23%	1427	69%	1051	51%	880	43%	39
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	3	2%	28	1%	0	0%	0	0%	3
GA	79%	127	82%	2046	100%	2046	100%	2046	100%	201.8
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	2	2%	67	3%	0	0%	0	0%	2.3
IN	0%	2	1%	56	2%	0	0%	0	0%	2.7
KY	1%	11	8%	511	24%	147	7%	58	2%	13.7
LA	1%	8	6%	669	32%	192	9%	0	0%	8.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.6
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	1.1
MO	0%	3	2%	112	5%	0	0%	0	0%	3.6
MS	2%	9	6%	808	39%	456	22%	23	1%	10.7
NC	1%	7	5%	285	13%	26	1%	0	0%	7.6
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.5
NY	0%	1	0%	0	0%	0	0%	0	0%	0.7
OH	0%	2	1%	86	4%	3	0%	0	0%	5.5
PA	0%	1	1%	0	0%	0	0%	0	0%	1.3
SC	1%	23	18%	627	30%	230	11%	23	1%	24.9
TN	4%	11	8%	1470	71%	860	42%	259	12%	20.4
TX	1%	5	4%	443	21%	13	0%	0	0%	5.7
VA	0%	1	1%	0	0%	0	0%	0	0%	1.5
WI	0%	0	0%	0	0%	0	0%	0	0%	0.4
WV	0%	1	1%	0	0%	0	0%	0	0%	1.6
West	1%	6	5%	241	11%	46	2%	0	0%	7.2
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.3

Downwind Nonattainment Area : Baltimore ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 979										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	6	4%	9	0%	6	0%	0	0%	7.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	2	2%	8	0%	0	0%	0	0%	2.5
GA	1%	3	2%	9	0%	0	0%	0	0%	2.8
IA	0%	1	1%	0	0%	0	0%	0	0%	1.2
IL	2%	6	5%	556	56%	65	6%	0	0%	6.7
IN	2%	6	5%	425	43%	262	26%	0	0%	8.8
KY	2%	8	6%	436	44%	238	24%	0	0%	9.2
LA	0%	1	1%	0	0%	0	0%	0	0%	1.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	44%	71	56%	979	100%	976	99%	968	98%	126.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	8	6%	460	46%	73	7%	0	0%	9.5
MO	0%	3	3%	56	5%	0	0%	0	0%	3.8
MS	0%	1	1%	0	0%	0	0%	0	0%	0.9
NC	2%	11	9%	390	39%	126	12%	40	4%	14.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	1	1%	0	0%	0	0%	0	0%	1.5
NY	0%	2	2%	115	11%	0	0%	0	0%	2.4
OH	4%	12	10%	720	73%	507	51%	62	6%	13.5
PA	7%	26	19%	529	54%	449	45%	342	34%	86.5
SC	0%	1	1%	0	0%	0	0%	0	0%	1.3
TN	1%	7	6%	427	43%	9	0%	0	0%	7.4
TX	0%	3	2%	15	1%	0	0%	0	0%	2.8
VA	24%	39	30%	969	98%	927	94%	862	88%	104.3
WI	0%	3	2%	13	1%	0	0%	0	0%	3.2
WV	4%	17	13%	580	59%	489	49%	130	13%	20.2
West	0%	4	3%	51	5%	2	0%	0	0%	5
Canada	1%	3	2%	42	4%	0	0%	0	0%	2.8

Downwind Nonattainment Area : Baton_Rouge ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 59										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	1%	7	6%	7	11%	7	11%	0	0%	8.2
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	0%	2	1%	1	1%	0	0%	0	0%	2.2
IA	0%	0	0%	0	0%	0	0%	0	0%	0.6
IL	0%	2	1%	0	0%	0	0%	0	0%	1.8
IN	0%	2	1%	0	0%	0	0%	0	0%	1.8
KY	0%	3	3%	7	11%	0	0%	0	0%	3.4
LA	70%	79	60%	59	100%	59	100%	59	100%	90.7
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	2%	2	2%	44	74%	0	0%	0	0%	3.3
MS	14%	19	15%	59	100%	59	100%	59	100%	22
NC	0%	0	0%	0	0%	0	0%	0	0%	0.1
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0.1
PA	0%	NA	NA	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0.1
TN	1%	5	4%	7	11%	7	11%	0	0%	5.4
TX	3%	4	3%	50	84%	24	40%	0	0%	7.4
VA	0%	0	0%	0	0%	0	0%	0	0%	0
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	0%	0	0%	0	0%	0	0%	0	0%	0
West	6%	7	5%	52	88%	52	88%	0	0%	7.8
Canada	0%	0	0%	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area : Birmingham ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 876										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	79%	117	85%	876	100%	876	100%	876	100%	149.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	3	2%	137	15%	0	0%	0	0%	3.7
GA	3%	24	18%	236	26%	231	26%	141	16%	51.1
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	1	1%	1	0%	0	0%	0	0%	2
IN	1%	3	2%	107	12%	0	0%	0	0%	4
KY	2%	7	5%	247	28%	186	21%	0	0%	9.8
LA	2%	9	7%	344	39%	119	13%	0	0%	9.2
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.1
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.2
MO	0%	2	2%	25	2%	0	0%	0	0%	2.8
MS	4%	12	9%	471	53%	381	43%	263	30%	14.2
NC	0%	3	3%	118	13%	0	0%	0	0%	4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.1
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.3
NY	0%	0	0%	0	0%	0	0%	0	0%	0.4
OH	0%	1	0%	0	0%	0	0%	0	0%	1.6
PA	0%	0	0%	0	0%	0	0%	0	0%	0.3
SC	1%	18	14%	147	16%	58	6%	15	1%	20.9
TN	5%	17	12%	396	45%	354	40%	260	29%	25.9
TX	1%	3	2%	145	16%	0	0%	0	0%	3.5
VA	0%	0	0%	0	0%	0	0%	0	0%	0.6
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	0%	0	0%	0	0%	0	0%	0	0%	0.6
West	1%	7	6%	112	12%	67	7%	0	0%	8.1
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind Nonattainment Area : Boston ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 527										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.4
CT/RI	8%	15	11%	489	92%	408	77%	189	35%	42.8
FL	0%	0	0%	0	0%	0	0%	0	0%	1.3
GA	0%	1	0%	0	0%	0	0%	0	0%	0.9
IA	0%	1	1%	10	1%	0	0%	0	0%	2.3
IL	0%	3	3%	26	4%	2	0%	0	0%	5.9
IN	1%	4	3%	51	9%	4	0%	0	0%	5.3
KY	1%	6	4%	38	7%	27	5%	0	0%	6.7
LA	0%	0	0%	0	0%	0	0%	0	0%	0.3
MA	52%	78	59%	477	90%	475	90%	475	90%	118.6
MD/DC/DE	2%	5	4%	375	71%	60	11%	0	0%	9.4
ME	0%	0	0%	16	3%	3	0%	0	0%	6.3
MI	1%	4	3%	123	23%	15	2%	0	0%	6.1
MO	0%	2	1%	18	3%	0	0%	0	0%	3
MS	0%	1	0%	0	0%	0	0%	0	0%	0.7
NC	1%	3	2%	70	13%	6	1%	0	0%	7.1
NH/VT	3%	13	9%	178	33%	125	23%	62	11%	79.4
NJ	7%	25	19%	427	81%	278	52%	99	18%	42.1
NY	9%	21	16%	513	97%	396	75%	259	49%	34
OH	2%	7	5%	182	34%	77	14%	0	0%	8.2
PA	5%	13	10%	459	87%	250	47%	131	24%	17.9
SC	0%	1	0%	2	0%	0	0%	0	0%	4
TN	0%	2	1%	10	1%	0	0%	0	0%	2.4
TX	0%	0	0%	0	0%	0	0%	0	0%	0.4
VA	2%	10	7%	221	41%	79	14%	27	5%	19.9
WI	0%	2	2%	84	15%	0	0%	0	0%	2.9
WV	1%	4	3%	154	29%	12	2%	0	0%	6.7
West	0%	2	2%	43	8%	0	0%	0	0%	2.8
Canada	2%	6	4%	287	54%	127	24%	3	0%	10.6

Downwind Nonattainment Area : Chicago-Milwaukee ; CAMX Source Apportionment Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base Case: Total Number of Exceedences (grids-hours) = 19

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	1%	1	1%	0	0%	0	0%	0	0%	1.1
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0
GA	0%	0	0%	0	0%	0	0%	0	0%	0.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	70%	78	57%	19	100%	19	100%	19	100%	98.6
IN	9%	10	7%	14	73%	10	52%	7	36%	42.3
KY	0%	0	0%	0	0%	0	0%	0	0%	0.5
LA	0%	0	0%	0	0%	0	0%	0	0%	0.3
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.3
MO	8%	9	7%	19	100%	19	100%	3	15%	11.3
MS	1%	2	1%	0	0%	0	0%	0	0%	1.9
NC	0%	0	0%	0	0%	0	0%	0	0%	0
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0
PA	0%	NA	NA	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0
TN	1%	2	1%	0	0%	0	0%	0	0%	2
TX	0%	0	0%	0	0%	0	0%	0	0%	0.2
VA	0%	0	0%	0	0%	0	0%	0	0%	0
WI	3%	3	3%	14	73%	5	26%	0	0%	7.3
WV	0%	NA	NA	0	0%	0	0%	0	0%	0
West	5%	5	4%	19	100%	15	78%	0	0%	5.9
Canada	0%	NA	NA	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area : Cincinnati ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 36										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	6%	20	16%	12	33%	12	33%	12	33%	20.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	1%	2	2%	5	13%	0	0%	0	0%	2.6
GA	1%	4	3%	12	33%	0	0%	0	0%	3.7
IA	0%	0	0%	0	0%	0	0%	0	0%	0.3
IL	0%	2	2%	2	5%	0	0%	0	0%	3.9
IN	11%	19	15%	36	100%	34	94%	22	61%	22.7
KY	25%	48	37%	36	100%	36	100%	36	100%	61.6
LA	2%	6	5%	12	33%	9	25%	0	0%	7.7
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.2
MO	0%	1	1%	0	0%	0	0%	0	0%	1.6
MS	2%	7	5%	12	33%	12	33%	0	0%	8.1
NC	2%	5	4%	18	50%	6	16%	0	0%	5.6
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0.3
OH	36%	67	52%	32	88%	32	88%	32	88%	69.1
PA	1%	1	1%	0	0%	0	0%	0	0%	1.3
SC	1%	2	2%	5	13%	0	0%	0	0%	2.5
TN	8%	25	19%	36	100%	19	52%	9	25%	27.1
TX	0%	1	0%	0	0%	0	0%	0	0%	0.6
VA	2%	4	3%	18	50%	0	0%	0	0%	4.7
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	1%	4	3%	6	16%	0	0%	0	0%	4.5
West	0%	1	1%	0	0%	0	0%	0	0%	1.3
Canada	0%	1	1%	0	0%	0	0%	0	0%	1

Downwind Nonattainment Area : Dallas ; CAMX Source Apportionment Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base Case: Total Number of Exceedences (grids-hours) = 19

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	1%	1	0%	0	0%	0	0%	0	0%	0.7
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	2%	3	2%	19	100%	0	0%	0	0%	2.8
GA	0%	0	0%	0	0%	0	0%	0	0%	0.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0
IL	0%	0	0%	0	0%	0	0%	0	0%	0
IN	0%	0	0%	0	0%	0	0%	0	0%	0
KY	0%	0	0%	0	0%	0	0%	0	0%	0
LA	4%	4	3%	19	100%	0	0%	0	0%	4.5
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0
MO	0%	0	0%	0	0%	0	0%	0	0%	0.1
MS	1%	1	1%	0	0%	0	0%	0	0%	0.8
NC	0%	0	0%	0	0%	0	0%	0	0%	0.1
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0
PA	0%	0	0%	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0.1
TN	0%	0	0%	0	0%	0	0%	0	0%	0.1
TX	91%	105	79%	19	100%	19	100%	19	100%	114.8
VA	0%	0	0%	0	0%	0	0%	0	0%	0
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	0%	0	0%	0	0%	0	0%	0	0%	0
West	2%	2	1%	8	42%	0	0%	0	0%	2.4
Canada	0%	NA	NA	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area : Greater Connecticut ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 572										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.6
CT/RI	17%	45	35%	500	87%	445	77%	369	64%	64.9
FL	0%	2	1%	26	4%	0	0%	0	0%	2.9
GA	0%	1	1%	0	0%	0	0%	0	0%	1.1
IA	0%	1	0%	0	0%	0	0%	0	0%	1.4
IL	1%	5	4%	127	22%	81	14%	0	0%	7.6
IN	1%	3	2%	113	19%	0	0%	0	0%	3.1
KY	0%	2	1%	1	0%	0	0%	0	0%	2.1
LA	0%	0	0%	0	0%	0	0%	0	0%	0.5
MA	0%	0	0%	0	0%	0	0%	0	0%	1.9
MD/DC/DE	3%	7	6%	419	73%	164	28%	15	2%	12
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	4	3%	195	34%	10	1%	0	0%	5.9
MO	0%	2	2%	52	9%	0	0%	0	0%	3.5
MS	0%	0	0%	0	0%	0	0%	0	0%	0.5
NC	1%	5	4%	112	19%	40	6%	0	0%	7.3
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.3
NJ	26%	45	35%	572	100%	572	100%	567	99%	62.3
NY	26%	37	27%	572	100%	572	100%	567	99%	64.5
OH	2%	10	8%	222	38%	104	18%	42	7%	13.6
PA	10%	23	18%	572	100%	561	98%	345	60%	28.6
SC	0%	2	1%	22	3%	0	0%	0	0%	3
TN	0%	2	1%	0	0%	0	0%	0	0%	1.6
TX	0%	0	0%	0	0%	0	0%	0	0%	0.2
VA	4%	9	7%	375	65%	204	35%	33	5%	14.9
WI	0%	2	1%	16	2%	0	0%	0	0%	2.3
WV	2%	10	7%	192	33%	131	22%	10	1%	10.8
West	0%	1	1%	0	0%	0	0%	0	0%	1.3
Canada	2%	7	5%	259	45%	176	30%	0	0%	8.9

Downwind Nonattainment Area : Houston ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 412										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0.5
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0
GA	0%	0	0%	0	0%	0	0%	0	0%	0.1
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	0	0%	0	0%	0	0%	0	0%	0.6
IN	0%	0	0%	0	0%	0	0%	0	0%	0.1
KY	0%	0	0%	0	0%	0	0%	0	0%	0.1
LA	4%	8	7%	336	81%	182	44%	27	6%	12.1
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0
MO	0%	0	0%	0	0%	0	0%	0	0%	1
MS	0%	1	1%	0	0%	0	0%	0	0%	1.1
NC	0%	0	0%	0	0%	0	0%	0	0%	0
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0
PA	0%	NA	NA	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0
TN	0%	0	0%	0	0%	0	0%	0	0%	0.4
TX	93%	113	84%	412	100%	412	100%	412	100%	152.2
VA	0%	0	0%	0	0%	0	0%	0	0%	0
WI	0%	0	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0	0%	0	0%	0	0%	0	0%	0
West	2%	4	3%	262	63%	71	17%	0	0%	6.9
Canada	0%	NA	NA	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area : Lake_Michigan ; CAMX Source Apportionment Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base Case: Total Number of Exceedences (grids-hours) = 2146

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	1%	8	6%	408	19%	177	8%	0	0%	9.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	2	2%	89	4%	0	0%	0	0%	2.9
GA	1%	5	4%	379	17%	76	3%	0	0%	5.8
IA	0%	0	0%	1	0%	0	0%	0	0%	2
IL	59%	68	50%	2146	100%	2146	100%	2146	100%	119.6
IN	9%	24	19%	1749	81%	1242	57%	802	37%	55.5
KY	1%	14	11%	549	25%	119	5%	13	0%	14.8
LA	0%	6	5%	123	5%	8	0%	0	0%	6.6
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.1
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	4	0%	0	0%	0	0%	2.4
MO	9%	12	8%	2017	93%	1985	92%	1435	66%	19
MS	1%	3	2%	287	13%	0	0%	0	0%	3.9
NC	0%	2	2%	77	3%	0	0%	0	0%	2.6
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	0%	5	4%	13	0%	13	0%	0	0%	5.6
PA	0%	0	0%	0	0%	0	0%	0	0%	0.4
SC	0%	2	2%	129	6%	0	0%	0	0%	2.7
TN	2%	11	8%	346	16%	304	14%	105	4%	12.7
TX	1%	8	6%	816	38%	9	0%	0	0%	9
VA	0%	1	1%	0	0%	0	0%	0	0%	1.3
WI	4%	8	6%	1159	54%	612	28%	242	11%	43.1
WV	0%	2	2%	8	0%	0	0%	0	0%	2
West	11%	17	12%	1993	92%	1864	86%	1414	65%	21.8
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind Nonattainment Area : Louisville ; CAMX Source Apportionment Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base Case: Total Number of Exceedences (grids-hours) = 166

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	2%	6	4%	73	43%	30	18%	0	0%	6.7
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0.1
GA	2%	4	3%	55	33%	4	2%	0	0%	5.6
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	1%	2	2%	15	9%	0	0%	0	0%	3.8
IN	17%	31	24%	159	95%	143	86%	121	72%	51.2
KY	58%	72	55%	166	100%	166	100%	166	100%	86.8
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	0%	1	0%	0	0%	0	0%	0	0%	0.7
MS	0%	0	0%	0	0%	0	0%	0	0%	0.2
NC	2%	4	3%	85	51%	0	0%	0	0%	4.9
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.1
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	1%	1	1%	15	9%	0	0%	0	0%	2.9
PA	0%	1	1%	0	0%	0	0%	0	0%	0.9
SC	1%	3	2%	70	42%	0	0%	0	0%	3.1
TN	14%	34	25%	166	100%	129	77%	81	48%	37.5
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	1%	2	1%	0	0%	0	0%	0	0%	2
WI	0%	0	0%	0	0%	0	0%	0	0%	0.1
WV	0%	1	1%	0	0%	0	0%	0	0%	1.4
West	0%	0	0%	0	0%	0	0%	0	0%	0.6
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind Nonattainment Area : Memphis ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 61										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	6%	18	13%	32	52%	20	32%	19	31%	19.5
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	1%	5	4%	3	4%	0	0%	0	0%	4.8
GA	5%	17	13%	22	36%	19	31%	19	31%	18.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.5
IL	0%	5	4%	2	3%	2	3%	0	0%	5.3
IN	0%	1	0%	0	0%	0	0%	0	0%	0.7
KY	0%	3	3%	2	3%	0	0%	0	0%	3.4
LA	4%	7	5%	37	60%	36	59%	0	0%	8.2
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	0%	2	1%	0	0%	0	0%	0	0%	1.7
MS	5%	10	8%	56	91%	37	60%	6	9%	12.8
NC	1%	4	3%	3	4%	0	0%	0	0%	4.2
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	0%	1	0%	0	0%	0	0%	0	0%	0.6
PA	0%	0	0%	0	0%	0	0%	0	0%	0.3
SC	2%	6	4%	22	36%	19	31%	0	0%	6.7
TN	47%	62	48%	61	100%	61	100%	61	100%	69.3
TX	4%	10	8%	37	60%	34	55%	11	18%	11.2
VA	0%	1	1%	0	0%	0	0%	0	0%	0.7
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	0%	1	0%	0	0%	0	0%	0	0%	0.6
West	25%	36	29%	61	100%	61	100%	53	86%	43.4
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.1

Downwind Nonattainment Area : Metro_DC ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 874										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.4
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	2	1%	0	0%	0	0%	0	0%	1.8
GA	0%	1	1%	17	1%	0	0%	0	0%	3.8
IA	0%	1	1%	0	0%	0	0%	0	0%	1
IL	1%	6	5%	293	33%	20	2%	0	0%	6.6
IN	1%	7	6%	165	18%	115	13%	0	0%	9.1
KY	1%	7	5%	143	16%	112	12%	16	1%	11.7
LA	0%	1	1%	0	0%	0	0%	0	0%	1.2
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	31%	55	37%	865	98%	850	97%	811	92%	100.2
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	8	7%	342	39%	40	4%	0	0%	8.3
MO	0%	4	3%	26	2%	0	0%	0	0%	4
MS	0%	1	0%	0	0%	0	0%	0	0%	0.7
NC	2%	9	7%	326	37%	97	11%	63	7%	20.2
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	1	1%	0	0%	0	0%	0	0%	1.5
NY	1%	2	2%	44	5%	0	0%	0	0%	2.3
OH	3%	10	8%	365	41%	265	30%	11	1%	11.4
PA	8%	16	11%	726	83%	712	81%	330	37%	56.7
SC	0%	1	1%	21	2%	0	0%	0	0%	4.4
TN	1%	4	4%	124	14%	0	0%	0	0%	4.4
TX	0%	3	2%	4	0%	0	0%	0	0%	3.1
VA	45%	70	49%	874	100%	871	99%	860	98%	123.3
WI	0%	3	2%	5	0%	0	0%	0	0%	3.1
WV	2%	19	15%	399	45%	170	19%	19	2%	20.3
West	0%	5	4%	26	2%	0	0%	0	0%	4.9
Canada	1%	2	2%	118	13%	0	0%	0	0%	3.1

Downwind Nonattainment Area : New_York_City ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 1924										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.6
CT/RI	1%	2	2%	211	10%	117	6%	52	2%	30.2
FL	0%	2	2%	95	4%	0	0%	0	0%	3.9
GA	0%	1	1%	2	0%	0	0%	0	0%	2.8
IA	0%	1	1%	0	0%	0	0%	0	0%	1.9
IL	2%	6	5%	718	37%	392	20%	0	0%	8.8
IN	1%	4	3%	667	34%	71	3%	0	0%	6.4
KY	1%	7	5%	314	16%	227	11%	0	0%	9.7
LA	0%	0	0%	0	0%	0	0%	0	0%	1.6
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	5%	15	12%	1310	68%	734	38%	275	14%	50.5
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	5	4%	782	40%	26	1%	0	0%	7.6
MO	1%	3	2%	164	8%	0	0%	0	0%	3.4
MS	0%	0	0%	0	0%	0	0%	0	0%	0.7
NC	1%	6	5%	469	24%	124	6%	3	0%	11.1
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	38%	56	43%	1924	100%	1923	99%	1921	99%	82
NY	16%	42	33%	1454	75%	1285	66%	1134	58%	67.7
OH	4%	9	7%	1223	63%	938	48%	136	7%	14.9
PA	18%	25	19%	1917	99%	1885	97%	1763	91%	53
SC	0%	2	2%	96	4%	0	0%	0	0%	2.9
TN	1%	2	2%	250	12%	0	0%	0	0%	4.6
TX	0%	2	2%	1	0%	0	0%	0	0%	2.1
VA	4%	11	9%	1059	55%	696	36%	214	11%	25.1
WI	0%	2	2%	143	7%	0	0%	0	0%	3.2
WV	3%	10	8%	971	50%	532	27%	133	6%	14.6
West	0%	4	3%	18	0%	0	0%	0	0%	4.7
Canada	1%	6	5%	434	22%	312	16%	0	0%	9.1

Downwind Nonattainment Area : Philadelphia ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 717										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	1%	1	1%	0	0%	0	0%	0	0%	1.6
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	3	3%	6	0%	0	0%	0	0%	3.5
GA	1%	1	1%	0	0%	0	0%	0	0%	1.3
IA	0%	1	0%	0	0%	0	0%	0	0%	0.9
IL	3%	5	4%	506	70%	237	33%	0	0%	7.3
IN	2%	3	3%	370	51%	119	16%	0	0%	7.1
KY	1%	4	3%	209	29%	4	0%	0	0%	6.7
LA	0%	1	1%	0	0%	0	0%	0	0%	1.6
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	29%	55	42%	685	95%	620	86%	542	75%	112.8
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	3	2%	320	44%	0	0%	0	0%	4.2
MO	1%	1	1%	1	0%	0	0%	0	0%	2
MS	0%	1	1%	0	0%	0	0%	0	0%	0.7
NC	1%	9	7%	132	18%	6	0%	1	0%	10.8
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	14%	41	31%	486	67%	445	62%	404	56%	58.2
NY	0%	3	2%	34	4%	0	0%	0	0%	3.9
OH	5%	10	8%	555	77%	450	62%	38	5%	13.1
PA	25%	58	44%	586	81%	502	70%	464	64%	98.2
SC	0%	2	2%	4	0%	0	0%	0	0%	2.1
TN	1%	3	2%	290	40%	0	0%	0	0%	3.3
TX	0%	0	0%	0	0%	0	0%	0	0%	0.4
VA	7%	28	21%	545	76%	405	56%	264	36%	37.5
WI	0%	2	2%	17	2%	0	0%	0	0%	2.4
WV	5%	13	10%	554	77%	466	64%	111	15%	18.6
West	0%	2	1%	0	0%	0	0%	0	0%	1.8
Canada	1%	5	4%	59	8%	9	1%	0	0%	6

Downwind Nonattainment Area : Pittsburgh ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 25										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	NA	NA	0	0%	0	0%	0	0%	0
GA	0%	0	0%	0	0%	0	0%	0	0%	0
IA	0%	NA	NA	0	0%	0	0%	0	0%	0
IL	0%	NA	NA	0	0%	0	0%	0	0%	0
IN	0%	0	0%	0	0%	0	0%	0	0%	0
KY	0%	0	0%	0	0%	0	0%	0	0%	0.1
LA	0%	NA	NA	0	0%	0	0%	0	0%	0
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.7
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.3
MO	0%	NA	NA	0	0%	0	0%	0	0%	0
MS	0%	NA	NA	0	0%	0	0%	0	0%	0
NC	4%	5	4%	25	100%	11	44%	0	0%	5.3
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	18%	20	16%	25	100%	25	100%	25	100%	25.4
PA	43%	48	38%	25	100%	25	100%	25	100%	64.7
SC	1%	1	1%	0	0%	0	0%	0	0%	1.4
TN	0%	0	0%	0	0%	0	0%	0	0%	0.1
TX	0%	NA	NA	0	0%	0	0%	0	0%	0
VA	3%	4	3%	25	100%	0	0%	0	0%	4.4
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	28%	31	24%	25	100%	25	100%	25	100%	36
West	0%	0	0%	0	0%	0	0%	0	0%	0
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.6

Downwind Nonattainment Area : Portland_ME ; CAMX Source Apportionment Modeling

Contributions to 1-Hr Designated + Modeled Receptors

Base Case: Total Number of Exceedences (grids-hours) = 51

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0.1
CT/RI	6%	7	6%	51	100%	39	76%	2	3%	10.8
FL	0%	0	0%	0	0%	0	0%	0	0%	0.8
GA	0%	0	0%	0	0%	0	0%	0	0%	0.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	1	0%	0	0%	0	0%	0	0%	0.9
IN	1%	1	1%	0	0%	0	0%	0	0%	1.6
KY	0%	1	0%	0	0%	0	0%	0	0%	0.6
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	56%	67	51%	51	100%	51	100%	51	100%	79
MD/DC/DE	3%	4	3%	49	96%	11	21%	0	0%	6.6
ME	2%	3	3%	22	43%	6	11%	0	0%	9.6
MI	1%	3	2%	1	1%	0	0%	0	0%	3
MO	0%	0	0%	0	0%	0	0%	0	0%	0.1
MS	0%	0	0%	0	0%	0	0%	0	0%	0
NC	2%	3	2%	23	45%	2	3%	0	0%	5.4
NH/VT	5%	9	7%	38	74%	20	39%	6	11%	27.9
NJ	4%	9	7%	42	82%	20	39%	0	0%	8.6
NY	6%	14	11%	48	94%	21	41%	20	39%	16
OH	2%	4	3%	30	58%	0	0%	0	0%	4.2
PA	5%	10	8%	51	100%	31	60%	1	1%	10.3
SC	0%	1	0%	0	0%	0	0%	0	0%	1.9
TN	0%	0	0%	0	0%	0	0%	0	0%	0.1
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	3%	6	4%	29	56%	17	33%	2	3%	12.1
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	1%	2	2%	25	49%	0	0%	0	0%	2.5
West	0%	0	0%	0	0%	0	0%	0	0%	0.3
Canada	2%	5	4%	21	41%	15	29%	0	0%	6

Downwind Nonattainment Area : Rhode_Island ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 48										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.2
CT/RI	5%	7	6%	35	72%	25	52%	10	20%	14.3
FL	0%	0	0%	0	0%	0	0%	0	0%	0.6
GA	0%	1	1%	0	0%	0	0%	0	0%	1
IA	0%	1	1%	0	0%	0	0%	0	0%	0.9
IL	1%	5	4%	3	6%	3	6%	0	0%	5.6
IN	2%	4	3%	13	27%	0	0%	0	0%	4.7
KY	2%	6	5%	11	22%	11	22%	0	0%	6.8
LA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MA	0%	0	0%	0	0%	0	0%	0	0%	0.2
MD/DC/DE	3%	7	5%	36	75%	6	12%	0	0%	7.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	5	4%	3	6%	0	0%	0	0%	4.8
MO	0%	2	2%	2	4%	0	0%	0	0%	2
MS	0%	0	0%	0	0%	0	0%	0	0%	0.3
NC	2%	2	2%	21	43%	0	0%	0	0%	4.4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	30%	38	29%	48	100%	48	100%	48	100%	47.7
NY	24%	37	26%	48	100%	48	100%	48	100%	44.7
OH	6%	8	6%	48	100%	39	81%	1	2%	10.3
PA	12%	20	16%	48	100%	48	100%	48	100%	22.4
SC	0%	1	0%	0	0%	0	0%	0	0%	0.6
TN	0%	2	1%	4	8%	0	0%	0	0%	2.5
TX	0%	0	0%	0	0%	0	0%	0	0%	0.1
VA	7%	13	10%	34	70%	33	68%	20	41%	18.1
WI	0%	1	1%	0	0%	0	0%	0	0%	1.2
WV	4%	6	4%	44	91%	19	39%	0	0%	8.1
West	0%	1	0%	0	0%	0	0%	0	0%	0.7
Canada	0%	1	1%	0	0%	0	0%	0	0%	1

Downwind Nonattainment Area : St_Louis ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 14										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	4%	5	4%	11	78%	11	78%	0	0%	5.8
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0
GA	2%	3	2%	11	78%	0	0%	0	0%	3.2
IA	0%	0	0%	0	0%	0	0%	0	0%	0
IL	18%	21	16%	14	100%	12	85%	8	57%	39
IN	1%	6	4%	3	21%	3	21%	0	0%	5.9
KY	1%	5	4%	3	21%	2	14%	0	0%	5.1
LA	0%	0	0%	0	0%	0	0%	0	0%	0
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	1	1%	0	0%	0	0%	0	0%	1.3
MO	65%	81	64%	14	100%	14	100%	14	100%	82.6
MS	0%	1	0%	0	0%	0	0%	0	0%	0.6
NC	1%	2	1%	0	0%	0	0%	0	0%	2
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.2
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	1%	3	2%	3	21%	0	0%	0	0%	2.7
PA	0%	0	0%	0	0%	0	0%	0	0%	0.5
SC	2%	2	2%	11	78%	0	0%	0	0%	2.2
TN	3%	3	3%	11	78%	0	0%	0	0%	3.6
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	0%	0	0%	0	0%	0	0%	0	0%	0.4
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	0%	0	0%	0	0%	0	0%	0	0%	0.1
West	0%	0	0%	0	0%	0	0%	0	0%	0.6
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind Nonattainment Area : SW_Michigan ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 195										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	NA	NA	0	0%	0	0%	0	0%	0
GA	0%	NA	NA	0	0%	0	0%	0	0%	0
IA	0%	1	0%	0	0%	0	0%	0	0%	1.7
IL	54%	57	43%	195	100%	195	100%	195	100%	78.1
IN	10%	14	11%	154	78%	112	57%	75	38%	32.7
KY	1%	2	1%	17	8%	0	0%	0	0%	3.3
LA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	NA	NA	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	1%	1	1%	21	10%	4	2%	0	0%	5.9
MO	12%	12	9%	195	100%	195	100%	184	94%	16.4
MS	0%	0	0%	0	0%	0	0%	0	0%	0.1
NC	0%	NA	NA	0	0%	0	0%	0	0%	0
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	NA	NA	0	0%	0	0%	0	0%	0
PA	0%	NA	NA	0	0%	0	0%	0	0%	0
SC	0%	NA	NA	0	0%	0	0%	0	0%	0
TN	0%	0	0%	0	0%	0	0%	0	0%	0.7
TX	3%	4	3%	123	63%	0	0%	0	0%	4.8
VA	0%	NA	NA	0	0%	0	0%	0	0%	0
WI	3%	4	3%	66	33%	34	17%	16	8%	18.3
WV	0%	NA	NA	0	0%	0	0%	0	0%	0
West	16%	18	14%	195	100%	195	100%	185	94%	21
Canada	0%	NA	NA	0	0%	0	0%	0	0%	0

Downwind Nonattainment Area : Western_Massachusetts ; CAMX Source Apportionment Modeling										
	Contributions to 1-Hr Designated + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-hours) = 22										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 1-hr contribution (ppb)
AL	0%	0	0%	0	0%	0	0%	0	0%	0.1
CT/RI	35%	50	39%	22	100%	22	100%	22	100%	61.4
FL	0%	1	1%	0	0%	0	0%	0	0%	1.3
GA	0%	0	0%	0	0%	0	0%	0	0%	0.4
IA	0%	0	0%	0	0%	0	0%	0	0%	0
IL	0%	0	0%	0	0%	0	0%	0	0%	0.2
IN	0%	0	0%	0	0%	0	0%	0	0%	0.4
KY	0%	1	1%	0	0%	0	0%	0	0%	1.3
LA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MA	6%	44	34%	8	36%	6	27%	4	18%	46.3
MD/DC/DE	3%	4	3%	22	100%	1	4%	0	0%	5.1
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	3	2%	10	45%	0	0%	0	0%	3.5
MO	0%	0	0%	0	0%	0	0%	0	0%	0
MS	0%	0	0%	0	0%	0	0%	0	0%	0.1
NC	1%	4	3%	8	36%	0	0%	0	0%	4.3
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.6
NJ	16%	23	17%	22	100%	22	100%	22	100%	30.3
NY	18%	23	18%	22	100%	22	100%	22	100%	25.7
OH	1%	3	2%	8	36%	0	0%	0	0%	4.1
PA	7%	12	10%	22	100%	20	90%	7	31%	14.3
SC	0%	1	1%	0	0%	0	0%	0	0%	1.4
TN	0%	0	0%	0	0%	0	0%	0	0%	0.2
TX	0%	0	0%	0	0%	0	0%	0	0%	0
VA	4%	7	5%	21	95%	8	36%	0	0%	8.2
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	2%	7	5%	8	36%	8	36%	0	0%	7.1
West	0%	0	0%	0	0%	0	0%	0	0%	0.1
Canada	4%	7	6%	12	54%	12	54%	0	0%	9

APPENDIX J
EVALUATION OF CONTRIBUTIONS -- TABLES OF METRICS
8-HOUR UAM-V: UPWIND STATES TO DOWNWIND STATES

The tables in this Appendix contain information on the UAM-V metrics used for the evaluation of contributions. Tables are provided only for those States with exceedences in the Base Case. The headings in the table relate to the metrics as follows:

Percent total ppb reduced >= 85 ppb	Metric 3
Percent pop-wgt total ppb reduced >= 85 ppb	Metric 4
Number of exceedences reduced >= 2 ppb	Metrics 1 & 2
Percent exceedences reduced >= 2 ppb	Metrics 1 & 2
Number of exceedences reduced >= 5 ppb	Metrics 1 & 2
Percent exceedences reduced >= 5 ppb	Metrics 1 & 2
Number of exceedences reduced >= 10 ppb	Metrics 1 & 2
Percent exceedences reduced >= 10 ppb	Metrics 1 & 2
max 8-hr contribution, ppb	Metric 2

(Note: Some of the maximum contribution values may appear to be inconsistent with the number of exceedences above a certain cut-point. For example, a contribution of 9.999........ is interpreted as being less that 10 ppb for the purpose of counting the number of exceedence reduced; however, this value is rounded to 10 ppb in the presentation of maximum "ppb" contribution in these tables.)

Downwind State: Alabama; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			432						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	95%	99%	414	96%	407	94%	397	92%	124.1
GA	23%	14%	188	44%	162	38%	118	27%	64.9
IL	1%	1%	14	3%	2	0%	0	0%	5.3
IN	1%	0%	0	0%	0	0%	0	0%	1.9
KY	3%	2%	46	11%	2	0%	0	0%	5.4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.2
MO	1%	1%	14	3%	0	0%	0	0%	2.9
NC	2%	1%	22	5%	5	1%	0	0%	8.1
OH	0%	0%	1	0%	0	0%	0	0%	2.2
SC	8%	5%	85	20%	53	12%	34	8%	21.6
TN	13%	12%	155	36%	106	25%	38	9%	27.6
VA	0%	0%	0	0%	0	0%	0	0%	0.3
WI	0%	0%	0	0%	0	0%	0	0%	0.2
WV	0%	0%	0	0%	0	0%	0	0%	0.7

Downwind State: Arkansas; UAM-V State Zero-Out Modeling

Contributions to 8-Hr Violating + Modeled Receptors

Base case: Total Number of Exceedences (grid-days) = 47

Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	7%	6%	14	30%	1	2%	0	0%	5.6
GA	6%	6%	8	17%	4	9%	0	0%	7.2
IL	4%	6%	5	11%	0	0%	0	0%	4.1
IN	0%	0%	0	0%	0	0%	0	0%	0.4
KY	3%	3%	1	2%	0	0%	0	0%	3.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.9
MO	4%	9%	5	11%	3	6%	0	0%	6.5
NC	6%	9%	10	21%	2	4%	0	0%	5.2
OH	0%	0%	0	0%	0	0%	0	0%	1.3
SC	5%	6%	10	21%	0	0%	0	0%	3.5
TN	100%	100%	47	100%	47	100%	47	100%	84.2
VA	0%	0%	0	0%	0	0%	0	0%	0.6
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0.6

Downwind State: Connecticut; UAM-V State Zero-Out Modeling

Contributions to 8-Hr Violating + Modeled Receptors

Base case: Total Number of Exceedences (grid-days) = 617

Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.5
GA	0%	0%	0	0%	0	0%	0	0%	0.3
IL	2%	1%	21	3%	0	0%	0	0%	3.7
IN	1%	1%	7	1%	0	0%	0	0%	3.6
KY	0%	0%	0	0%	0	0%	0	0%	1.8
MA	0%	0%	1	0%	0	0%	0	0%	3.4
MI	2%	2%	22	4%	0	0%	0	0%	4.2
MO	1%	0%	0	0%	0	0%	0	0%	1.6
NC	2%	1%	19	3%	0	0%	0	0%	3.5
OH	5%	4%	127	21%	11	2%	0	0%	6.5
SC	0%	0%	0	0%	0	0%	0	0%	1.3
TN	0%	0%	0	0%	0	0%	0	0%	0.7
VA	6%	6%	147	24%	16	3%	0	0%	8.9
WI	1%	1%	0	0%	0	0%	0	0%	1.2
WV	5%	5%	137	22%	22	4%	0	0%	6.9

Downwind State: Delaware; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				361					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	1%	1%	0	0%	0	0%	0	0%	1
GA	1%	1%	0	0%	0	0%	0	0%	1.2
IL	6%	4%	20	6%	0	0%	0	0%	2.9
IN	7%	4%	32	9%	0	0%	0	0%	3.2
KY	7%	5%	43	12%	0	0%	0	0%	4.1
MA	0%	0%	0	0%	0	0%	0	0%	0.1
MI	5%	6%	39	11%	4	1%	0	0%	7.4
MO	2%	1%	0	0%	0	0%	0	0%	0.9
NC	8%	7%	60	17%	27	7%	7	2%	21.6
OH	19%	15%	183	51%	21	6%	0	0%	6.2
SC	1%	1%	0	0%	0	0%	0	0%	1.2
TN	4%	3%	22	6%	0	0%	0	0%	2.7
VA	60%	54%	282	78%	221	61%	144	40%	33.6
WI	1%	1%	0	0%	0	0%	0	0%	1.1
WV	33%	29%	239	66%	125	35%	26	7%	15.1

Downwind State: District of Columbia; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			11						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	1%	1%	1	9%	0	0%	0	0%	2.8
GA	1%	1%	0	0%	0	0%	0	0%	0.9
IL	3%	3%	1	9%	0	0%	0	0%	2.5
IN	3%	3%	0	0%	0	0%	0	0%	1.8
KY	6%	6%	3	27%	0	0%	0	0%	4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	3%	3%	2	18%	0	0%	0	0%	3.2
MO	1%	1%	0	0%	0	0%	0	0%	1.1
NC	2%	2%	0	0%	0	0%	0	0%	1.1
OH	11%	11%	5	45%	2	18%	0	0%	5.4
SC	0%	0%	0	0%	0	0%	0	0%	0.4
TN	3%	3%	1	9%	0	0%	0	0%	2.1
VA	59%	59%	9	82%	8	73%	8	73%	54.2
WI	1%	1%	0	0%	0	0%	0	0%	1.6
WV	20%	20%	5	45%	5	45%	2	18%	18

Downwind State: Florida; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				63					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	71%	54%	60	95%	47	75%	29	46%	37.8
GA	3%	2%	0	0%	0	0%	0	0%	1.4
IL	0%	0%	0	0%	0	0%	0	0%	0
IN	0%	0%	0	0%	0	0%	0	0%	0
KY	0%	0%	0	0%	0	0%	0	0%	0
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	1%	1%	0	0%	0	0%	0	0%	0.5
NC	0%	0%	0	0%	0	0%	0	0%	0.1
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0.1
TN	1%	1%	0	0%	0	0%	0	0%	0.8
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0.1

Downwind State: Georgia; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			504						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	15%	11%	248	49%	168	33%	77	15%	32.6
GA	100%	100%	504	100%	504	100%	500	99%	166.3
IL	1%	1%	14	3%	0	0%	0	0%	2.9
IN	0%	0%	0	0%	0	0%	0	0%	2
KY	3%	2%	51	10%	25	5%	12	2%	14.9
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	1%	1%	1	0%	0	0%	0	0%	2.1
NC	2%	2%	45	9%	10	2%	0	0%	6.6
OH	0%	0%	0	0%	0	0%	0	0%	0.6
SC	8%	6%	129	26%	72	14%	67	13%	41.4
TN	9%	7%	203	40%	91	18%	25	5%	14.6
VA	0%	0%	0	0%	0	0%	0	0%	0.8
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	1.1

Downwind State: Illinois; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				251					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	4%	2%	24	10%	0	0%	0	0%	4.6
GA	4%	3%	19	8%	0	0%	0	0%	3.2
IL	92%	97%	247	98%	241	96%	226	90%	82.1
IN	7%	8%	35	14%	23	9%	7	3%	30.6
KY	7%	7%	35	14%	21	8%	0	0%	8.4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	0%	1	0%	0	0%	0	0%	2
MO	66%	36%	216	86%	178	71%	130	52%	71.1
NC	2%	1%	0	0%	0	0%	0	0%	1.3
OH	2%	2%	2	1%	1	0%	0	0%	5.6
SC	2%	1%	0	0%	0	0%	0	0%	1.3
TN	7%	4%	36	14%	11	4%	6	2%	23.6
VA	0%	0%	0	0%	0	0%	0	0%	0.6
WI	0%	0%	0	0%	0	0%	0	0%	0.3
WV	2%	2%	1	0%	0	0%	0	0%	2

Downwind State: Indiana; UAM-V State Zero-Out Modeling

Contributions to 8-Hr Violating + Modeled Receptors

Base case: Total Number of Exceedences (grid-days) = 522

Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	8%	7%	76	15%	14	3%	2	0%	10.9
GA	8%	9%	73	14%	7	1%	4	1%	11.7
IL	19%	16%	160	31%	69	13%	37	7%	40.5
IN	73%	75%	468	90%	428	82%	380	73%	49.1
KY	70%	64%	445	85%	357	68%	233	45%	64.4
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	1%	1	0%	0	0%	0	0%	2.1
MO	5%	5%	65	12%	19	4%	0	0%	9
NC	8%	9%	52	10%	0	0%	0	0%	4.8
OH	5%	4%	42	8%	5	1%	3	1%	13.7
SC	6%	7%	20	4%	2	0%	0	0%	5.5
TN	38%	36%	339	65%	168	32%	77	15%	33.3
VA	4%	4%	10	2%	0	0%	0	0%	3.5
WI	0%	0%	0	0%	0	0%	0	0%	0.9
WV	6%	6%	58	11%	6	1%	0	0%	7.9

Downwind State: Kentucky; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			766						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	7%	6%	115	15%	64	8%	22	3%	19.8
GA	6%	5%	86	11%	10	1%	0	0%	8.9
IL	7%	7%	125	16%	43	6%	5	1%	18.4
IN	40%	44%	484	63%	376	49%	214	28%	30.9
KY	90%	88%	744	97%	703	92%	618	81%	67.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	1%	15	2%	15	2%	4	1%	12.5
MO	4%	3%	64	8%	14	2%	0	0%	7
NC	6%	7%	88	11%	10	1%	0	0%	9.2
OH	11%	11%	133	17%	105	14%	70	9%	39.8
SC	3%	3%	13	2%	0	0%	0	0%	4.3
TN	35%	35%	431	56%	304	40%	198	26%	67.8
VA	2%	3%	7	1%	0	0%	0	0%	3.8
WI	0%	0%	0	0%	0	0%	0	0%	1.1
WV	5%	4%	62	8%	29	4%	18	2%	52.3

Downwind State: Louisiana; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			504						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	14%	13%	133	26%	85	17%	45	9%	28.8
GA	2%	2%	24	5%	0	0%	0	0%	2.8
IL	1%	1%	0	0%	0	0%	0	0%	1.4
IN	1%	1%	0	0%	0	0%	0	0%	1.4
KY	1%	1%	0	0%	0	0%	0	0%	1.6
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.1
MO	2%	2%	0	0%	0	0%	0	0%	1.7
NC	0%	0%	0	0%	0	0%	0	0%	0.1
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0.1
TN	5%	6%	57	11%	2	0%	0	0%	5.3
VA	0%	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0%	0	0%	0	0%	0	0%	0.2
WV	0%	0%	0	0%	0	0%	0	0%	0.1

Downwind State: Maine; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				236					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.1
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	1%	1%	0	0%	0	0%	0	0%	1.1
IN	2%	1%	0	0%	0	0%	0	0%	1.1
KY	0%	0%	0	0%	0	0%	0	0%	0.3
MA	95%	94%	229	97%	217	92%	193	82%	50.5
MI	5%	4%	1	0%	0	0%	0	0%	2.8
MO	0%	0%	0	0%	0	0%	0	0%	0.4
NC	3%	2%	11	5%	0	0%	0	0%	3.4
OH	4%	3%	0	0%	0	0%	0	0%	1.8
SC	1%	1%	0	0%	0	0%	0	0%	1.1
TN	0%	0%	0	0%	0	0%	0	0%	0.1
VA	8%	6%	37	16%	6	3%	0	0%	5.5
WI	1%	0%	0	0%	0	0%	0	0%	0.8
WV	2%	2%	0	0%	0	0%	0	0%	1.2

Downwind State: Maryland; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			1221						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	1%	0%	13	1%	0	0%	0	0%	3
GA	1%	0%	1	0%	0	0%	0	0%	2.4
IL	3%	2%	26	2%	0	0%	0	0%	2.5
IN	4%	2%	101	8%	0	0%	0	0%	4.9
KY	4%	3%	153	13%	8	1%	0	0%	6.3
MA	0%	0%	0	0%	0	0%	0	0%	0.2
MI	4%	3%	142	12%	22	2%	0	0%	7.1
MO	1%	0%	0	0%	0	0%	0	0%	1.1
NC	5%	4%	157	13%	90	7%	46	4%	26.9
OH	10%	8%	508	42%	126	10%	0	0%	8
SC	1%	0%	9	1%	2	0%	0	0%	5.6
TN	2%	1%	43	4%	0	0%	0	0%	3.3
VA	57%	52%	991	81%	878	72%	694	57%	62.6
WI	1%	1%	0	0%	0	0%	0	0%	1.5
WV	17%	14%	579	47%	391	32%	133	11%	23.1

Downwind State: Massachusetts; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				584					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.5
GA	0%	0%	0	0%	0	0%	0	0%	0.8
IL	1%	1%	8	1%	0	0%	0	0%	3.5
IN	1%	1%	1	0%	0	0%	0	0%	2.8
KY	1%	0%	0	0%	0	0%	0	0%	1.2
MA	53%	71%	344	59%	303	52%	257	44%	93.3
MI	3%	3%	21	4%	2	0%	0	0%	5.1
MO	0%	0%	0	0%	0	0%	0	0%	1.4
NC	2%	1%	9	2%	1	0%	0	0%	7.2
OH	4%	2%	35	6%	0	0%	0	0%	3.5
SC	0%	0%	2	0%	0	0%	0	0%	2.2
TN	0%	0%	0	0%	0	0%	0	0%	0.4
VA	6%	4%	79	14%	28	5%	2	0%	13.1
WI	1%	1%	0	0%	0	0%	0	0%	1.2
WV	4%	3%	108	18%	4	1%	0	0%	5.8

Downwind State: Michigan; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			583						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	5%	5%	60	10%	0	0%	0	0%	4.5
GA	4%	4%	43	7%	0	0%	0	0%	2.9
IL	78%	50%	499	86%	476	82%	367	63%	61.4
IN	43%	44%	396	68%	281	48%	201	34%	36
KY	10%	13%	141	24%	37	6%	0	0%	8.1
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	23%	67%	213	37%	157	27%	135	23%	76
MO	22%	13%	335	57%	120	21%	0	0%	9.2
NC	2%	2%	0	0%	0	0%	0	0%	1.6
OH	6%	13%	91	16%	24	4%	20	3%	23.4
SC	2%	2%	0	0%	0	0%	0	0%	1.4
TN	10%	10%	151	26%	31	5%	0	0%	7.8
VA	1%	1%	0	0%	0	0%	0	0%	0.8
WI	5%	1%	47	8%	20	3%	8	1%	15.6
WV	3%	4%	3	1%	0	0%	0	0%	2.2

Downwind State: Missouri; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				78					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	10%	9%	16	21%	6	8%	1	1%	10.1
GA	6%	6%	10	13%	0	0%	0	0%	2.9
IL	28%	22%	45	58%	31	40%	8	10%	16.3
IN	6%	5%	6	8%	5	6%	0	0%	8.6
KY	11%	10%	24	31%	0	0%	0	0%	4.5
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	1%	0	0%	0	0%	0	0%	0.9
MO	98%	99%	77	99%	77	99%	73	94%	76.8
NC	3%	3%	0	0%	0	0%	0	0%	1.3
OH	3%	3%	1	1%	0	0%	0	0%	2.2
SC	2%	2%	0	0%	0	0%	0	0%	1.3
TN	21%	15%	21	27%	14	18%	10	13%	19.2
VA	1%	1%	0	0%	0	0%	0	0%	0.4
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	2%	1%	0	0%	0	0%	0	0%	0.6

Downwind State: Mississippi; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			63						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	30%	24%	25	40%	21	33%	14	22%	25.8
GA	4%	3%	6	10%	0	0%	0	0%	2.8
IL	4%	5%	3	5%	0	0%	0	0%	4.2
IN	1%	0%	0	0%	0	0%	0	0%	0.3
KY	1%	0%	1	2%	0	0%	0	0%	3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.7
MO	12%	16%	15	24%	2	3%	0	0%	5.3
NC	2%	5%	3	5%	1	2%	0	0%	5.2
OH	0%	0%	0	0%	0	0%	0	0%	1.1
SC	1%	3%	0	0%	0	0%	0	0%	1.8
TN	50%	59%	23	37%	23	37%	23	37%	53.6
VA	0%	0%	0	0%	0	0%	0	0%	0.6
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0.5

Downwind State: New Hampshire; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				131					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.2
GA	0%	0%	0	0%	0	0%	0	0%	0.1
IL	1%	1%	0	0%	0	0%	0	0%	0.8
IN	1%	1%	0	0%	0	0%	0	0%	0.7
KY	0%	0%	0	0%	0	0%	0	0%	0.5
MA	87%	85%	115	88%	115	88%	98	75%	68.1
MI	3%	3%	0	0%	0	0%	0	0%	1.8
MO	0%	0%	0	0%	0	0%	0	0%	0.7
NC	0%	0%	0	0%	0	0%	0	0%	0.7
OH	1%	1%	0	0%	0	0%	0	0%	1.6
SC	0%	0%	0	0%	0	0%	0	0%	0.2
TN	0%	0%	0	0%	0	0%	0	0%	0.2
VA	2%	2%	0	0%	0	0%	0	0%	1.4
WI	1%	0%	0	0%	0	0%	0	0%	1.2
WV	1%	1%	3	2%	0	0%	0	0%	2.3

Downwind State: New Jersey; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			1215						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.5
GA	0%	0%	0	0%	0	0%	0	0%	0.9
IL	3%	3%	32	3%	0	0%	0	0%	3.1
IN	3%	3%	49	4%	0	0%	0	0%	3.4
KY	3%	2%	82	7%	0	0%	0	0%	3.8
MA	0%	0%	0	0%	0	0%	0	0%	0.2
MI	4%	4%	139	11%	21	2%	0	0%	7.3
MO	1%	1%	0	0%	0	0%	0	0%	0.9
NC	4%	3%	110	9%	38	3%	9	1%	18
OH	10%	9%	458	38%	60	5%	0	0%	8.6
SC	1%	1%	1	0%	0	0%	0	0%	2.2
TN	1%	1%	13	1%	0	0%	0	0%	2.5
VA	19%	14%	614	51%	271	22%	105	9%	32.3
WI	1%	1%	0	0%	0	0%	0	0%	1.6
WV	18%	17%	602	50%	285	23%	64	5%	15

Downwind State: New York; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			770						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.9
GA	0%	0%	0	0%	0	0%	0	0%	0.7
IL	2%	2%	69	9%	16	2%	0	0%	7.4
IN	2%	3%	54	7%	5	1%	0	0%	6.4
KY	1%	2%	23	3%	0	0%	0	0%	4
MA	0%	0%	0	0%	0	0%	0	0%	0.2
MI	3%	3%	84	11%	19	2%	0	0%	9.9
MO	1%	1%	0	0%	0	0%	0	0%	1.6
NC	2%	3%	26	3%	0	0%	0	0%	5
OH	5%	9%	158	21%	32	4%	0	0%	7.8
SC	0%	1%	0	0%	0	0%	0	0%	1.4
TN	0%	1%	2	0%	0	0%	0	0%	2.9
VA	8%	10%	259	34%	77	10%	1	0%	10
WI	1%	1%	23	3%	0	0%	0	0%	3.3
WV	7%	12%	200	26%	82	11%	7	1%	12

Downwind State: North Carolina; UAM-V State Zero-Out Modeling

Contributions to 8-Hr Violating + Modeled Receptors

Base case: Total Number of Exceedences (grid-days) = 989

Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	3%	2%	65	7%	32	3%	1	0%	10.2
GA	6%	6%	118	12%	76	8%	41	4%	18.5
IL	1%	1%	2	0%	0	0%	0	0%	4.3
IN	3%	2%	16	2%	0	0%	0	0%	3.9
KY	8%	6%	212	21%	53	5%	3	0%	13.5
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	2%	1%	32	3%	0	0%	0	0%	3.5
MO	1%	1%	8	1%	0	0%	0	0%	2.6
NC	97%	99%	962	97%	952	96%	937	95%	108.7
OH	7%	4%	155	16%	47	5%	6	1%	11.7
SC	21%	22%	391	40%	249	25%	138	14%	38.2
TN	11%	7%	209	21%	142	14%	65	7%	57.7
VA	22%	16%	532	54%	203	21%	64	6%	33.7
WI	0%	0%	0	0%	0	0%	0	0%	0.4
WV	15%	9%	334	34%	151	15%	36	4%	27.2

Downwind State: Ohio; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			1336						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	8%	8%	122	9%	88	7%	22	2%	14.2
GA	4%	3%	0	0%	0	0%	0	0%	1.8
IL	12%	12%	296	22%	130	10%	3	0%	10.9
IN	32%	31%	750	56%	440	33%	151	11%	21.1
KY	50%	52%	902	68%	668	50%	420	31%	51.1
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	24%	21%	272	20%	243	18%	213	16%	45
MO	2%	3%	48	4%	2	0%	0	0%	5.2
NC	7%	6%	89	7%	4	0%	0	0%	6.6
OH	77%	63%	1221	91%	1158	87%	924	69%	56.3
SC	3%	3%	9	1%	0	0%	0	0%	3
TN	18%	18%	346	26%	193	14%	4	0%	11.3
VA	7%	5%	80	6%	12	1%	0	0%	8.1
WI	1%	1%	13	1%	0	0%	0	0%	4.7
WV	30%	24%	500	37%	396	30%	215	16%	52.6

Downwind State: Oklahoma; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				53					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	5%	2%	10	19%	0	0%	0	0%	3.7
GA	2%	1%	0	0%	0	0%	0	0%	1.3
IL	0%	0%	0	0%	0	0%	0	0%	0.2
IN	0%	0%	0	0%	0	0%	0	0%	0.1
KY	0%	0%	0	0%	0	0%	0	0%	0.2
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	2%	2%	1	2%	0	0%	0	0%	2.5
NC	0%	0%	0	0%	0	0%	0	0%	0.4
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	1%	0%	0	0%	0	0%	0	0%	0.5
TN	1%	1%	0	0%	0	0%	0	0%	1.1
VA	0%	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0%	0	0%	0	0%	0	0%	0
WV	0%	0%	0	0%	0	0%	0	0%	0.1

Downwind State: Pennsylvania; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			2042						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	2%	1%	73	4%	0	0%	0	0%	4.9
GA	1%	1%	0	0%	0	0%	0	0%	1
IL	7%	5%	284	14%	46	2%	1	0%	10.2
IN	10%	7%	394	19%	118	6%	1	0%	10.1
KY	13%	9%	568	28%	191	9%	10	0%	11.7
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	7%	6%	263	13%	88	4%	25	1%	23.6
MO	2%	2%	58	3%	0	0%	0	0%	3.9
NC	8%	6%	218	11%	4	0%	0	0%	5.2
OH	33%	22%	1267	62%	687	34%	229	11%	47.6
SC	1%	1%	0	0%	0	0%	0	0%	1.4
TN	5%	3%	88	4%	0	0%	0	0%	3.8
VA	19%	22%	607	30%	249	12%	100	5%	22.9
WI	1%	1%	7	0%	1	0%	0	0%	5.4
WV	47%	34%	1401	69%	1081	53%	622	30%	45.3

Downwind State: Rhode Island; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				60					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	1%	0	0%	0	0%	0	0%	0.3
GA	0%	1%	0	0%	0	0%	0	0%	0.2
IL	4%	4%	2	3%	0	0%	0	0%	2.6
IN	3%	4%	0	0%	0	0%	0	0%	1.1
KY	1%	1%	0	0%	0	0%	0	0%	0.5
MA	0%	-3%	2	3%	1	2%	0	0%	5.2
MI	3%	4%	0	0%	0	0%	0	0%	1.8
MO	1%	1%	0	0%	0	0%	0	0%	0.9
NC	3%	5%	2	3%	0	0%	0	0%	2.9
OH	14%	15%	20	33%	0	0%	0	0%	4.1
SC	1%	1%	0	0%	0	0%	0	0%	0.8
TN	0%	1%	0	0%	0	0%	0	0%	0.2
VA	11%	15%	13	22%	2	3%	0	0%	5.8
WI	1%	1%	0	0%	0	0%	0	0%	0.6
WV	13%	15%	23	38%	0	0%	0	0%	3.8

Downwind State: South Carolina; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				237					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	5%	3%	34	14%	1	0%	0	0%	5.4
GA	19%	14%	82	35%	55	23%	45	19%	29
IL	1%	1%	0	0%	0	0%	0	0%	1.7
IN	1%	1%	3	1%	0	0%	0	0%	3.5
KY	7%	6%	36	15%	0	0%	0	0%	4.9
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0.1
MO	1%	1%	0	0%	0	0%	0	0%	1.7
NC	43%	35%	173	73%	117	49%	74	31%	43.8
OH	2%	2%	1	0%	0	0%	0	0%	2.2
SC	99%	99%	236	100%	233	98%	219	92%	81.2
TN	27%	21%	101	43%	82	35%	38	16%	24.9
VA	6%	5%	22	9%	0	0%	0	0%	3.9
WI	0%	0%	0	0%	0	0%	0	0%	0.2
WV	7%	6%	27	11%	1	0%	0	0%	5.2

Downwind State: Tennessee; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			761						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	10%	11%	175	23%	90	12%	42	6%	51.5
GA	9%	10%	157	21%	84	11%	29	4%	22.6
IL	3%	3%	53	7%	1	0%	0	0%	5.3
IN	3%	3%	57	7%	18	2%	1	0%	10.3
KY	19%	16%	291	38%	175	23%	92	12%	26.5
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	0%	5	1%	0	0%	0	0%	3.1
MO	2%	2%	28	4%	1	0%	0	0%	5
NC	6%	6%	109	14%	41	5%	8	1%	15.5
OH	5%	3%	54	7%	41	5%	18	2%	15.6
SC	4%	5%	75	10%	21	3%	7	1%	13.5
TN	98%	99%	756	99%	750	99%	736	97%	92.2
VA	4%	3%	54	7%	25	3%	5	1%	22.2
WI	0%	0%	0	0%	0	0%	0	0%	0.7
WV	5%	3%	64	8%	34	4%	21	3%	43.3

Downwind State: Texas; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =				616					
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	2%	1%	54	9%	0	0%	0	0%	4.1
GA	1%	1%	28	5%	0	0%	0	0%	2.9
IL	0%	0%	0	0%	0	0%	0	0%	0.9
IN	0%	0%	0	0%	0	0%	0	0%	0.3
KY	0%	0%	0	0%	0	0%	0	0%	0.3
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	0%	0%	0	0%	0	0%	0	0%	0
MO	1%	1%	0	0%	0	0%	0	0%	0.9
NC	0%	0%	0	0%	0	0%	0	0%	0.2
OH	0%	0%	0	0%	0	0%	0	0%	0
SC	0%	0%	0	0%	0	0%	0	0%	0.4
TN	1%	0%	0	0%	0	0%	0	0%	1.6
VA	0%	0%	0	0%	0	0%	0	0%	0
WI	0%	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0%	0	0%	0	0%	0	0%	0

Downwind State: Virginia; UAM-V State Zero-Out Modeling

Contributions to 8-Hr Violating + Modeled Receptors

Base case: Total Number of Exceedences (grid-days) = 427

Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	1%	1%	20	5%	1	0%	0	0%	6
GA	1%	1%	27	6%	0	0%	0	0%	4.9
IL	1%	2%	2	0%	0	0%	0	0%	2.5
IN	2%	2%	11	3%	0	0%	0	0%	2.9
KY	4%	4%	65	15%	7	2%	0	0%	7.7
MA	0%	0%	0	0%	0	0%	0	0%	0.1
MI	2%	2%	13	3%	0	0%	0	0%	4.7
MO	0%	0%	0	0%	0	0%	0	0%	0.9
NC	12%	6%	117	27%	83	19%	50	12%	44.6
OH	5%	6%	81	19%	3	1%	0	0%	6.2
SC	1%	1%	26	6%	0	0%	0	0%	4.1
TN	2%	2%	31	7%	3	1%	0	0%	5.3
VA	91%	80%	422	99%	416	97%	405	95%	98.8
WI	1%	1%	0	0%	0	0%	0	0%	1.5
WV	13%	13%	197	46%	100	23%	36	8%	30.7

Downwind State: West Virginia; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			147						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	1%	1%	2	1%	2	1%	2	1%	17.7
GA	1%	1%	0	0%	0	0%	0	0%	1.5
IL	9%	7%	37	25%	7	5%	0	0%	8.9
IN	16%	12%	67	46%	12	8%	0	0%	9.5
KY	41%	37%	85	58%	72	49%	59	40%	39.7
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	9%	6%	30	20%	17	12%	2	1%	12.4
MO	2%	1%	0	0%	0	0%	0	0%	1.8
NC	4%	4%	11	7%	1	1%	0	0%	6.4
OH	54%	39%	125	85%	93	63%	60	41%	38.5
SC	1%	1%	0	0%	0	0%	0	0%	1.7
TN	7%	6%	22	15%	2	1%	0	0%	8.7
VA	5%	4%	14	10%	1	1%	0	0%	7.4
WI	0%	0%	0	0%	0	0%	0	0%	1
WV	87%	91%	135	92%	127	86%	101	69%	69.6

Downwind State: Wisconsin; UAM-V State Zero-Out Modeling									
	Contributions to 8-Hr Violating + Modeled Receptors								
Base case: Total Number of Exceedences (grid-days) =			54						
Upwind State	Percent total ppb reduced >= 85 ppb	Percent pop-wgt total ppb	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8-hr contribution ppb
AL	0%	0%	0	0%	0	0%	0	0%	0.2
GA	1%	2%	0	0%	0	0%	0	0%	0.4
IL	100%	100%	54	100%	54	100%	51	94%	44.2
IN	11%	18%	6	11%	6	11%	0	0%	8.1
KY	10%	15%	6	11%	4	7%	0	0%	5.5
MA	0%	0%	0	0%	0	0%	0	0%	0
MI	1%	1%	0	0%	0	0%	0	0%	0.8
MO	36%	32%	31	57%	1	2%	0	0%	7.4
NC	1%	1%	0	0%	0	0%	0	0%	0.3
OH	2%	4%	0	0%	0	0%	0	0%	1.1
SC	1%	1%	0	0%	0	0%	0	0%	0.2
TN	9%	5%	7	13%	0	0%	0	0%	3.3
VA	0%	0%	0	0%	0	0%	0	0%	0.1
WI	31%	-39%	29	54%	22	41%	20	37%	26.7
WV	3%	5%	0	0%	0	0%	0	0%	1.5

APPENDIX K
EVALUATION OF CONTRIBUTIONS -- TABLES OF METRICS
8-HOUR CAMX: UPWIND STATES TO DOWNWIND STATES

The tables in this Appendix contain information on the CAMx metrics used for the evaluation of contributions. Tables are provided only for those States with predicted exceedences in the Base Case. The headings in the table relate to the metrics as follows:

Average percent contribution (4-episode)	Metric 4
Highest daily average contribution (ppb)	Metric 3
Highest daily average contribution (%)	Metric 3
Number of exceedences reduced >= 2 ppb	Metrics 1 & 2
Percent exceedences reduced >= 2 ppb	Metrics 1 & 2
Number of exceedences reduced >= 5 ppb	Metrics 1 & 2
Percent exceedences reduced >= 5 ppb	Metrics 1 & 2
Number of exceedences reduced >= 10 ppb	Metrics 1 & 2
Percent exceedences reduced >= 10 ppb	Metrics 1 & 2
max 8-hr contribution, ppb	Metric 2

(Note: Some of the maximum contribution values may appear to be inconsistent with the number of exceedences above a certain cut-point. For example, a contribution of 9.999........ is interpreted as being less that 10 ppb for the purpose of counting the number of exceedence reduced; however, this value is rounded to 10 ppb in the presentation of maximum "ppb" contribution in these tables.)

Downwind State : Alabama ; CAMX Source Apportionment Modeling

Contributions to 8-hr Violating Counties + Modeled Receptors

Base Case: Total Number of Exceedences (grids-8hrs) = 6894

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	65%	82	79%	6863	99%	6765	98%	6621	96%	128.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	1%	7	8%	1232	17%	2	0%	0	0%	7.2
GA	10%	30	31%	2929	42%	2563	37%	1932	28%	71.1
IA	0%	0	0%	0	0%	0	0%	0	0%	0.8
IL	1%	5	5%	368	5%	158	2%	0	0%	8.6
IN	0%	2	2%	311	4%	4	0%	0	0%	5.8
KY	2%	5	5%	1527	22%	766	11%	0	0%	9.8
LA	2%	22	25%	1994	28%	694	10%	24	0%	28
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	1.3
MO	1%	5	5%	563	8%	151	2%	0	0%	7.5
MS	4%	12	11%	2864	41%	2111	30%	792	11%	16.5
NC	1%	5	5%	1252	18%	420	6%	100	1%	14
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.1
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.5
NY	0%	0	0%	0	0%	0	0%	0	0%	0.5
OH	0%	1	1%	92	1%	24	0%	0	0%	6.4
PA	0%	0	0%	0	0%	0	0%	0	0%	0.7
SC	3%	15	15%	2046	29%	1120	16%	615	8%	28.7
TN	7%	14	13%	3548	51%	2761	40%	1479	21%	38.8
TX	1%	6	7%	929	13%	269	3%	0	0%	8.1
VA	0%	1	1%	0	0%	0	0%	0	0%	1
WI	0%	0	0%	0	0%	0	0%	0	0%	0.6
WV	0%	0	0%	0	0%	0	0%	0	0%	0.7
West	2%	8	9%	1572	22%	1072	15%	43	0%	11.3
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind State : Arkansas ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 193										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	3%	14	16%	74	38%	21	10%	13	6%	14.7
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	1%	3	3%	44	22%	0	0%	0	0%	4.3
GA	3%	15	17%	79	40%	17	8%	13	6%	17.4
IA	1%	3	3%	28	14%	0	0%	0	0%	2.8
IL	2%	5	6%	58	30%	29	15%	0	0%	6.2
IN	0%	1	1%	0	0%	0	0%	0	0%	1.2
KY	2%	7	8%	41	21%	7	3%	0	0%	8.5
LA	0%	13	15%	4	2%	4	2%	4	2%	15.4
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	2	2%	0	0%	0	0%	0	0%	1.9
MO	2%	9	9%	39	20%	28	14%	0	0%	9.5
MS	5%	23	27%	127	65%	60	31%	5	2%	24.7
NC	5%	8	8%	107	55%	72	37%	0	0%	9
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	1%	4	5%	7	3%	0	0%	0	0%	4.4
PA	0%	0	0%	0	0%	0	0%	0	0%	0.3
SC	3%	5	6%	124	64%	5	2%	0	0%	5.3
TN	45%	40	45%	193	100%	189	97%	188	97%	54.6
TX	0%	0	0%	0	0%	0	0%	0	0%	0.3
VA	1%	1	1%	0	0%	0	0%	0	0%	1.3
WI	0%	0	0%	0	0%	0	0%	0	0%	0.1
WV	1%	1	1%	0	0%	0	0%	0	0%	1.5
West	24%	24	26%	193	100%	193	100%	186	96%	29.3
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.3

Downwind State : Connecticut ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 7379										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.8
CT/RI	12%	27	28%	5055	68%	4022	54%	2951	39%	52.4
FL	0%	2	2%	366	4%	0	0%	0	0%	4.3
GA	0%	1	1%	0	0%	0	0%	0	0%	1.3
IA	0%	1	1%	0	0%	0	0%	0	0%	1.9
IL	1%	6	5%	949	12%	397	5%	0	0%	8.9
IN	1%	5	5%	1108	15%	147	1%	0	0%	5.9
KY	1%	6	6%	378	5%	185	2%	0	0%	7.4
LA	0%	0	0%	0	0%	0	0%	0	0%	1
MA	0%	0	0%	18	0%	0	0%	0	0%	2.6
MD/DC/DE	6%	9	10%	5195	70%	3458	46%	748	10%	18.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	4	5%	2184	29%	192	2%	0	0%	6.7
MO	1%	2	2%	522	7%	0	0%	0	0%	4.1
MS	0%	1	1%	0	0%	0	0%	0	0%	0.7
NC	2%	6	6%	1147	15%	569	7%	46	0%	12.9
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.7
NJ	23%	30	26%	7192	97%	6876	93%	5978	81%	53.9
NY	24%	39	45%	7346	99%	7214	97%	6501	88%	50.6
OH	3%	9	9%	2730	36%	1538	20%	515	6%	14.9
PA	14%	28	29%	7062	95%	6500	88%	4147	56%	38.3
SC	0%	2	1%	345	4%	0	0%	0	0%	4.1
TN	0%	4	5%	153	2%	8	0%	0	0%	5.4
TX	0%	1	1%	0	0%	0	0%	0	0%	1.7
VA	5%	9	9%	4886	66%	2104	28%	452	6%	20.7
WI	1%	2	2%	479	6%	0	0%	0	0%	3
WV	2%	7	7%	2317	31%	1170	15%	33	0%	11.8
West	0%	2	3%	175	2%	2	0%	0	0%	5.1
Canada	2%	6	7%	2723	36%	952	12%	0	0%	9.8

Downwind State : Delaware ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 4035										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	5	6%	272	6%	61	1%	0	0%	6.6
CT/RI	0%	0	1%	0	0%	0	0%	0	0%	0.5
FL	0%	2	3%	142	3%	0	0%	0	0%	2.9
GA	1%	2	2%	314	7%	0	0%	0	0%	3.9
IA	0%	1	1%	0	0%	0	0%	0	0%	1.6
IL	3%	5	5%	1951	48%	223	5%	0	0%	6.5
IN	2%	5	5%	1532	37%	276	6%	0	0%	6.1
KY	3%	7	7%	1639	40%	659	16%	0	0%	8.8
LA	0%	2	2%	3	0%	0	0%	0	0%	2
MA	0%	0	0%	0	0%	0	0%	0	0%	0.5
MD/DC/DE	34%	38	43%	4022	99%	3912	96%	3729	92%	88.5
ME	0%	0	0%	0	0%	0	0%	0	0%	0.1
MI	2%	7	7%	1688	41%	301	7%	0	0%	8.8
MO	1%	2	2%	478	11%	0	0%	0	0%	3.7
MS	0%	1	1%	0	0%	0	0%	0	0%	1.1
NC	4%	18	19%	1344	33%	757	18%	443	10%	27.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.1
NJ	0%	27	31%	14	0%	2	0%	2	0%	28
NY	0%	7	8%	23	0%	2	0%	0	0%	7.3
OH	6%	9	10%	3120	77%	1899	47%	135	3%	13.7
PA	7%	20	23%	2567	63%	1708	42%	713	17%	32.4
SC	1%	2	2%	103	2%	0	0%	0	0%	4.8
TN	2%	6	6%	1279	31%	254	6%	0	0%	7.4
TX	0%	2	2%	193	4%	0	0%	0	0%	2.7
VA	23%	35	37%	3832	94%	3549	87%	3085	76%	60.2
WI	1%	2	2%	56	1%	0	0%	0	0%	2.3
WV	6%	12	12%	2754	68%	1806	44%	428	10%	17.2
West	1%	3	3%	757	18%	27	0%	0	0%	5.6
Canada	1%	3	3%	257	6%	0	0%	0	0%	3.1

Downwind State : District of Columbia ; CAMX Source Apportionment Modeling

Contributions to 8-hr Violating Counties + Modeled Receptors

Base Case: Total Number of Exceedences (grids-8hrs) = 99

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	9	9%	6	6%	6	6%	0	0%	9.7
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	2	2%	6	6%	0	0%	0	0%	2.4
GA	1%	3	3%	6	6%	0	0%	0	0%	2.7
IA	0%	1	1%	0	0%	0	0%	0	0%	0.9
IL	2%	5	6%	39	39%	6	6%	0	0%	6.1
IN	2%	6	6%	32	32%	10	10%	0	0%	7.6
KY	3%	8	9%	37	37%	24	24%	0	0%	9
LA	0%	2	2%	2	2%	0	0%	0	0%	2.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	17%	39	34%	82	82%	73	73%	59	59%	49.5
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	7	8%	30	30%	5	5%	0	0%	6.6
MO	1%	3	3%	18	18%	0	0%	0	0%	3.7
MS	0%	1	1%	0	0%	0	0%	0	0%	2
NC	1%	3	4%	17	17%	4	4%	0	0%	5.3
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.1
NJ	0%	2	2%	0	0%	0	0%	0	0%	1.7
NY	1%	2	2%	4	4%	0	0%	0	0%	2.1
OH	5%	10	12%	63	63%	46	46%	3	3%	10.3
PA	6%	10	11%	69	69%	55	55%	16	16%	14.2
SC	0%	1	1%	0	0%	0	0%	0	0%	1
TN	2%	7	7%	34	34%	6	6%	0	0%	6.8
TX	0%	1	1%	0	0%	0	0%	0	0%	0.9
VA	47%	60	62%	99	100%	99	100%	99	100%	87.9
WI	0%	3	3%	6	6%	0	0%	0	0%	3.1
WV	6%	21	23%	57	57%	41	41%	14	14%	22.9
West	1%	4	4%	20	20%	0	0%	0	0%	4.5
Canada	1%	3	3%	4	4%	0	0%	0	0%	3.2

Downwind State : Florida ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 740										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	46%	42	47%	740	100%	740	100%	727	98%	59.6
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	8%	32	37%	479	64%	273	36%	134	18%	38.5
GA	1%	4	4%	57	7%	6	0%	0	0%	5.9
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	0	0%	0	0%	0	0%	0	0%	0.5
IN	0%	0	0%	0	0%	0	0%	0	0%	0.2
KY	0%	0	0%	0	0%	0	0%	0	0%	0.4
LA	16%	29	33%	740	100%	665	89%	479	64%	34.2
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0
MO	0%	1	2%	7	0%	0	0%	0	0%	2.2
MS	22%	30	31%	740	100%	724	97%	562	75%	37.6
NC	0%	0	0%	0	0%	0	0%	0	0%	0.2
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0.1
PA	0%	0	0%	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0.2
TN	1%	2	2%	0	0%	0	0%	0	0%	1.9
TX	3%	7	8%	230	31%	138	18%	14	1%	12.5
VA	0%	0	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	0%	0	0%	0	0%	0	0%	0	0%	0.1
West	2%	6	7%	228	30%	89	12%	0	0%	7.7
Canada	0%	0	0%	0	0%	0	0%	0	0%	0

Downwind State : Georgia ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 8043										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	11%	27	26%	6191	76%	4930	61%	3568	44%	43.6
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	1%	3	3%	662	8%	49	0%	0	0%	8.9
GA	67%	96	78%	8043	100%	8043	100%	8043	100%	178.4
IA	0%	0	0%	0	0%	0	0%	0	0%	0.5
IL	0%	2	2%	191	2%	0	0%	0	0%	3.3
IN	0%	1	1%	141	1%	0	0%	0	0%	4.7
KY	1%	9	9%	1378	17%	433	5%	177	2%	13.8
LA	2%	10	10%	2916	36%	733	9%	86	1%	11
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.5
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.5
MO	0%	3	3%	520	6%	0	0%	0	0%	4.2
MS	2%	7	7%	3064	38%	1578	19%	7	0%	10.3
NC	1%	7	8%	1784	22%	664	8%	62	0%	14.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.5
NY	0%	0	0%	0	0%	0	0%	0	0%	0.6
OH	0%	1	1%	36	0%	0	0%	0	0%	3.1
PA	0%	1	1%	0	0%	0	0%	0	0%	1.1
SC	4%	24	26%	3004	37%	1675	20%	733	9%	47.2
TN	6%	18	19%	5307	65%	3096	38%	1046	13%	28.4
TX	1%	4	4%	1197	14%	123	1%	0	0%	5.6
VA	0%	1	1%	0	0%	0	0%	0	0%	1.5
WI	0%	0	0%	0	0%	0	0%	0	0%	0.3
WV	0%	1	1%	0	0%	0	0%	0	0%	1.8
West	1%	5	5%	966	12%	407	5%	0	0%	6.9
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.3

Downwind State : Illinois ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 2333										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	4%	8	9%	912	39%	483	20%	133	5%	16.1
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	1	2%	29	1%	0	0%	0	0%	2.8
GA	3%	6	6%	981	42%	294	12%	27	1%	10.9
IA	0%	1	1%	2	0%	0	0%	0	0%	4.6
IL	26%	32	37%	2239	95%	2048	87%	1715	73%	63
IN	2%	13	15%	240	10%	169	7%	109	4%	15.3
KY	3%	8	9%	584	25%	278	11%	135	5%	15.8
LA	1%	8	9%	221	9%	166	7%	38	1%	12.8
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.3
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	1	1%	0	0%	0	0%	0	0%	1.4
MO	38%	60	62%	2064	88%	2008	86%	1788	76%	72.8
MS	2%	10	12%	502	21%	159	6%	70	3%	17.1
NC	1%	3	3%	239	10%	0	0%	0	0%	3.4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.2
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	1%	3	4%	168	7%	0	0%	0	0%	4.4
PA	0%	0	0%	0	0%	0	0%	0	0%	0.4
SC	1%	2	2%	210	9%	0	0%	0	0%	2.7
TN	7%	25	27%	1379	59%	678	29%	322	13%	28.9
TX	2%	12	14%	222	9%	155	6%	128	5%	16.2
VA	0%	1	1%	0	0%	0	0%	0	0%	1
WI	0%	1	1%	23	0%	0	0%	0	0%	3
WV	0%	1	1%	0	0%	0	0%	0	0%	1.7
West	9%	15	16%	1396	59%	1172	50%	552	23%	19.9
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind State : Indiana ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 4994										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	4%	10	11%	1888	37%	1226	24%	272	5%	20.7
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	1%	2	3%	312	6%	11	0%	0	0%	5.3
GA	4%	9	11%	2635	52%	606	12%	102	2%	16.5
IA	0%	1	1%	0	0%	0	0%	0	0%	1.2
IL	5%	11	12%	2244	44%	1310	26%	549	10%	43.9
IN	27%	26	28%	4747	95%	4401	88%	3895	77%	48.8
KY	27%	47	53%	4681	93%	4356	87%	3569	71%	64.9
LA	2%	15	17%	663	13%	490	9%	328	6%	21.5
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	1	2%	35	0%	10	0%	0	0%	6.8
MO	2%	9	10%	743	14%	475	9%	186	3%	15.2
MS	2%	11	13%	711	14%	576	11%	420	8%	16.8
NC	2%	4	4%	1611	32%	171	3%	0	0%	8
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.3
NY	0%	0	0%	0	0%	0	0%	0	0%	0.3
OH	2%	12	13%	799	15%	359	7%	72	1%	27.6
PA	0%	1	1%	0	0%	0	0%	0	0%	1.5
SC	2%	3	3%	1235	24%	13	0%	0	0%	6.5
TN	15%	18	20%	4322	86%	3636	72%	1802	36%	52.3
TX	0%	7	8%	180	3%	40	0%	2	0%	10.6
VA	1%	3	3%	219	4%	12	0%	0	0%	5.4
WI	0%	0	0%	0	0%	0	0%	0	0%	1.2
WV	1%	7	8%	699	13%	21	0%	0	0%	7.7
West	2%	8	8%	553	11%	433	8%	192	3%	15.8
Canada	0%	2	2%	0	0%	0	0%	0	0%	1.6

Downwind State : Kentucky ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 9321										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	5%	16	18%	3632	38%	2366	25%	996	10%	25.7
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	5	5%	379	4%	125	1%	0	0%	5.9
GA	4%	14	16%	3613	38%	1603	17%	390	4%	19.5
IA	0%	1	1%	0	0%	0	0%	0	0%	1.6
IL	2%	10	11%	2280	24%	918	9%	199	2%	15.7
IN	12%	18	18%	6143	65%	4975	53%	3448	36%	40.4
KY	39%	49	58%	9118	97%	8874	95%	8465	90%	74
LA	1%	12	13%	640	6%	200	2%	145	1%	21.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.5
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	2	2%	177	1%	139	1%	113	1%	16.7
MO	1%	8	9%	1197	12%	802	8%	42	0%	11.3
MS	1%	6	7%	912	9%	195	2%	5	0%	11.3
NC	2%	5	6%	4108	44%	382	4%	14	0%	12.4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.4
NY	0%	0	0%	0	0%	0	0%	0	0%	0.3
OH	5%	12	13%	1828	19%	1317	14%	1080	11%	61.2
PA	0%	1	1%	0	0%	0	0%	0	0%	1.7
SC	2%	3	3%	2286	24%	126	1%	0	0%	6.9
TN	20%	52	59%	7753	83%	6109	65%	4604	49%	90.8
TX	1%	9	10%	1276	13%	636	6%	81	0%	13
VA	1%	2	3%	421	4%	4	0%	0	0%	6.2
WI	0%	1	1%	0	0%	0	0%	0	0%	1.4
WV	1%	5	5%	898	9%	242	2%	33	0%	30.7
West	2%	8	9%	1774	19%	857	9%	54	0%	16.6
Canada	0%	1	1%	0	0%	0	0%	0	0%	1.6

Downwind State : Louisiana ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 6297										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	5%	13	14%	2743	43%	1809	28%	1046	16%	28.7
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	1%	6	6%	955	15%	524	8%	47	0%	13.5
GA	1%	3	3%	817	12%	5	0%	0	0%	5.3
IA	0%	0	0%	0	0%	0	0%	0	0%	0.7
IL	1%	1	2%	272	4%	0	0%	0	0%	3.4
IN	0%	1	1%	95	1%	0	0%	0	0%	2.7
KY	1%	2	2%	678	10%	0	0%	0	0%	4.3
LA	61%	69	74%	6297	100%	6297	100%	6278	99%	84.1
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.4
MO	2%	2	2%	1025	16%	0	0%	0	0%	3.8
MS	14%	14	15%	5858	93%	4962	78%	3515	55%	40.4
NC	0%	0	0%	0	0%	0	0%	0	0%	0.4
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0.3
PA	0%	0	0%	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0.5
TN	2%	4	4%	2087	33%	447	7%	0	0%	9
TX	7%	20	23%	3959	62%	2381	37%	1200	19%	38.4
VA	0%	0	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0	0%	0	0%	0	0%	0	0%	0.4
WV	0%	0	0%	0	0%	0	0%	0	0%	0.1
West	5%	6	6%	4998	79%	1460	23%	12	0%	10.9
Canada	0%	0	0%	0	0%	0	0%	0	0%	0

Downwind State : Maine ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 4063										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.2
CT/RI	7%	7	8%	3458	85%	2022	49%	547	13%	19.4
FL	0%	1	1%	1	0%	0	0%	0	0%	2
GA	0%	1	1%	0	0%	0	0%	0	0%	0.7
IA	0%	1	2%	0	0%	0	0%	0	0%	1.9
IL	0%	3	3%	118	2%	0	0%	0	0%	3.2
IN	1%	3	3%	159	3%	0	0%	0	0%	3.2
KY	0%	1	1%	0	0%	0	0%	0	0%	0.9
LA	0%	0	0%	0	0%	0	0%	0	0%	0.3
MA	33%	47	54%	4019	98%	3776	92%	3424	84%	66.6
MD/DC/DE	3%	3	4%	2248	55%	83	2%	0	0%	6.6
ME	7%	14	16%	2456	60%	1547	38%	786	19%	39
MI	2%	4	5%	1579	38%	0	0%	0	0%	4.7
MO	0%	2	2%	17	0%	0	0%	0	0%	2.6
MS	0%	1	1%	0	0%	0	0%	0	0%	0.6
NC	1%	3	3%	337	8%	74	1%	0	0%	8.7
NH/VT	11%	20	22%	3292	81%	2447	60%	1326	32%	46.4
NJ	7%	10	10%	3087	75%	1948	47%	753	18%	21
NY	11%	12	13%	4060	99%	2919	71%	1545	38%	19.9
OH	1%	5	5%	722	17%	17	0%	0	0%	5.8
PA	6%	8	9%	3097	76%	1785	43%	297	7%	13.9
SC	0%	1	1%	49	1%	0	0%	0	0%	3
TN	0%	1	1%	0	0%	0	0%	0	0%	0.7
TX	0%	0	0%	0	0%	0	0%	0	0%	0.4
VA	3%	6	7%	1128	27%	278	6%	96	2%	17.4
WI	0%	2	2%	55	1%	0	0%	0	0%	2.5
WV	0%	2	2%	184	4%	0	0%	0	0%	3.2
West	0%	2	3%	69	1%	0	0%	0	0%	2.7
Canada	5%	9	10%	3198	78%	1987	48%	1	0%	10.1

Downwind State : Maryland ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 12635										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	7	8%	711	5%	433	3%	3	0%	10.2
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.5
FL	0%	2	2%	613	4%	0	0%	0	0%	2.9
GA	1%	2	3%	822	6%	11	0%	0	0%	6.7
IA	0%	1	1%	0	0%	0	0%	0	0%	1.4
IL	2%	5	5%	3981	31%	469	3%	0	0%	6.5
IN	2%	6	5%	3984	31%	991	7%	16	0%	11.2
KY	3%	7	7%	4424	35%	2159	17%	100	0%	12.9
LA	0%	2	2%	74	0%	0	0%	0	0%	3.1
MA	0%	0	0%	0	0%	0	0%	0	0%	0.7
MD/DC/DE	32%	37	43%	12135	96%	11563	91%	10507	83%	100.2
ME	0%	0	0%	0	0%	0	0%	0	0%	0.1
MI	2%	6	6%	3656	28%	882	6%	0	0%	9.8
MO	1%	3	3%	1179	9%	3	0%	0	0%	5.1
MS	0%	1	1%	18	0%	0	0%	0	0%	2.9
NC	3%	15	17%	3470	27%	1728	13%	1032	8%	31.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.2
NJ	0%	2	3%	55	0%	0	0%	0	0%	2.9
NY	1%	2	2%	306	2%	0	0%	0	0%	2.9
OH	5%	9	10%	8141	64%	5232	41%	776	6%	13.7
PA	7%	15	14%	7974	63%	5705	45%	2390	18%	56.3
SC	0%	2	2%	405	3%	137	1%	11	0%	11.2
TN	2%	6	6%	3479	27%	647	5%	0	0%	7.5
TX	0%	2	2%	244	1%	0	0%	0	0%	2.9
VA	30%	40	42%	11998	94%	11246	89%	10285	81%	83.6
WI	1%	2	2%	552	4%	0	0%	0	0%	3.3
WV	6%	15	15%	7364	58%	4991	39%	1667	13%	25.7
West	1%	4	4%	1697	13%	185	1%	0	0%	6.7
Canada	1%	4	4%	1015	8%	0	0%	0	0%	4.3

Downwind State : Massachusetts ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 7692										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.8
CT/RI	15%	38	43%	6240	81%	5086	66%	3704	48%	59.1
FL	0%	1	1%	160	2%	0	0%	0	0%	3.1
GA	0%	1	1%	63	0%	0	0%	0	0%	2.8
IA	0%	1	1%	7	0%	0	0%	0	0%	2
IL	1%	4	4%	711	9%	101	1%	0	0%	7.5
IN	1%	4	4%	434	5%	16	0%	0	0%	5.5
KY	1%	5	5%	341	4%	101	1%	0	0%	6.1
LA	0%	1	1%	0	0%	0	0%	0	0%	1.6
MA	15%	47	52%	4150	53%	3438	44%	2738	35%	87.6
MD/DC/DE	5%	10	12%	6081	79%	2633	34%	457	5%	17.2
ME	0%	0	0%	0	0%	0	0%	0	0%	1
MI	2%	5	6%	2520	32%	328	4%	0	0%	8.1
MO	0%	2	2%	329	4%	0	0%	0	0%	4.3
MS	0%	0	0%	0	0%	0	0%	0	0%	0.7
NC	2%	4	4%	1706	22%	699	9%	76	0%	14.7
NH/VT	1%	3	3%	461	5%	190	2%	64	0%	43.3
NJ	16%	20	22%	7099	92%	6261	81%	4562	59%	38.6
NY	15%	21	20%	7413	96%	6581	85%	4490	58%	41
OH	2%	6	6%	2447	31%	1073	13%	0	0%	9.5
PA	11%	17	19%	7143	92%	5681	73%	3056	39%	28.8
SC	0%	2	2%	199	2%	2	0%	0	0%	5.3
TN	0%	2	2%	24	0%	0	0%	0	0%	2.8
TX	0%	1	2%	0	0%	0	0%	0	0%	1.6
VA	5%	11	10%	5015	65%	1808	23%	869	11%	26.8
WI	0%	2	2%	563	7%	0	0%	0	0%	2.6
WV	2%	5	5%	2284	29%	726	9%	0	0%	7.4
West	0%	2	3%	325	4%	0	0%	0	0%	2.9
Canada	3%	5	5%	3687	47%	1586	20%	8	0%	12.1

Downwind State : Michigan ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 8753										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	3%	5	6%	3648	41%	1557	17%	0	0%	9.3
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	1	1%	322	3%	0	0%	0	0%	3.4
GA	2%	4	4%	3451	39%	595	6%	0	0%	6.3
IA	1%	6	7%	650	7%	113	1%	0	0%	8.5
IL	31%	32	35%	8108	92%	7812	89%	7006	80%	90.4
IN	18%	29	34%	7321	83%	5865	67%	4524	51%	51.1
KY	5%	9	9%	4469	51%	2281	26%	964	11%	14
LA	1%	6	6%	612	6%	169	1%	3	0%	10.2
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.2
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	7%	12	13%	3588	40%	2059	23%	1117	12%	55.3
MO	7%	11	12%	5653	64%	4375	49%	1577	18%	18.2
MS	1%	4	4%	1086	12%	131	1%	8	0%	10.7
NC	1%	2	2%	265	3%	0	0%	0	0%	2.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.1
NY	0%	0	0%	0	0%	0	0%	0	0%	0.1
OH	3%	15	17%	1659	18%	1337	15%	418	4%	31.3
PA	0%	0	0%	0	0%	0	0%	0	0%	0.8
SC	1%	2	2%	388	4%	0	0%	0	0%	2.7
TN	5%	7	8%	4293	49%	3037	34%	346	3%	13
TX	1%	9	10%	1723	19%	230	2%	24	0%	11.5
VA	0%	1	1%	0	0%	0	0%	0	0%	1.3
WI	5%	12	13%	2593	29%	1663	18%	1024	11%	33.5
WV	1%	1	1%	220	2%	0	0%	0	0%	3.9
West	7%	13	13%	4437	50%	3678	42%	2131	24%	20.1
Canada	0%	0	0%	15	0%	0	0%	0	0%	4.2

Downwind State : Mississippi ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 904										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	10%	19	20%	553	61%	425	47%	306	33%	29.3
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	2%	5	6%	116	12%	88	9%	48	5%	15.3
GA	2%	4	4%	250	27%	98	10%	0	0%	8.5
IA	0%	2	2%	15	1%	0	0%	0	0%	2.6
IL	1%	1	2%	16	1%	11	1%	0	0%	7.9
IN	0%	1	1%	0	0%	0	0%	0	0%	0.9
KY	1%	3	3%	7	0%	5	0%	0	0%	6.8
LA	41%	60	71%	774	85%	772	85%	731	80%	74.5
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	1	1%	0	0%	0	0%	0	0%	1.8
MO	2%	9	10%	270	29%	60	6%	5	0%	10.6
MS	21%	25	28%	903	99%	843	93%	598	66%	44.8
NC	0%	2	2%	29	3%	29	3%	0	0%	9.6
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	0%	1	1%	7	0%	0	0%	0	0%	4.1
PA	0%	0	0%	0	0%	0	0%	0	0%	0.4
SC	0%	1	1%	35	3%	0	0%	0	0%	4.8
TN	8%	29	32%	453	50%	212	23%	132	14%	44.9
TX	4%	7	7%	485	53%	156	17%	25	2%	12.1
VA	0%	0	0%	0	0%	0	0%	0	0%	1.4
WI	0%	0	0%	0	0%	0	0%	0	0%	0.1
WV	0%	0	0%	0	0%	0	0%	0	0%	1.3
West	7%	21	24%	592	65%	331	36%	104	11%	37.1
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.3

Downwind State : Missouri ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 415										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	6%	14	16%	221	53%	166	40%	41	9%	15.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	1	1%	0	0%	0	0%	0	0%	1.2
GA	2%	5	6%	164	39%	20	4%	0	0%	5.5
IA	0%	1	1%	0	0%	0	0%	0	0%	0.8
IL	8%	20	23%	220	53%	171	41%	87	20%	22.7
IN	2%	12	14%	45	10%	37	8%	24	5%	14
KY	3%	6	7%	174	41%	74	17%	0	0%	9.3
LA	2%	10	11%	49	11%	42	10%	1	0%	10
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	1	1%	0	0%	0	0%	0	0%	1.2
MO	35%	54	60%	415	100%	415	100%	366	88%	60.5
MS	2%	6	7%	83	20%	26	6%	0	0%	6.9
NC	1%	2	2%	21	5%	0	0%	0	0%	3.4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.2
NY	0%	0	0%	0	0%	0	0%	0	0%	0.2
OH	1%	3	4%	45	10%	0	0%	0	0%	3.9
PA	0%	0	1%	0	0%	0	0%	0	0%	0.5
SC	1%	3	3%	31	7%	0	0%	0	0%	2.8
TN	12%	24	25%	245	59%	177	42%	127	30%	29.6
TX	7%	13	15%	157	37%	153	36%	106	25%	21.4
VA	0%	1	1%	0	0%	0	0%	0	0%	0.9
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	0%	1	1%	0	0%	0	0%	0	0%	0.9
West	19%	42	45%	199	47%	177	42%	162	39%	48.6
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.2

Downwind State : New Hampshire ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 1280										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.4
CT/RI	9%	13	14%	1080	84%	801	62%	354	27%	25.4
FL	0%	1	1%	0	0%	0	0%	0	0%	2
GA	0%	0	1%	0	0%	0	0%	0	0%	0.8
IA	0%	1	1%	0	0%	0	0%	0	0%	2
IL	0%	2	2%	33	2%	0	0%	0	0%	3.7
IN	0%	2	2%	24	1%	0	0%	0	0%	2.5
KY	0%	1	1%	0	0%	0	0%	0	0%	1.3
LA	0%	0	0%	0	0%	0	0%	0	0%	0.3
MA	30%	47	52%	1172	91%	1065	83%	947	73%	83.7
MD/DC/DE	3%	4	5%	643	50%	6	0%	0	0%	5.2
ME	0%	1	1%	20	1%	6	0%	0	0%	6.4
MI	2%	3	3%	409	31%	0	0%	0	0%	4.9
MO	0%	1	2%	37	2%	0	0%	0	0%	3
MS	0%	0	0%	0	0%	0	0%	0	0%	0.7
NC	0%	3	3%	61	4%	3	0%	0	0%	5.5
NH/VT	18%	35	35%	1017	79%	858	67%	646	50%	68.5
NJ	9%	15	16%	943	73%	588	45%	302	23%	25.8
NY	12%	13	14%	1280	100%	986	77%	611	47%	20.9
OH	1%	5	5%	127	9%	42	3%	0	0%	6.5
PA	6%	10	11%	906	70%	455	35%	269	21%	17.6
SC	0%	1	1%	0	0%	0	0%	0	0%	1.5
TN	0%	1	1%	0	0%	0	0%	0	0%	0.7
TX	0%	0	0%	0	0%	0	0%	0	0%	0.4
VA	2%	5	5%	296	23%	37	2%	0	0%	8.2
WI	0%	2	2%	56	4%	0	0%	0	0%	2.6
WV	0%	4	4%	113	8%	0	0%	0	0%	4.8
West	0%	2	2%	50	3%	0	0%	0	0%	2.7
Canada	5%	7	7%	909	71%	507	39%	0	0%	9.4

Downwind State : New Jersey ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 11565										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	3	3%	154	1%	2	0%	0	0%	5.3
CT/RI	0%	3	4%	5	0%	0	0%	0	0%	4.2
FL	0%	2	2%	239	2%	0	0%	0	0%	4.6
GA	1%	2	2%	99	0%	0	0%	0	0%	3
IA	0%	1	1%	3	0%	0	0%	0	0%	2
IL	2%	5	5%	4296	37%	1163	10%	0	0%	7.5
IN	2%	4	4%	3814	32%	306	2%	0	0%	8.4
KY	2%	7	8%	3539	30%	963	8%	0	0%	9.5
LA	0%	1	1%	0	0%	0	0%	0	0%	1.9
MA	0%	1	1%	0	0%	0	0%	0	0%	0.8
MD/DC/DE	20%	31	36%	9547	82%	8442	72%	6946	60%	70.8
ME	0%	0	0%	0	0%	0	0%	0	0%	0.1
MI	2%	7	7%	4023	34%	1004	8%	0	0%	9.7
MO	1%	3	3%	1442	12%	0	0%	0	0%	3.4
MS	0%	1	1%	0	0%	0	0%	0	0%	1.1
NC	3%	7	7%	2802	24%	1251	10%	489	4%	24.7
NH/VT	0%	0	1%	0	0%	0	0%	0	0%	0.7
NJ	15%	41	48%	7967	68%	6589	56%	5153	44%	58.4
NY	1%	22	25%	767	6%	7	0%	5	0%	24.4
OH	6%	11	12%	7265	62%	4522	39%	1287	11%	16.5
PA	26%	33	37%	10518	90%	9655	83%	8251	71%	61.8
SC	0%	2	2%	133	1%	1	0%	0	0%	5.3
TN	1%	6	6%	2148	18%	437	3%	0	0%	7.1
TX	0%	2	2%	248	2%	0	0%	0	0%	2.4
VA	9%	20	21%	8300	71%	6213	53%	3191	27%	37.9
WI	1%	2	2%	273	2%	0	0%	0	0%	3.8
WV	5%	9	9%	6464	55%	4269	36%	1279	11%	16.2
West	1%	4	4%	1753	15%	209	1%	0	0%	6.5
Canada	1%	4	4%	1735	15%	222	1%	0	0%	6.9

Downwind State : New York ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 8737										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	0%	1	1%	93	1%	0	0%	0	0%	2.8
CT/RI	1%	3	3%	493	5%	201	2%	71	0%	19.9
FL	0%	2	2%	158	1%	0	0%	0	0%	4.8
GA	0%	1	1%	0	0%	0	0%	0	0%	1.9
IA	0%	1	2%	164	1%	0	0%	0	0%	3.6
IL	2%	4	5%	2038	23%	817	9%	31	0%	11.1
IN	1%	4	4%	1880	21%	389	4%	10	0%	11.4
KY	1%	6	6%	1368	15%	628	7%	7	0%	12.4
LA	0%	1	0%	0	0%	0	0%	0	0%	1.5
MA	0%	1	1%	1	0%	0	0%	0	0%	2.2
MD/DC/DE	7%	14	15%	5980	68%	4314	49%	1739	19%	26.7
ME	0%	0	0%	0	0%	0	0%	0	0%	0.2
MI	2%	5	6%	3294	37%	732	8%	258	2%	18.8
MO	1%	3	4%	1100	12%	38	0%	0	0%	6.7
MS	0%	1	1%	0	0%	0	0%	0	0%	1.1
NC	2%	7	7%	2138	24%	657	7%	180	2%	15.8
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.8
NJ	30%	44	50%	7789	89%	7596	86%	7215	82%	64.3
NY	14%	32	33%	6684	76%	5250	60%	3828	43%	54.3
OH	4%	8	8%	4007	45%	1918	21%	413	4%	17.9
PA	18%	22	23%	7806	89%	7473	85%	6029	69%	54.9
SC	0%	1	1%	185	2%	1	0%	0	0%	5.4
TN	1%	4	3%	628	7%	13	0%	0	0%	5.6
TX	0%	2	2%	60	0%	0	0%	0	0%	2.5
VA	6%	10	10%	5464	62%	3373	38%	1071	12%	28.4
WI	1%	4	5%	715	8%	52	0%	0	0%	6.1
WV	3%	7	7%	2861	32%	1481	16%	272	3%	14.1
West	1%	8	9%	953	10%	165	1%	4	0%	10.4
Canada	5%	35	40%	2915	33%	1526	17%	790	9%	51.5

Downwind State : North Carolina ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 13399										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	6	7%	1377	10%	1028	7%	215	1%	28.6
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	2	3%	617	4%	85	0%	0	0%	6
GA	3%	17	18%	2902	21%	1932	14%	1295	9%	48.6
IA	0%	0	0%	0	0%	0	0%	0	0%	0.9
IL	1%	2	2%	1386	10%	67	0%	0	0%	8.1
IN	1%	2	2%	2306	17%	106	0%	0	0%	6.4
KY	4%	9	9%	6510	48%	3213	23%	907	6%	22
LA	0%	3	3%	455	3%	45	0%	0	0%	6.7
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	1%	2	2%	991	7%	2	0%	0	0%	5.1
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	3	3%	906	6%	288	2%	0	0%	7.8
MO	0%	2	2%	589	4%	73	0%	0	0%	5.9
MS	0%	2	2%	343	2%	1	0%	0	0%	5
NC	55%	64	63%	12939	96%	12675	94%	12469	93%	121.6
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.1
NJ	0%	1	1%	0	0%	0	0%	0	0%	1.5
NY	0%	1	1%	0	0%	0	0%	0	0%	1.3
OH	4%	9	10%	5043	37%	2288	17%	1044	7%	28.9
PA	2%	3	3%	3105	23%	461	3%	0	0%	6.8
SC	9%	17	18%	7700	57%	5506	41%	3469	25%	49.9
TN	6%	14	15%	5827	43%	3357	25%	1436	10%	53.7
TX	1%	4	4%	1306	9%	235	1%	0	0%	6.7
VA	6%	15	14%	9136	68%	4523	33%	1620	12%	34.9
WI	0%	0	0%	0	0%	0	0%	0	0%	0.9
WV	3%	5	5%	5664	42%	2203	16%	183	1%	15.8
West	1%	4	5%	1428	10%	333	2%	0	0%	7.1
Canada	0%	1	1%	0	0%	0	0%	0	0%	1.3

Downwind State : Ohio ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 14091										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	3%	11	12%	4287	30%	1583	11%	1166	8%	21.9
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	1%	3	3%	1379	9%	0	0%	0	0%	3.8
GA	2%	3	3%	4535	32%	22	0%	0	0%	5.4
IA	0%	1	1%	31	0%	0	0%	0	0%	2.9
IL	4%	10	11%	5750	40%	3756	26%	1324	9%	18
IN	11%	17	19%	9951	70%	8344	59%	4909	34%	31
KY	15%	25	27%	12430	88%	10223	72%	6113	43%	52.8
LA	1%	12	13%	990	7%	569	4%	227	1%	13.9
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	1.4
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	6%	19	21%	3394	24%	3047	21%	2737	19%	42.2
MO	1%	6	6%	1695	12%	293	2%	46	0%	14.4
MS	1%	9	10%	1180	8%	535	3%	0	0%	9.7
NC	2%	3	3%	3988	28%	380	2%	0	0%	9
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.2
NY	0%	0	0%	0	0%	0	0%	0	0%	0.6
OH	33%	44	51%	13407	95%	12707	90%	11664	82%	72
PA	1%	8	8%	811	5%	431	3%	135	0%	31.9
SC	1%	1	2%	713	5%	0	0%	0	0%	4.6
TN	7%	13	14%	9384	66%	5177	36%	2749	19%	27
TX	0%	8	9%	392	2%	80	0%	0	0%	9.6
VA	1%	5	6%	2917	20%	273	1%	61	0%	13.9
WI	0%	2	2%	389	2%	60	0%	0	0%	6.7
WV	8%	30	33%	5389	38%	3917	27%	2678	19%	67.8
West	1%	5	6%	1419	10%	347	2%	10	0%	10.6
Canada	1%	2	2%	1237	8%	212	1%	12	0%	11.2

Downwind State : Oklahoma ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 294										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	3%	7	8%	74	25%	54	18%	0	0%	7.8
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	1%	4	5%	96	32%	0	0%	0	0%	4.2
GA	1%	4	4%	33	11%	0	0%	0	0%	3.6
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	0	1%	0	0%	0	0%	0	0%	0.7
IN	0%	0	0%	0	0%	0	0%	0	0%	0.3
KY	0%	0	1%	0	0%	0	0%	0	0%	0.5
LA	7%	13	16%	189	64%	140	47%	62	21%	13.3
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	1%	1	2%	0	0%	0	0%	0	0%	1.7
MS	3%	7	8%	100	34%	54	18%	0	0%	8.2
NC	0%	1	1%	0	0%	0	0%	0	0%	0.5
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0.1
PA	0%	0	0%	0	0%	0	0%	0	0%	0
SC	0%	1	1%	0	0%	0	0%	0	0%	1
TN	1%	2	2%	52	17%	0	0%	0	0%	2.8
TX	19%	29	33%	294	100%	289	98%	186	63%	29.8
VA	0%	0	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0	0%	0	0%	0	0%	0	0%	0
WV	0%	0	0%	0	0%	0	0%	0	0%	0
West	63%	59	63%	294	100%	294	100%	294	100%	73.2
Canada	0%	0	0%	0	0%	0	0%	0	0%	0

Downwind State : Pennsylvania ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 24806										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	7	8%	3557	14%	1325	5%	300	1%	12
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	1.3
FL	0%	1	1%	484	1%	0	0%	0	0%	3.3
GA	1%	2	2%	2468	9%	0	0%	0	0%	3.7
IA	0%	1	1%	40	0%	0	0%	0	0%	2.6
IL	3%	7	7%	8713	35%	4472	18%	554	2%	16.3
IN	4%	8	9%	12013	48%	5809	23%	1270	5%	14.1
KY	5%	10	11%	12785	51%	8127	32%	2779	11%	20
LA	1%	9	10%	1130	4%	856	3%	221	0%	11.7
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	6%	31	37%	7971	32%	5993	24%	4241	17%	49.7
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	8	9%	5761	23%	2681	10%	588	2%	30.1
MO	1%	4	5%	4457	17%	697	2%	0	0%	8.2
MS	1%	6	7%	1242	5%	595	2%	37	0%	11.2
NC	2%	11	13%	6864	27%	1056	4%	3	0%	11.3
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	1%	17	19%	1348	5%	666	2%	315	1%	39.8
NY	1%	5	6%	2071	8%	237	0%	8	0%	11.3
OH	15%	18	20%	20038	80%	17449	70%	12009	48%	55.3
PA	35%	59	69%	22584	91%	21494	86%	19948	80%	92
SC	1%	1	1%	4	0%	0	0%	0	0%	2.1
TN	2%	5	5%	9829	39%	2078	8%	48	0%	12.9
TX	0%	3	3%	236	0%	0	0%	0	0%	4.7
VA	5%	14	16%	11072	44%	6097	24%	2644	10%	33.8
WI	0%	2	2%	543	2%	36	0%	0	0%	7.4
WV	12%	26	28%	16850	67%	12987	52%	7776	31%	63.3
West	1%	5	6%	3575	14%	1128	4%	0	0%	8.8
Canada	1%	3	4%	3583	14%	566	2%	24	0%	12.7

Downwind State : Rhode Island ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 947										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	0%	1	1%	0	0%	0	0%	0	0%	1.5
CT/RI	22%	30	34%	883	93%	826	87%	729	76%	35.9
FL	0%	1	1%	17	1%	0	0%	0	0%	3.1
GA	0%	1	1%	0	0%	0	0%	0	0%	1
IA	0%	1	1%	0	0%	0	0%	0	0%	1.6
IL	1%	5	4%	147	15%	21	2%	0	0%	6.2
IN	1%	3	3%	149	15%	17	1%	0	0%	5.6
KY	1%	3	3%	23	2%	19	2%	0	0%	5.6
LA	0%	0	0%	0	0%	0	0%	0	0%	0.6
MA	0%	1	2%	12	1%	0	0%	0	0%	2.5
MD/DC/DE	5%	9	11%	587	61%	325	34%	45	4%	15.2
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	2%	3	4%	183	19%	23	2%	0	0%	5.9
MO	1%	2	2%	75	7%	0	0%	0	0%	3.3
MS	0%	0	0%	0	0%	0	0%	0	0%	0.6
NC	2%	6	7%	138	14%	75	7%	1	0%	10.4
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.9
NJ	16%	18	19%	917	96%	814	85%	579	61%	36.4
NY	20%	26	24%	940	99%	922	97%	799	84%	33.9
OH	4%	9	9%	427	45%	281	29%	18	1%	10.6
PA	12%	21	23%	898	94%	772	81%	373	39%	24.3
SC	0%	1	1%	32	3%	0	0%	0	0%	3.3
TN	0%	1	1%	12	1%	0	0%	0	0%	3.2
TX	0%	1	1%	0	0%	0	0%	0	0%	1.3
VA	5%	11	12%	550	58%	237	25%	69	7%	18.6
WI	1%	2	2%	64	6%	0	0%	0	0%	2.5
WV	3%	6	7%	364	38%	151	15%	0	0%	7.4
West	1%	2	2%	7	0%	0	0%	0	0%	2.1
Canada	3%	6	6%	368	38%	130	13%	0	0%	7.3

Downwind State : South Carolina ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 2465										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	4%	10	11%	1021	41%	552	22%	118	4%	19.6
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	3	4%	57	2%	0	0%	0	0%	3.5
GA	15%	33	36%	1858	75%	1263	51%	798	32%	61.1
IA	0%	0	0%	0	0%	0	0%	0	0%	0.2
IL	0%	2	2%	97	3%	0	0%	0	0%	4
IN	0%	2	2%	31	1%	0	0%	0	0%	2.5
KY	3%	9	10%	1127	45%	230	9%	7	0%	10.2
LA	1%	7	8%	229	9%	11	0%	0	0%	8.3
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	1%	0	0%	0	0%	0	0%	0.7
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	1.1
MO	0%	2	3%	104	4%	0	0%	0	0%	3.2
MS	1%	4	5%	286	11%	0	0%	0	0%	5
NC	13%	33	37%	1875	76%	1501	60%	962	39%	44.5
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	1	1%	0	0%	0	0%	0	0%	0.6
NY	0%	1	1%	0	0%	0	0%	0	0%	0.6
OH	1%	4	5%	530	21%	65	2%	5	0%	12.8
PA	0%	2	2%	3	0%	0	0%	0	0%	2
SC	45%	62	70%	2355	95%	2316	93%	2283	92%	79.6
TN	10%	14	15%	1639	66%	1351	54%	920	37%	25.9
TX	1%	4	4%	533	21%	43	1%	0	0%	5.3
VA	1%	4	4%	550	22%	8	0%	0	0%	5.5
WI	0%	0	0%	0	0%	0	0%	0	0%	0.4
WV	1%	4	4%	560	22%	30	1%	0	0%	6.2
West	1%	4	4%	444	18%	78	3%	0	0%	6.8
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.4

Downwind State : Tennessee ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 9244										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	7%	21	24%	3529	38%	2506	27%	1872	20%	76.3
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.1
FL	0%	4	5%	264	2%	21	0%	0	0%	5.3
GA	5%	16	16%	3711	40%	2330	25%	1529	16%	44.7
IA	0%	1	1%	21	0%	0	0%	0	0%	3
IL	1%	8	8%	998	10%	493	5%	63	0%	16.7
IN	1%	6	7%	1109	11%	499	5%	65	0%	12.9
KY	8%	16	15%	5265	56%	3721	40%	2482	26%	51.5
LA	1%	8	10%	1772	19%	798	8%	32	0%	13.2
MA	0%	0	0%	0	0%	0	0%	0	0%	0.1
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0.7
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	0%	1	1%	204	2%	39	0%	0	0%	7
MO	1%	6	6%	1410	15%	303	3%	5	0%	10.7
MS	2%	21	24%	2013	21%	828	8%	167	1%	33.7
NC	3%	12	13%	3805	41%	1359	14%	323	3%	33.9
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	1	1%	0	0%	0	0%	0	0%	0.8
NY	0%	0	1%	0	0%	0	0%	0	0%	0.6
OH	3%	8	8%	1469	15%	900	9%	648	7%	33.5
PA	0%	1	1%	36	0%	0	0%	0	0%	2.4
SC	3%	12	12%	2171	23%	1179	12%	701	7%	21.3
TN	54%	49	54%	9244	100%	9204	99%	9061	98%	120
TX	3%	6	7%	2812	30%	2032	21%	103	1%	12.6
VA	1%	2	2%	588	6%	203	2%	85	0%	22.3
WI	0%	0	0%	0	0%	0	0%	0	0%	1.4
WV	1%	3	3%	1003	10%	428	4%	218	2%	20.3
West	5%	26	28%	3795	41%	2724	29%	1226	13%	36.2
Canada	0%	0	0%	0	0%	0	0%	0	0%	1.1

Downwind State : Texas ; CAMX Source Apportionment Modeling

Contributions to 8-hr Violating Counties + Modeled Receptors

Base Case: Total Number of Exceedences (grids-8hrs) = 4867

Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	6	6%	538	11%	293	6%	0	0%	9.3
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	5	6%	391	8%	15	0%	0	0%	5.7
GA	0%	3	4%	468	9%	0	0%	0	0%	4
IA	0%	0	0%	0	0%	0	0%	0	0%	0.4
IL	0%	0	1%	0	0%	0	0%	0	0%	1.5
IN	0%	0	0%	0	0%	0	0%	0	0%	0.7
KY	0%	0	0%	0	0%	0	0%	0	0%	0.8
LA	7%	15	17%	3215	66%	1809	37%	1045	21%	25.9
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.1
MO	1%	1	1%	37	0%	0	0%	0	0%	2.4
MS	1%	5	6%	663	13%	281	5%	0	0%	9.8
NC	0%	0	0%	0	0%	0	0%	0	0%	0.4
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	NA	NA	0	0%	0	0%	0	0%	0
NY	0%	NA	NA	0	0%	0	0%	0	0%	0
OH	0%	0	0%	0	0%	0	0%	0	0%	0.1
PA	0%	0	0%	0	0%	0	0%	0	0%	0
SC	0%	0	0%	0	0%	0	0%	0	0%	0.7
TN	0%	1	1%	9	0%	0	0%	0	0%	2.2
TX	84%	70	73%	4867	100%	4867	100%	4867	100%	129.3
VA	0%	0	0%	0	0%	0	0%	0	0%	0.1
WI	0%	0	0%	0	0%	0	0%	0	0%	0.2
WV	0%	0	0%	0	0%	0	0%	0	0%	0
West	4%	4	4%	3029	62%	783	16%	0	0%	9.4
Canada	0%	0	0%	0	0%	0	0%	0	0%	0

Downwind State : Virginia ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 3828										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	8	9%	410	10%	271	7%	42	1%	11
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0.3
FL	0%	2	3%	51	1%	0	0%	0	0%	2.4
GA	1%	8	8%	482	12%	343	8%	144	3%	14.1
IA	0%	0	0%	0	0%	0	0%	0	0%	1.1
IL	1%	3	3%	707	18%	80	2%	0	0%	6.8
IN	2%	5	5%	892	23%	252	6%	0	0%	9.7
KY	3%	7	7%	1238	32%	525	13%	169	4%	21
LA	0%	2	2%	16	0%	0	0%	0	0%	2.4
MA	0%	0	0%	0	0%	0	0%	0	0%	0.2
MD/DC/DE	11%	24	26%	2312	60%	1743	45%	1243	32%	60.2
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	1%	3	3%	739	19%	115	3%	0	0%	7.2
MO	0%	2	2%	141	3%	0	0%	0	0%	4.2
MS	0%	1	1%	0	0%	0	0%	0	0%	2
NC	8%	41	45%	1681	43%	1105	28%	794	20%	52
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0.1
NJ	1%	2	3%	29	0%	0	0%	0	0%	3
NY	1%	2	2%	142	3%	0	0%	0	0%	2.5
OH	3%	8	8%	1826	47%	919	24%	23	0%	11.2
PA	5%	8	8%	2401	62%	1733	45%	314	8%	26.3
SC	1%	4	4%	443	11%	250	6%	26	0%	10.9
TN	2%	7	7%	1062	27%	446	11%	30	0%	10.9
TX	0%	2	2%	49	1%	0	0%	0	0%	3.3
VA	52%	55	63%	3828	100%	3828	100%	3812	99%	104.9
WI	0%	2	2%	18	0%	0	0%	0	0%	3.4
WV	4%	13	15%	1804	47%	1075	28%	170	4%	24.9
West	0%	3	2%	215	5%	0	0%	0	0%	4.8
Canada	1%	3	3%	173	4%	0	0%	0	0%	4.1

Downwind State : West Virginia ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 2087										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	1%	10	12%	295	14%	79	3%	44	2%	18.8
CT/RI	0%	0	0%	0	0%	0	0%	0	0%	0
FL	0%	3	3%	112	5%	0	0%	0	0%	4.2
GA	1%	3	4%	262	12%	0	0%	0	0%	4.9
IA	0%	0	0%	0	0%	0	0%	0	0%	1.1
IL	3%	9	10%	653	31%	376	18%	38	1%	11.2
IN	5%	13	14%	1224	58%	875	41%	133	6%	17.9
KY	20%	29	30%	1792	85%	1447	69%	1135	54%	64.2
LA	0%	9	10%	50	2%	33	1%	22	1%	12.1
MA	0%	0	0%	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	1	1%	0	0%	0	0%	0	0%	1.7
ME	0%	0	0%	0	0%	0	0%	0	0%	0
MI	3%	12	12%	432	20%	363	17%	241	11%	17.6
MO	1%	5	6%	297	14%	30	1%	0	0%	6.2
MS	0%	4	4%	79	3%	11	0%	0	0%	5.7
NC	2%	9	10%	596	28%	189	9%	20	0%	11.2
NH/VT	0%	0	0%	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0.1
NY	0%	0	0%	0	0%	0	0%	0	0%	0.6
OH	26%	36	37%	2015	96%	1853	88%	1590	76%	52.1
PA	1%	2	3%	76	3%	16	0%	2	0%	12
SC	1%	2	2%	44	2%	1	0%	0	0%	5
TN	4%	13	14%	833	39%	446	21%	256	12%	17.6
TX	1%	5	6%	225	10%	141	6%	0	0%	6.3
VA	2%	9	10%	571	27%	209	10%	16	0%	13.3
WI	0%	2	2%	16	0%	0	0%	0	0%	2.6
WV	26%	55	60%	1894	90%	1717	82%	1403	67%	71.7
West	1%	4	4%	318	15%	21	1%	0	0%	6.4
Canada	1%	2	2%	122	5%	0	0%	0	0%	3.2

Downwind State : Wisconsin ; CAMX Source Apportionment Modeling										
	Contributions to 8-hr Violating Counties + Modeled Receptors									
Base Case: Total Number of Exceedences (grids-8hrs) = 175										
Upwind State:	Average percent contribution (4-episode)	Highest daily average (ppb)	Highest daily average (%)	Number of exceedences reduced >= 2 ppb	Percent exceedences reduced >= 2 ppb	Number of exceedences reduced >= 5 ppb	Percent exceedences reduced >= 5 ppb	Number of exceedences reduced >= 10 ppb	Percent exceedences reduced >= 10 ppb	Max 8hr contribution (ppb)
AL	0%	6	7%	1	0%	1	0%	0	0%	5.9
CT/RI	0%	NA	NA	0	0%	0	0%	0	0%	0
FL	0%	0	0%	0	0%	0	0%	0	0%	0.4
GA	1%	4	4%	5	2%	0	0%	0	0%	3.5
IA	3%	4	5%	48	27%	14	8%	0	0%	7.5
IL	42%	44	50%	175	100%	175	100%	174	99%	46.3
IN	4%	12	14%	42	24%	27	15%	27	15%	12.9
KY	3%	11	13%	28	16%	27	15%	27	15%	12.5
LA	1%	4	4%	25	14%	0	0%	0	0%	4.2
MA	0%	NA	NA	0	0%	0	0%	0	0%	0
MD/DC/DE	0%	0	0%	0	0%	0	0%	0	0%	0
ME	0%	NA	NA	0	0%	0	0%	0	0%	0
MI	0%	0	0%	0	0%	0	0%	0	0%	0.4
MO	12%	17	20%	148	84%	134	76%	49	28%	17.5
MS	0%	1	1%	0	0%	0	0%	0	0%	1.5
NC	0%	1	1%	0	0%	0	0%	0	0%	1.2
NH/VT	0%	NA	NA	0	0%	0	0%	0	0%	0
NJ	0%	0	0%	0	0%	0	0%	0	0%	0
NY	0%	0	0%	0	0%	0	0%	0	0%	0
OH	1%	4	4%	27	15%	0	0%	0	0%	4.4
PA	0%	0	0%	0	0%	0	0%	0	0%	0.2
SC	0%	1	2%	0	0%	0	0%	0	0%	1.5
TN	2%	7	8%	28	16%	1	0%	0	0%	6.6
TX	3%	6	7%	66	37%	24	13%	0	0%	7.6
VA	0%	1	1%	0	0%	0	0%	0	0%	0.5
WI	13%	19	21%	115	65%	73	41%	49	28%	30.1
WV	0%	1	2%	0	0%	0	0%	0	0%	1.5
West	14%	18	21%	143	81%	108	61%	51	29%	19.9
Canada	0%	0	0%	0	0%	0	0%	0	0%	0.1

APPENDIX L
NOx CONTROL STRATEGIES -- TABLES OF METRICS

The electronic copies of the data contained in Appendix L are in the form of Microsoft Excel files. The names of these files are listed below.

Metric 1 for 1-hour daily maximum values for nonattainment areas
File: app-l1.xls

Metric 2 for 1-hour daily maximum values for nonattainment areas
File: app-l2.xls

Metrics 3 and 4 for 1-hour daily maximum values for nonattainment areas
File: app-l3.xls

Metric 1 for 1-hour daily maximum values by State using designated counties
File: app-l4.xls

Metric 2 for 1-hour daily maximum values by State using designated counties
File: app-l5.xls

Metrics 3 and 4 for 1-hour daily maximum values by State using designated counties
File: app-l6.xls

Metric 1 for 8-hour daily maximum values by State using violating counties
File: app-l7.xls

Metric 2 for 8-hour daily maximum values by State using violating counties
File: app-l8.xls

Metrics 3 and 4 for 8-hour daily maximum values by State using violating counties
File: app-l9.xls

APPENDIX M
TRANSPORT SCENARIOS -- TABLES OF METRICS

The electronic copies of the data contained in Appendix M are in the form of Microsoft Excel files. The names of these files are listed below.

Metrics 1 and 3 for Northeast "transport" analysis
File: app-m1.xls

Metrics 1 and 3 for the Illinois, Indiana, Wisconsin "transport" analysis
File: app-m2.xls

Metrics 1 and 3 for the Georgia "transport" analysis
File: app-m3.xls