Public Comment Summary and Response Document on EPA's Recommended Area Designations for the 2006 24-hour $PM_{2.5}$ Designation Recommendations
EPA-HQ-OAR-2007-0562

December 22, 2008

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ACRONYMS

ALA	American Lung Association
AQS	Air Quality System
AQZ	Air Quality Zone
ARM	Approved Regional Method
CAA	Clean Air Act
CBSA	Core-Based Statistical Area
CES	Contributing Emission Score
CFR	Code of Federal Regulations
CMAQ	Community Multi-scale Air Quality modeling
CO	Carbon Monoxide
CO_2	Carbon Dioxide
SO_2	Sulfur Dioxide
CSA	Combined Statistical Area
CMSA	Consolidated Metropolitan Statistical Area
CSN	Chemical Speciation Network
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EGU	Electric Generating Unit
EPA	U.S. Environmental Protection Agency
FEM	Federal Equivalent Method
FRM	Federal Reference Method
HYSPLIT	Hybrid Single Particle Lagrangian Integrated Trajectory
IMPROVE	Interagency Monitoring of Protected Visual Environments
MSA	Metropolitan Statistical Area
MSL	Mean Sea Level
MVEB	Motor Vehicle Emissions Budgets
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standard
NCAR	National Center for Atmospheric Research
NEI	National Emission Inventory
NESCAUM	Northeast States for Coordinated Air Use Management
NOAA	U.S. National Oceanic and Atmospheric Administration
NO_X	Nitrogen Oxide
OMB	Office of Management and Budget
OTAQ	Office of Transportation and Air Quality
OWB	Outdoor Wood Boiler

PM	Particulate Matter
PMF	positive matrix factorization
RTC	Response to Comment
SANDWICH	Sulfate, Adjusted Nitrate, Derived Water, Inferred Carbonaceous mass Hybrid material balance
SIP	State Implementation Plan
SPM	Special Purpose Monitor
TSD	Technical Support Document
UGB	Urban Growth Boundary
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WES	Weighted Emission Score

1.0. Introduction

On September 2, 2008 the United States Environmental Protection Agency (EPA or "the Agency") published a Federal Register Notice 73 FR 51259 for the 2006 24-hour $PM_{2.5}$ Designation Recommendations. EPA requested comments from the public on the proposed designations from September 2 through October 2, 2008.

The purpose of this response to comment (RTC) document is to respond to public comments submitted to the docket (EPA-HQ-OAR-2007-0562: available online at www.regulations.gov) from interested parties other than States and Tribes on EPA's recent responses to the State and Tribal designation recommendations for the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS). EPA is not required under Clean Air Act (CAA or "the Act") Section 107(d) to seek public comment during the designation process, but elected to do so for the 2006 24-hour $PM_{2.5}$ NAAQS in order to gather additional information for EPA to consider before making final designations. CAA Section 107(d) provides a process for designations that involves recommendations by States and Tribes to EPA and responses from EPA to those parties, prior to EPA promulgating final designations and boundaries. EPA invited public comment on its responses to States and Tribes during the 30-day comment period provided in this notice. Due to the statutory timeframe for promulgating designations set out in CAA Section 107(d), EPA was not able to consider any comments submitted after October 2, 2008, notwithstanding what may have appeared in any State-specific announcements. Any comment submitted after October 2, 2008, is not in this document. Also due to the statutory timeframe, EPA was not able to accommodate any request for an extension of the public comment period. EPA elected to provide this public comment period, and the October 2 deadline was necessary to allow EPA sufficient time to review and respond to all significant comments in advance of promulgating the 2006 24-hour $PM_{2.5}$ designations in December 2008. This opportunity for public comment does not affect any rights or obligations of any State, Tribe or the EPA which might otherwise exist pursuant to CAA section 107(d).

The docket gave the following instructions in providing comments to EPA:

- Please consider the Agency's charge under CAA section 107(d). Under this section, EPA is obligated to identify every area as attainment, nonattainment, or unclassifiable. Further, in establishing nonattainment area boundaries, the Agency is required to identify the area that does not meet the 2006 $PM_{2.5}$ 24-hour standard and any nearby area that is contributing to the area that does not meet that standard. If you believe that a specific geographic area that EPA is proposing to identify as a nonattainment area should not be categorized by the section 107(d) criteria as nonattainment, or if you believe that a specific area not proposed by EPA to be identified as a nonattainment area should in fact be categorized as nonattainment using the section 107(d) criteria, please be as specific as possible in supporting your belief;
- Describe any assumptions and provide any technical information and/or data that you used;

- Provide specific examples to illustrate your concerns, and suggest alternatives;
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats; and
- Make sure to submit your comments by the comment period deadline identified.

This document summarizes those significant public comments EPA received during the public comment period. Each commenter, whose submission is publicly available on the docket, is referred to by the last four digits of its docket submission. A table of the commenters and their associated docket number(s) is presented on the following pages.

The summaries are divided into three sections. Section 2.0 organizes the comments according to a general designation issue. Section 3.0 organizes the same comments by specific nonattainment area (NAA). Section 4.0 contains comments for geographic areas that could not be attributed to a specific nonattainment area and are organized by EPA Region, then by State.

Seven of the commenters (0084, 0090, 0093, 0110, 0132, 0137, 0139) submitted copyrighted material in the docket that may not be reproduced without consent of the copyright holder. To receive a copy of the complete public comment in regulations.gov, the requester is instructed to contact the EPA Docket Center, Public Reading Room.

Table of Public Commenters

Commenter Organization	Docket Number
Anonymous	EPA-HQ-OAR-0562-0002
Jodi Kriebaum	EPA-HQ-OAR-0562-0003
John G. Bloemer	EPA-HQ-OAR-0562-0004
Anonymous	EPA-HQ-OAR-0562-0005
Princia Benson	EPA-HQ-OAR-0562-0006/0012
Jeanne Leaver	EPA-HQ-OAR-0562-0007
Kenneth Dubinski	EPA-HQ-OAR-0562-0008
Wasatch Clean Air Coalition	EPA-HQ-OAR-0562-0010
Sierra Club – Utah Chapter	EPA-HQ-OAR-0562-0011/0024
Clean Air Revival	EPA-HQ-OAR-0562-0013
Commercial Metal Forming	EPA-HQ-OAR-0562-0014
Representatives for NE Ohio/US House and Senate	EPA-HQ-OAR-0562-0015
The Financial Concept Group, LLC	EPA-HQ-OAR-0562-0016
Village of Lordstown, Planning and Zoning Administrator	EPA-HQ-OAR-0562-0017
Ohio House and Senate	EPA-HQ-OAR-0562-0018
Department of the Air Force, Eielson Air Force Base	EPA-HQ-OAR-0562-0019/0084
Poland Village Mayor's Office	EPA-HQ-OAR-0562-0020
City of Struthers Mayor's Office	EPA-HQ-OAR-0562-0021
Vienna Township Trustees	EPA-HQ-OAR-0562-0022
Howland Township Board of Trustees	EPA-HQ-OAR-0562-0023
Hubbard Township Trustees	EPA-HQ-OAR-0562-0025
Trumbull County Commissioners	EPA-HQ-OAR-0562-0026
Eastgate Regional Council of Governments	EPA-HQ-OAR-0562-0027
City of Warren, OH	EPA-HQ-OAR-0562-0028
Village of Sebring	EPA-HQ-OAR-0562-0029
City of Hubbard	EPA-HQ-OAR-0562-0030
City of Campbell	EPA-HQ-OAR-0562-0031
Salt Lake City Council	EPA-HQ-OAR-0562-0032
Castlo Community Improvement Corporation	EPA-HQ-OAR-0562-0033
Fairbanks Metropolitan Area Transportation System	EPA-HQ-OAR-0562-0034
Macatawa Area Coordinating Council	EPA-HQ-OAR-0562-0035
City of Lindon	EPA-HQ-OAR-0562-0036
City of Payson	EPA-HQ-OAR-0562-0037
Riverdale City	EPA-HQ-OAR-0562-0038

Joel Laws	EPA-HQ-OAR-0562-0039
Fairbanks North Star Borough Assembly	EPA-HQ-OAR-0562-0040
Ernest Grolimund	EPA-HQ-OAR-0562-0041
Jorge Verde	EPA-HQ-OAR-0562-0042
Ed Fenner	EPA-HQ-OAR-0562-0043
Yvette McLeod	EPA-HQ-OAR-0562-0044
Philip Meyer	EPA-HQ-OAR-0562-0045
GRM Insurance LLC	EPA-HQ-OAR-0562-0046
South Weber City	EPA-HQ-OAR-0562-0047
Regional Chamber	EPA-HQ-OAR-0562-0048
Mountainland Association of Governments	EPA-HQ-OAR-0562-0049/0062
American Lung Association of the Upper Midwest	EPA-HQ-OAR-0562-0050
City of American Fork	EPA-HQ-OAR-0562-0051
County of El Dorado	EPA-HQ-OAR-0562-0052
Fairbanks North Star Borough DOT	EPA-HQ-OAR-0562-0053
City of Highland	EPA-HQ-OAR-0562-0054
Placer County	EPA-HQ-OAR-0562-0055
Wasatch Front Regional Council	EPA-HQ-OAR-0562-0056
American Lung Association of the Southeast	EPA-HQ-OAR-0562-0057
Dubois County Area Development Corporation	EPA-HQ-OAR-0562-0058
American Lung Association of Pennsylvania	EPA-HQ-OAR-0562-0059
Jeld-Wen, Inc.	EPA-HQ-OAR-0562-0060
Illinois Environmental Regulatory Group	EPA-HQ-OAR-0562-0063/0067
American Lung Association of the Atlantic Coast	EPA-HQ-OAR-0562-0064
Bear River Association of Governments	EPA-HQ-OAR-0562-0065
Imperial County Air Pollution Control District	EPA-HQ-OAR-0562-0066
American Lung Association of the Midland States	EPA-HQ-OAR-0562-0068
Utah Manufacturers Association	EPA-HQ-OAR-0562-0069
Arnold's Body Shop	EPA-HQ-OAR-0562-0070
Brigham City	EPA-HQ-OAR-0562-0071
City of Orem	EPA-HQ-OAR-0562-0072/0156
Bear River Health Department	EPA-HQ-OAR-0562-0073
City of Pleasant Grove	EPA-HQ-OAR-0562-0074/0078
Grand Rapids Chamber of Commerce	EPA-HQ-OAR-0562-0075
Box Elder County Commissioners	EPA-HQ-OAR-0562-0076
Nobilus, LLC	EPA-HQ-OAR-0562-0077
Alcoa Mill Products	EPA-HQ-OAR-0562-0079
Dayton Power and Light	EPA-HQ-OAR-0562-0080

Willard City Corporation	EPA-HQ-OAR-0562-0081
Wisconsin Manufacturers & Commerce	EPA-HQ-OAR-0562-0082
Kelley Drye & Warren, LLP	EPA-HQ-OAR-0562-0083
Jackson Kelly PLLC	EPA-HQ-OAR-0562-0085
Humphreys County	EPA-HQ-OAR-0562-0086
Parsons Behle & Latimer	EPA-HQ-OAR-0562-0087
MidAmerican Energy Company	EPA-HQ-OAR-0562-0089
ATK Launch Systems	EPA-HQ-OAR-0562-0090
Respiratory Health Association of Metropolitan Chicago	EPA-HQ-OAR-0562-0091
City of Fairbanks	EPA-HQ-OAR-0562-0092
Monsanto	EPA-HQ-OAR-0562-0093
Southeast Michigan Council of Governments	EPA-HQ-OAR-0562-0094
American Lung Association, Earthjustice, Environmental Defense Fund, Natural Resources Defense Council	EPA-HQ-OAR-0562-0095
Wisconsin Transportation Builders Association	EPA-HQ-OAR-0562-0096
Environmental & Laboratory Services	EPA-HQ-OAR-0562-0097
Office of the Federal Coordinator for Alaska Natural Gas Transportation Projects	EPA-HQ-OAR-0562-0098
Cache Metropolitan Planning Organization	EPA-HQ-OAR-0562-0099
Sierra Club – National Coal Campaign	EPA-HQ-OAR-0562-0100
Sierra Club-Georgia	EPA-HQ-OAR-0562-0101
Alaska Department of Transportation and Public Facilities	EPA-HQ-OAR-0562-0102
Vanderburgh County Department of Health	EPA-HQ-OAR-0562-0103
Tennessee Valley Authority	EPA-HQ-OAR-0562-0104
Tooele City	EPA-HQ-OAR-0562-0105
Sierra Club-Indiana	EPA-HQ-OAR-0562-0106
American Bottom Conservancy	EPA-HQ-OAR-0562-0107
Ameren Corporate	EPA-HQ-OAR-0562-0108
Alliant Energy Corporation	EPA-HQ-OAR-0562-0109
DTE Energy	EPA-HQ-OAR-0562-0110
Lehi City, Utah County, UT	EPA-HQ-OAR-0562-0112
Oakland, MI	EPA-HQ-OAR-0562-0113
Chuck Hendricks	EPA-HQ-OAR-0562-0114
Utah Industry Environmental Coalition	EPA-HQ-OAR-0562-0115
City and Borough of Juneau	EPA-HQ-OAR-0562-0116
Proctor & Gamble Paper Products Company	EPA-HQ-OAR-0562-0117
Ohio Environmental Council, Ohioans for Health, Sierra Club-Ohio, Sierra Club-Coal Campaign	EPA-HQ-OAR-0562-0118
Wisconsin Clean Energy Campaign/Sierra Club	EPA-HQ-OAR-0562-0119
Yolo-Solano Air Quality Management District	EPA-HQ-OAR-0562-0121

Earthjustice	EPA-HQ-OAR-0562-0123
Julie Burgo	EPA-HQ-OAR-0562-0124
Van Bakel	EPA-HQ-OAR-0562-0125
City of Washington Terrace, UT	EPA-HQ-OAR-0562-0126
Wisconsin Public Service Corporation	EPA-HQ-OAR-0562-0127
Greenebaum Doll and McDonald PLLC	EPA-HQ-OAR-0562-0128
Utah Physicians for a Healthy Environment , League of Women Voters of Utah	EPA-HQ-OAR-0562-0129
Michigan Manufacturers Association	EPA-HQ-OAR-0562-0130
MonValley Clean Air Coalition	EPA-HQ-OAR-0562-0131
Environmental Committee of the Ohio Electric Utility Institute	EPA-HQ-OAR-0562-0132
Tom Dawson	EPA-HQ-OAR-0562-0133
Wisconsin Economic Development Association	EPA-HQ-OAR-0562-0134
Environmental Defense Fund, Natural Resources Defense Council	EPA-HQ-OAR-0562-0136
Kentucky Environmental Foundation, The Sierra Club	EPA-HQ-OAR-0562-0137
American Lung Association of New York	EPA-HQ-OAR-0562-0138
Lane Regional Air Protection Agency	EPA-HQ-OAR-0562-0139
Village of West Farmington, OH	EPA-HQ-OAR-0562-0140
Salt Lake City Corporation	EPA-HQ-OAR-0562-0141
Illinois Manufacturers Association	EPA-HQ-OAR-0562-0142
Riverton City, UT	EPA-HQ-OAR-0562-0143
LyonellBasell Industries	EPA-HQ-OAR-0562-0144
Grantsville, UT	EPA-HQ-OAR-0562-0145
City of Cortland, OH	EPA-HQ-OAR-0562-0146
Ogden, UT	EPA-HQ-OAR-0562-0147
American Lung Association of New England	EPA-HQ-OAR-0562-0148
Mayors from the Cities of Bettendorf, Davenport, East Moline, Moline, Muscatine, Rock Island, County Chairs	EPA-HQ-OAR-0562-0150
Muscatine Power and Water	EPA-HQ-OAR-0562-0151
Deere & Company	EPA-HQ-OAR-0562-0152
UT Department of Transportation	EPA-HQ-OAR-0562-0153
City of Provo, UT	EPA-HQ-OAR-0562-0154
Illinois Quad City Chamber of Commerce	EPA-HQ-OAR-0562-0155
Box Elder Transportation Planning Group	EPA-HQ-OAR-0562-0157
American Lung Association of Southwest	EPA-HQ-OAR-0562-0158
Salt Lake City Council of Governments	EPA-HQ-OAR-0562-0159/0169
Perry City, UT	EPA-HQ-OAR-0562-0160
City of Westfir, Oregon	EPA-HQ-OAR-0562-0161
E.ON U.S. LLC	EPA-HQ-OAR-0562-0164

The SIP Transformation Workgroup	EPA-HQ-OAR-0562-0165
City of Youngstown	EPA-HQ-OAR-0562-0167
Utah County of Commissioners	EPA-HQ-OAR-0562-0168
Klamath County Commissioners	EPA-HQ-OAR-0562-0170
Iowa Environmental Council	EPA-HQ-OAR-0562-0171
Eagle Mountain	EPA-HQ-OAR-0562-0174
Jarrett Jamison, III	EPA-HQ-OAR-0562-0176
Salt River Pima-Maricopa Indian Community	EPA-HQ-OAR-0562-0178

2.0. Comments on General Designation Issues

Comment:

One commenter (0002) asserts that EPA is letting the air become "dirty as can be."

EPA Response:

In this action, EPA is designating areas nonattainment that either violate the $PM_{2.5}$ NAAQS or contribute to areas that violate the NAAQS. This action will ultimately lead to further air quality planning in all areas designated nonattainment. Consequently EPA does not agree that by this action EPA is letting air become dirtier as alleged by the commenter. To the extent the commenter is making statements broader than this designation action the comments are beyond the scope of this rulemaking and EPA is not responding here to such comments.

Comment:

One commenter (0003) asserts that EPA should strictly enforce the 2006 air quality laws.

EPA Response:

EPA is unclear what the commenter is referring to by enforcing 2006 air quality laws. However, EPA believes that it is following the requirements of CAA section 107(d) in making the final $PM_{2.5}$ designations.

Comment:

One commenter (0010) had no comments but thanked EPA for having a public comment period.

EPA Response*:*

EPA acknowledges the comment and thanks the commenter for the support of this public comment process.

Comment:

One commenter (0042) believes when there are air quality improvements EPA thanks "us" by writing stricter standards. The commenter believes that EPA ensures its budget and jobs by writing new and ever more costly regulations. The commenter questions the air pollution from China, India and developing countries, the length of time it takes for the pollution from those countries to reach "us" and how it influences air improvements. The commenter mentions the outsourcing of jobs in these countries and that there are no EPA restrictions in these countries which give them a greater cost advantage.

EPA Response:

Today's action is directed under CAA section 107(d). Under this section, EPA is obligated to designate every area as attainment, nonattainment, or unclassifiable. Further, in establishing nonattainment area boundaries, EPA is required to designate the area that does not meet the 2006 $PM_{2.5}$ 24-hour NAAQS and any nearby area that is contributing to the area that does not meet that standard. EPA

is not, by this action, promulgating any new designations for any other NAAQS, nor is EPA promulgating any air quality standards by this action. EPA is acting as required by the Act which does not allow the Agency to consider the costs of implementing the standards in making the area designations.

EPA considers international transport of pollution an important issue. Given the challenge and complexity of assessing the potential impact of international and intercontinental emissions on domestic air quality in the United States, EPA has been engaged in a number of activities to improve our understanding of such transport. For example, the Agency has cooperative agreements with both Canada and Mexico to investigate international border transport. As work progresses on these activities, EPA will be able to better address the uncertainties associated with transboundary flows of air pollution and their impacts. These major uncertainties include current limitations of regional air quality models, global air quality models, and EPA's ability to integrate these models. EPA is also currently limited in its ability to quantify transboundary impacts, including the sources, transport, and fate of these emissions. Because of this EPA believes that the best approach for addressing international transport is to work on a case-by-case basis to determine what is the best available information and the best method for analysis that fits the unique situation for each area.

2.1. Health Concerns

Comment:

Several commenters raised concerns about the health effects of wood smoke and proposed solutions. Five commenters (0005, 0006, 0007, 0012, 0124, 0133) would like outdoor wood boilers (OWBs) banned, citing personal hardships caused by wood smoke. One commenter (0008) would like a ban on outdoor wood-burning fireplaces, fire pits, campfires and OWBs, citing negative health effects. The commenter supports a government grant to convert indoor wood burning fireplace to gas or electric. Another commenter (0039) would like wood smoke more tightly regulated, citing personal hardships caused by wood smoke and negative health effects caused by wood smoke. One commenter (0041) requests a lower PM NAAQS of 24 mcg/cm, citing health studies and anecdotal evidence of negative health effects in Maine. The commenter noted that the NAAQS and air regulatory system in general is designed for large plants and auto emissions, but residential wood burning is the largest contributor to air pollution in their region. The commenter cites negative health effects caused by wood smoke. The commenter believes that the data from a monitor in Maine should be ignored. One commenter (0013) asks EPA to educate the public on wood smoke.

EPA Response:

Today's action does not directly affect the emissions from wood smoke, but could lead to emissions reductions from this source category in the future. Today's action is directed under CAA section 107(d). Under this section, EPA is obligated to identify every area as attainment, nonattainment, or unclassifiable. Further, in establishing nonattainment area boundaries, the Agency is required to identify the

area that does not meet the 2006 24-hour $PM_{2.5}$ NAAQS and any nearby area that is contributing to the area that does not meet that standard.

EPA recognizes there are potential health risks from breathing wood smoke, particularly for people who have heart or lung disease, older adults and children. Wood smoke is made up of a complex mixture of gases and fine particles produced when wood and other organic matter burn. The biggest health threat from smoke comes from fine particles (also called particulate matter or PM).

The Clean Air Act requires States to develop implementation plans (SIPs) for areas once they are designated as not attaining the NAAQS. Tribes may develop tribal implementation plans (TIPs) and are encouraged to collaborate with States when developing their plans. Today's action to designate nonattainment areas is just the first step in the planning process. In developing implementation plans for 24-hour $PM_{2.5}$ nonattainment areas, States and Tribes should fully consider public comments and ensure the plans will attain the 24-hour $PM_{2.5}$ NAAQS. In some areas, wood smoke emissions are one of the largest contributors to the $PM_{2.5}$ nonattainment problem that States will need to address in their SIPs. Tribes are encouraged to collaborate with States in developing plans to address these emissions.

The EPA has provided, and will continue to provide, technical assistance to States, Tribes and local governments in their efforts to reduce wood smoke emissions. EPA is working with many partner organizations across the country, including state, local, tribal air pollution control officials, the American Lung Association (ALA) and the hearth industry to reduce residential wood smoke. For example, EPA has worked with these organizations on a campaign to encourage homeowners to "changeout" their old inefficient wood stoves and fireplaces to cleaner-burning hearth technologies like gas, wood pellet, and EPA-certified woodstoves. Since 2005, states, local and tribal government have implemented more than 35 wood stove and fireplace changeout programs throughout the country.

EPA has developed fact sheets, brochures, posters and a website (www.epa.gov/woodstoves) to help educate homeowners about ways to burn more cleanly and efficiently, and has a website (http://www.epa.gov/compliance/monitoring/programs/caa/whregs.html) that provides information about the EPA wood heater regulation. This regulation requires manufacturers of woodstoves to certify that, with some exceptions, each new woodstove model complies with a PM emission limit of 7.5 grams/hour (g/hr) for non-catalytic woodstoves and 4.1 g/hr for catalytic woodstoves.

Additionally, EPA provided technical and financial assistance for the Northeast States for Coordinated Air Use Management (NESCAUM) to develop an outdoor hydronic heater (OHH) model regulation for States, Tribes and local governments to use in efforts to lower emissions from OHHs (also known as outdoor wood boilers or OWBs). EPA also developed a Memorandum of Understanding (MOU) with manufacturers to voluntarily produce cleaner OHHs that, under the Phase I program, emit about 70 percent less PM and, under the Phase 2 program, emit

about 90 percent less $PM_{2.5}$ emissions than many existing models. These cleaner OHHs are eligible for listing on an EPA website (http://www.epa.gov/woodheaters/models.htm).

For those areas where wood smoke is the predominate contributor to nonattainment of the 24-hour $PM_{2.5}$ NAAQS, EPA will work with the State or Tribe to identify actions to address these emissions. These actions should be taken as early as possible and would be appropriate for inclusion in a state's SIP submittal. EPA believes that wood-smoke emissions reduction efforts, including burn management and changeout programs, could be an effective way to reduce emissions and bring an area back into attainment. EPA has provided States and Tribes (and other interested parties) with a "how-to guide" for implementing a wood stove changeout campaign (http://www.epa.gov/Woodstoves/how-to-guide.html) and is available to provide outreach for other programs that hold promise for reducing wood-smoke emissions. EPA believes that areas that are currently attaining the 24-hour $PM_{2.5}$ NAAQS, as well as areas that are not attaining the NAAQS, could benefit from programs to reduce emissions from wood smoke.

In today's action, EPA is not establishing or revising the PM NAAQS. Therefore, comments on the need to lower that standard are beyond the scope of this action and EPA is not responding to such comments.

Comment:

One commenter (0044) questions the boiler release requirement for commercial and large residential complexes in the city. The commenter states that boilers release fine soot into the atmosphere daily, without filtering or scrubbing the material, and the soot is deadly. The commenter states that if small scrubber systems are required or boiler specifications are tightened, it would reduce the health effects and related environmental pollution.

EPA Response:

Today's action does not directly affect the emissions from boilers but could lead to emissions reductions from those sources in the future. Today's action is directed under CAA section 107(d). Under this section, EPA is obligated to identify every area as attainment, nonattainment, or unclassifiable. Further, in establishing nonattainment area boundaries, the Agency is required to identify the area that does not meet the 2006 $PM_{2.5}$ 24-hour standard and any nearby area that is contributing to the area that does not meet that standard. Once those boundaries are established, States must develop implementation plans (SIPs) to ensure that these "nonattainment areas" achieve clean air standards. (Tribes and local air-quality agencies may collaborate in this effort.) SIPs required under the Clean Air Act must evaluate potential actions for improving fine particle levels, such as reducing emissions from boilers.

Although not directly related to this action, EPA directs the commenter to two additional efforts related to boiler emissions:

1. EPA is developing emissions standards for industrial, commercial and institutional boilers to control hazardous air pollutants as required under section 112 of the Act.
2. Community information on reducing emissions from boilers can be found at: http://epa.gov/air/community/details/boilers_addl_info.html#activity2.

2.2. Clean Air Act, EPA's Guidance and Actions

Comment:
One commenter (0085) asserts that CAA section 107 gives states "primary responsibility" for designations and that EPA must defer to the initial recommended designations of the states. Another commenter (0113) made comparable legal arguments, and the substance of those comments is addressed below along with those of this commenter.

EPA Response:

EPA disagrees with the commenter's reading of the statute. Section 107(d) charges States with the responsibility to make initial designations and to submit these to EPA. The statutory text makes clear that these initial designations are, in essence, recommendations. Section 107(d)(1)(A) directs States to submit a "list" of areas to EPA, designating them nonattainment, attainment, or unclassifiable. The "list" of "designations" are implicitly provisional unless and until EPA acts upon them by promulgating them, with or without modification.. Unlike the designations that EPA ultimately promulgates, these initial designations from the States do not trigger subsequent actions under the CAA, such as the deadline for submission of SIPs.

Under section 107(d), EPA has the ultimate authority and responsibility to promulgate the final designations. After receiving the list of areas from the State, EPA must exercise independent judgment before promulgating the designations and the statute provides time to do so. Section 107(d)(B)(i) provides that EPA is to promulgate designations within one year after receiving the State's recommendations. Were EPA merely to rubber stamp State recommendations, the statute would not accord this time to the Agency.

Significantly, the statute also explicitly authorizes EPA to modify State recommendations. Section 107(d)(1)(B)(ii) provides that EPA "may make such modifications as the Administrator deems necessary," to both the recommended designations and the boundaries of the recommended areas. EPA would not have this authority were it merely required to defer to State recommendations in all instances. Thereafter, the statute contemplates a period of 120 days within which States have the "opportunity to demonstrate why any proposed modification is inappropriate." Were EPA required merely to defer to State recommendations in all instances, Congress would not have phrased this process as an "opportunity" for States to alter EPA's judgment about proposed modifications. Taken together, these provisions demonstrate that EPA is ultimately responsible to promulgate the

designations that it believes are most consistent with the requirements of section 107(d), even if such designations deviate from the preferences of the State affected by the designation. At a minimum, EPA believes that modifications are "necessary" for nonattainment areas when they do not encompass both the areas that are violating, and the areas that are contributing to those violations, based upon the facts and circumstances of each area.

Comment:

The commenter (0085) noted that in the context of the 2004 designations for the 1997 $PM_{2.5}$ NAAQS, EPA established a presumption regarding the boundaries of nonattainment areas. The commenter also noted that this use of a presumption is currently being challenged in court, and that EPA has not established a comparable presumption for the 2006 $PM_{2.5}$ NAAQS as a direct result of this litigation. In other words, the commenter claims that EPA established no presumption for the 2006 $PM_{2.5}$ NAAQS because it is illegal to do so.

EPA Response:

EPA disagrees with the assertions of the commenter. As the commenter is aware, EPA contends that section 107(d) does not preclude EPA from establishing a rebuttable presumption as part of the designations process. EPA has also previously explained the rational basis for this specific presumption in the context of the 1997 $PM_{2.5}$ NAAQS, i.e., that speciated $PM_{2.5}$ data indicated that the portion of ambient $PM_{2.5}$ particles associated with the "urban excess" in cities across the U.S. indicated a strong contribution from sources typically dispersed throughout an urban area, and OMB's independent establishment of the MSA boundaries is a reflection of geographic areas that are economically integrated urban areas. As the commenter is also aware, this was a merely rebuttable presumption to aid in the analysis for each area, as evidenced by many areas across the country for which the final designation was smaller or larger than the MSA for that area, based on the facts and circumstances of each area.

EPA elected not to recommend the same rebuttable presumption for analysis purposes for the 2006 $PM_{2.5}$ NAAQS because of the possibility that some areas that were only violating the 2006 24-hour $PM_{2.5}$ NAAQS might require nonattainment areas with different boundaries. For example, because violations of a 24-hour NAAQS could involve contribution from an area only on selected days, or during a specific season, or from a more narrow range of source categories, EPA did not recommend the same analytical starting point for evaluation of contributing areas for this round of designations. By contrast, for areas that are already designated nonattainment based on violations of the 1997 $PM_{2.5}$ NAAQS and are violating the 2006 24-hour $PM_{2.5}$ NAAQS, EPA anticipated that the same boundaries might be appropriate. This was, however, merely a result that the Agency anticipated, and EPA expected this to be and evaluated by States and EPA during the designations process. Thus, in the designations for the 2006 24-hour $PM_{2.5}$ NAAQS, there are designated nonattainment areas that differ in some respects from the prior designations for

the 1997 $PM_{2.5}$ NAAQS, e.g, that for Cleveland in which EPA concluded that a particular area is not contributing to violations of the 2006 24-hour $PM_{2.5}$ NAAQS, even though it has been designated nonattainment because of its contribution to violations of the annual NAAQS.

Comment:

The commenter (0085) asserted that even though EPA established no presumption for the 2006 $PM_{2.5}$ NAAQS, it is nevertheless imposing this same presumption by stating that it "anticipates" that the same boundaries would be appropriate for the both the 1997 $PM_{2.5}$ NAAQS and the 2006 $PM_{2.5}$ NAAQS for those areas already designated nonattainment for the former. According to the commenter, EPA is violating its own guidance by "applying a presumption in fact."

EPA Response:

As noted above, EPA merely stated that it anticipated that areas contributing to violations of the 1997 annual $PM_{2.5}$ NAAQS would likely be contributing to violations of the 24-hour $PM_{2.5}$ NAAQS. Given that both NAAQS use the same indicator (i.e., particles of the same size), that typically result from direct emissions of both direct $PM_{2.5}$ and the same $PM_{2.5}$ precursors, from the same types of sources, that would potentially require the same control strategies, EPA does not consider this outcome to be highly unlikely. However, because of differences in the NAAQS (such as the form of the NAAQS and their respective averaging times) EPA expected an evaluation that would explore this based on the facts and circumstances in each area. For example, the CES analytical tool utilized by EPA to inform the designations for the 2006 24 hour $PM_{2.5}$ NAAQS specifically examined impacts on individual days rather than on an annual average basis. EPA thus disagrees that this was a "presumption in fact."

Comment:

The commenter (0085) asserted that the "sole reason articulated" by EPA for anticipating that the prior designated boundaries would remain appropriate was "administrative convenience." The commenter admonished EPA not to take regulatory action based on what the Agency considers "fairness," citing the recent decision by the D.C. Circuit concerning the Clean Air Interstate Rule. According to the commenter, EPA should not make designations based on any factor other than monitor data, including administrative convenience or any other reason.

EPA Response:

EPA disagrees that "administrative convenience" was the sole basis for EPA's statement as to anticipated continuity between boundaries for nonattainment areas for the 1997 $PM_{2.5}$ NAAQS and the 2006 $PM_{2.5}$ NAAQS. As explained above, EPA's preliminary analysis indicated that it is likely that similar boundaries would be appropriate for technical reasons, including the nature of the particles, their sources, and their potential need for controls.

The statement highlighted by the commenter in the June 8, 2007, Meyers Memorandum, merely stated an obvious practical consideration that is relevant to effective implementation of NAAQS that affect the same pollutant. EPA stated that having similar designated boundaries for the 1997 PM2.5 NAAQS and the 2006 PM2.5 NAAQS "*may* more easily facilitate overall air quality planning for attaining *the suite of $PM_{2.5}$ standards*." Meyers Memo page 2 (emphasis added). This was obviously not a mandatory directive that boundaries must be identical, nor even an unequivocal statement that identical boundaries would always be appropriate even for practical reasons. Obviously, the statutory requirements for a nonattainment area are that it contain both the violating areas, and the contributing areas. EPA's analytical approach was intended to assure, on the facts, that each area met that test with respect to the 2006 24-hour $PM_{2.5}$ NAAQS. Moreover, EPA notes that many States concurred in this analysis, and made recommendations that reflected their own determination that comparable boundaries for both NAAQS were the most appropriate.

Comment:

The commenter (0085) argued that section 107(d) requires EPA to make designation decisions solely on "air quality monitoring data." In particular, the commenter quotes a portion of CAA section 107(d)(6) for the proposition that EPA can use no information other than monitoring data for designations.

EPA Response:

EPA disagrees with this comment. First, section 107(d)(6) only directs EPA to make decisions "based on" monitoring data. The statute thus does not explicitly exclude consideration of other forms of relevant data. Because EPA must designate as nonattainment both areas that violate the NAAQS (i.e., that have a violating monitor) and nearby areas that contribute to those violations (i.e., that do not have a violating monitor but nevertheless contribute), EPA must take into account information in addition to monitoring data.

Second, the commenter quotes selectively from section 107(d)(6). That provision explicitly refers to designations for "the July 1997 $PM_{2.5}$ national ambient air quality standards." By its own explicit terms, therefore, this provision does not refer to designations for the 2006 $PM_{2.5}$ NAAQS.

Third, other portions section 107(d) support EPA's reading of the statute that states and EPA should not limit their evaluation to monitoring data in isolation. For example, section 107(d)(1)(A)(iii) indicates that areas should be designated "unclassifiable" if it is not possible to ascertain whether the area is violating "on the basis of available information." Similarly, section 107(d)(B)(i) provides that EPA may defer designations for an area if the Agency "has insufficient information to promulgate" the designation. Neither provision refers solely to monitoring data, and both suggest that EPA is authorized to look at relevant information more generally.

EPA in fact has relied heavily on monitoring data, e.g., the presence of a FRM monitor showing a violation of the 2006 24-hour $PM_{2.5}$ NAAQS is the starting point for each and every nonattainment area. Evaluations of contributing areas include analysis of impacts from nearby areas by various appropriate means, including examination of county by county emissions inventories, consideration of physical proximity of those emissions, weighing of the potential for contribution through meteorological information by means of pollution roses, etc. By contrast, the commenter's narrow reading of section 107 as limited EPA to consider only monitoring data is illogical because it would not include those areas that are "contributing" to the monitored violations. Moreover, this simplistic reading is at odds with the commenters own assertions that EPA must use other forms of information, such as modeling, to comply with section 107(d).

Comment:

The commenter (0085) also argued that EPA had exceeded its authority to modify state recommendations. According to the commenter, EPA is only authorized to make modifications "as the Administrator deems necessary," and "as necessary" is not "carte blanche to make whatever modifications the Agency would like to make to the States' designations." The commenter further asserted that the term "necessary" should be read to mean "'necessary' to achieve attainment of the NAAQS."

EPA Response:

EPA agrees that the term "as necessary" does not constitute "carte blanche," but as the commenter is aware, EPA believes that modifications to initial State recommendations are within EPA's discretion when EPA determines that such recommendations are inconsistent with the statutory directive that nonattainment areas must include both violating areas, and nearby areas that contribute to those violations. In the context of these and other designations, EPA often agrees with the recommendations of the State and proposes no modifications. In other instances, EPA is compelled to make modifications in order to meet the letter and the spirit of the statute with respect to nonattainment area boundaries.

Commenter's assertion that "necessary" should be read as meaning "necessary to achieve attainment of the NAAQS," is also specious. The purpose of nonattainment area boundary designations is to identify that geographic area within which source of emissions are contributing to violations of the NAAQS, to assure that such sources are given proper evaluation in the development of the nonattainment area plan for the area. CAA Section 172, past EPA guidance and regulations, and many years of EPA precedent lay out the procedural and substantive requirements for such nonattainment area plans. CAA section 110 likewise lays out additional procedural and substantive requirements for all SIPs. As a means of truncating, or sidestepping, these specific statutory and regulatory planning requirements, the commenter implicitly declares that EPA should preemptively draw designation boundaries that preemptively eliminate the procedural and substantive requirements of the CAA and applicable regulations. EPA does not agree that section 107(d) requires EPA to preemptively devise the

nonattainment area SIP for an area in order to promulgate designations for an area. Nor does EPA consider such an approach consistent with the purpose and spirit of the CAA, which is to assure full and thorough evaluation of the relevant facts and circumstances of a given area, an updated and thorough emissions inventory for the area, a thorough evaluation of RACM/RACT level controls for the area, an attainment demonstration that establishes the proper mix of control strategies to assure attainment of the NAAQS as expeditiously as practicable, etc. Ironically, the commenter on the one hand asserts that EPA is only authorized to base designations on monitor data, and on the other demands that EPA conduct, in essence, an entire nonattainment plan development process to promulgate the designation.

Comment:

The commenter (0085) argued that modifications "can only be made on the same basis as the States' recommendations, i.e., 'air quality monitoring data.'" According to the commenter, any other interpretation "would render the States' designations an exercise in futility."

EPA Response:

EPA disagrees with the commenter's erroneous theory about the proper considerations for the designations, and what information both States and EPA may consider, as explained above. With respect to the recommendations of the States, EPA specifically put out guidance recommending types of information that EPA thought could be relevant to the designations process, on a case by case basis. In this guidance, EPA explicitly noted various forms of information other than monitoring data that EPA recommended States consider. EPA has used these same types of information for other designations, including those for ozone and for the 1997 $PM_{2.5}$ NAAQS. EPA intended this guidance to assist States with the process and to assure that their recommendations were fully developed. By contrast, the commenter's suggestion that States are bound to make initial recommendations based solely on monitoring data, and that EPA is similarly constrained, would be in contravention of section 107(d) and illogical.

Comment:

The commenter (0085) objected to EPA's consideration of metropolitan area boundaries in any way, because "it resembles the statutory mandate for ozone and carbon monoxide designations." Specifically, the commenter argued that because CAA section 107(d)(4)(A) refers to the use of such boundaries for ozone and carbon monoxide designations, EPA is not authorized to consider such boundaries for PM2.5 designations. Similarly, the commenter argued that Congress only authorized EPA to consider "factors" other than monitoring data to promulgate designations for ozone or carbon monoxide, not $PM_{2.5}$, in section 107(d)(4)(A)(v). Because Congress did not include the same language in section 107(d)(6) or otherwise require EPA to use the MSA and factors for PM2.5, the commenter argues that EPA is not authorized to do so.

EPA Response:

EPA disagrees with the commenter's strained reading of the statute. Section 107(d) does not explicitly preclude States or EPA from using any form of information, nor any form of presumption, as part of the designations process. EPA contends that the forms of information and analysis that it has recommended are rational and related to the statutory purpose, which is to identify areas that are violating and nearby areas that are contributing to those violations.

The reasonableness of EPA's approach is supported by the fact that Congress itself considered metropolitan area boundaries an appropriate starting point for nonattainment areas for ozone and carbon monoxide in section 107(d)(4). In section 107(d)(4)(A)(v), Congress likewise provided relevant considerations for evaluating such boundaries, and specifically whether areas contribute to violations, as follows: "factors *such as* population density, traffic congestion, commercial development, industrial development, meteorological conditions, and pollution transport" (emphasis added). It is clear on the face of the statute that Congress considered a wide range of information relevant to evaluating appropriate nonattainment area boundaries, and even this list is not explicitly exclusive.

EPA considered the specific statutory provisions for ozone and carbon monoxide to provide a suitable approach, because $PM_{2.5}$ is very similar to ozone in particular. Like ozone, it typically results from the emissions of many types of sources, of many different sizes, that are dispersed most densely in urban areas. Moreover, like ozone, much ambient PM2.5 results from the chemical interactions of precursor chemicals (SO2, NOx, VOCs, and Ammonia) in the atmosphere, that requires controls for a host of sources that may not emit PM2.5 directly, but clearly contribute to its formation by adding to the aggregate mix of chemicals that form secondary $PM_{2.5}$.

The commenter's argument about section 107(d)(6) is plainly wrong on its face, as that provision refers only to the 1997 PM2.5 NAAQS. In addition, even if it did apply to the 2006 $PM_{2.5}$ NAAQS, EPA disagrees with commenters assertion that section 107(d)(6) superseded the general grant of authority in section 107(d)(1). Indeed, section 107(d)(6) explicitly refers to section 107(d)(1), and EPA contends that section 107(d)(1) does not preclude the use of an appropriate rebuttable presumption or forms of information to evaluate contribution to violations of the NAAQS.

Comment:

The commenter (0085) specifically argued that section 107(d) precludes EPA from designating as nonattainment any area that is monitoring attainment, or that does not have a monitor, "simply because they contain one or more power plants."

EPA Response:

Section 107(d) directs EPA to designate "contributing" areas. By definition, this means that EPA must designate areas that have a monitor that is currently

"monitoring attainment," or areas that have no monitor, if EPA determines based on available data that the area nonetheless contributes to a violation in a nearby area. Thus, the commenter's argument is simply inconsistent with the statute, and would frustrate the purpose behind the designations.

The commenter is also incorrect that EPA designated areas nonattainment "simply" because they contain a power plant. Were this the sole criterion, there would be far more designated nonattainment areas across the country, and the existing areas would be larger, because EPA obviously did not designate each and every area with a power plant nonattainment. EPA evaluated each violating area, and the potential nearby contributing areas, on the facts and circumstances relevant to that area. Based on relevant information, such as the amount of $PM_{2.5}$ and $PM_{2.5}$ precursor emissions, geographic location of the plant, and meteorological connection of the plant to the area with violations, EPA included an area with a power plant as the Agency concluded was necessary. Not surprisingly, many of these plants turn out to be the single largest contributor of $PM_{2.5}$ and $PM_{2.5}$ precursors in an area under evaluation, and those emissions are clearly related to the high ambient levels of $PM_{2.5}$ (especially sulfates and nitrates, but not exclusively) in nearby areas.

The commenters elsewhere assert that EPA should exclude areas based on the theory that states have the inchoate authority to regulate sources in attainment areas in order to achieve the NAAQS. EPA contends that if such a source contributes to the violation in a nearby area, especially to the extent that control of it would provide for attainment of the NAAQS, that this merely confirms the existence of the contribution that is supposed to be the basis for the designation in the first instance. In addition, to the extent that emissions from power plants outside of designated nonattainment areas participate in the formation of regional $PM_{2.5}$ levels, or significantly contribute to nonattainment through interstate transport of $PM_{2.5}$ and $PM_{2.5}$ precursors, EPA anticipates that other provisions of the statute will address such sources, such as section 110(a)(2)(D) or section 126, as appropriate.

Comment:

The commenter (0085) argued that EPA's assessment of contribution is a "black box" test that leads to "inconsistent and arbitrary" designations. In particular, the commenter argues that EPA's reading of section 107(d) is defective because the term "contribution" requires that there must be a "causal connection" between the contributing area and the violation.

EPA Response:

EPA disagrees with the commenter's characterization of the evaluation undertaken by States and EPA to ascertain which areas are violating the 2006 $PM_{2.5}$ NAAQS, and which nearby areas are contributing to such violations. EPA's approach is designed to allow for full consideration of various types of information that EPA believes are relevant to assessing the geographic scope of

violating and contributing areas. By investigating the full range of information, EPA is seeking to make the decision that will best result in adherence to the statute and to the goal of the statute, which is to assure that States will develop nonattainment area plans that provide for attainment of the NAAQS as expeditiously as practicable, taking into consideration all of the emissions that are contributing to the violation. That the commenter selectively disagrees with the outcome of the evaluation in some areas (and not with the outcome in locations where EPA did not include power plants), does not render EPA's process a "black box."

In particular, EPA disagrees with the commenter's assertion that EPA has disregarded the need for a "causal connection." First, the commenter intends this term to connote that the emissions from the nearby area must literally "cause" the violation. Section 107(d) is not phrased to require that only areas that "cause" a violation should be designated nonattainment; section 107(d) requires that areas that "contribute" to violations must be designated nonattainment. This is logical at the juncture of designations, because it is in the context of the nonattainment area SIPs that States will more carefully evaluate which sources to control, by how much, and by when, in accordance with statutory and regulatory requirements to provide for attainment of the NAAQS as expeditiously as practicable.

Second, EPA disagrees with the commenter because EPA has in fact evaluated the "causal connection" in an appropriate way to assess factually whether there is contribution for purposes of designations. In each nonattainment area, EPA has evaluated a range of information, including but not limited to, emissions inventories, speciated data, pollution roses, and other information to confirm that the emissions in a nearby area are contributing to violations in a nearby area. This information allows States and EPA to assess whether nearby areas are likely to be contributing. For example, a county with a very large stationary source that emits tens of thousands of tons of $PM_{2.5}$, SO_2, and NO_x, geographically close to, and upwind of the violating monitor on days with high concentrations of ambient $PM_{2.5}$ in an area with speciated data confirming the presence of sulfates, nitrates, or other particles attributable to such a source, is contributing to the violation. Thus, that source is one that should be evaluated for controls as part of the nonattainment plan developed for the area. This approach is a rational way to reach conclusions about contribution that are appropriate for the designations process.

The commenter demands a level of "proof" that section 107(d) does not require in the context of designations, but will be provided in the context of nonattainment area plans in which a source may seek to establish that it does not significantly contribute. For the type of sources represented by the commenter this may be an unlikely outcome, but nevertheless the nonattainment area SIP planning process and attainment demonstration will provide the avenue to establish such a lack of contribution, were it to exist.

Comment:
The commenter (0085) also asserts that EPA can conclude that there is contribution "only if and to the extent that $PM_{2.5}$ transported from the nearby area is reaching the monitors that are measuring nonattainment and playing a material part in causing the nonattainment." Thus, according to the commenter, section 107(d) imposes a "materiality" requirement on contribution.

EPA Response:

EPA agrees that section 107(d) requires a designation of nonattainment for areas that are contributing to violations in a nearby area; EPA disagrees that the statute imposes a specific materiality requirement. Section 107(d)(1)(A)(i) defines "nonattainment" as an are that "does not meet (or that contributes to ambient air quality in a nearby area that does not meet)" the NAAQS. Unlike section 110(a)(2)(D) or section 126, Congress has not specified that this contribution must be "significant." Likewise, in section 107(d), Congress has not specified a specific amount of contribution that constitutes contribution for purposes of designations, nor required that EPA quantify the amount of contribution as part of the process. Instead, EPA contends that section 107(d) authorizes the Agency to assess contribution on the facts and circumstances of each area, and that it is not appropriate to set a bright line test or other black and white test that the commenter would presumably prefer, so long as the bright line were set high enough. In short, EPA believes that the determination of what degree of contribution justifies inclusion of an area, and thus the "materiality" of that contribution is best assessed on a case by case basis.

Comment:
The commenter (0085) also argued that: "[a] nonattainment designation makes sense only if control measures in the 'contributing' area would help to remedy the $PM_{2.5}$ violation." In essence, the commenter argues that EPA should predetermine which sources should be controlled, as part of determining which nearby areas are contributing to violations.

EPA Response:

EPA disagrees with the commenter's belief that "contribution" only exists, based upon what control measures in the contributing area could accomplish. In addition to being flatly contradictory of the commenter's own arguments that EPA should only base designations on "monitoring data," this approach would override the process of evaluating the universe of sources of $PM_{2.5}$ and $PM_{2.5}$ precursors that is required in the development of a nonattainment area SIP, and would circumvent the very process of determining what should be required for RACM/RACT level controls, controls to the meet the reasonable further progress and contingency measure requirements, and other obligations specified in CAA section 172 for nonattainment area plans. These requirements must be ascertained, and supported with an attainment demonstration, that establishes the area will attain the NAAQS as expeditiously as practicable. By contrast, the

commenter advocates a predetermined decision that an area should be deemed contributing only if it would "make sense" to control sources within such area. Given that the commenter represents the interests of some of the largest individual sources of $PM_{2.5}$ and $PM_{2.5}$ precursor emissions in the U.S., it is likely that it will make sense to examine such sources for additional controls, and to require them as appropriate in the nonattainment area SIPs developed for their respective areas. It would be inappropriate for EPA to predetermine the need for additional controls in the context of the designations, once EPA has concluded that these sources do factually contribute to violations in nearby areas.

Comment:

The commenter (0085) criticized EPA for not utilizing modeling to establish if sources in a county contribute to a violation at a monitor in a nearby area. According to the commenter, EPA has failed to explain why it does not think modeling should be used for the designations. The commenter asserts that modeling would be a better way to ascertain contribution, and notes that EPA has used modeling "in virtually every other case involving the need to establish the presence of a contribution."

EPA Response:

EPA disagrees with the commenter's assertion that contribution can be evaluated, and thus designations can only be promulgated, based upon modeling. Section 107(d) does not explicitly require modeling to evaluate what areas contribute. EPA believes that modeling can be useful to inform such decisions, or to confirm conceptual points such as the fact that EGUs have the potential to contribute to violations, but modeling is not the sine qua non of decision making for designations. For example, some models do not use sufficiently small grids to evaluate the contribution of an area effectively (e.g., a model that looks at emissions only at the entire state level, or with grids of many square miles). Other models, or the incorrect assumptions used to construct them, do not properly answer the question about potential contribution (e.g., the model that starts with the assumption that $PM_{2.5}$ transports only 5 miles, and therefore attributes all ambient $PM_{2.5}$ to sources in such area). Models designed only to evaluate the impacts of a single source, or a small group of sources, by their nature ignore all the other sources contributing to a violation, unless that source or group of sources literally contribute 100 percent of the ambient $PM_{2.5}$ at a violating monitor.

The commenter alludes to EPA's use of modeling to support the Clean Air Interstate Rule (CAIR), in which EPA did conduct modeling to assess the interstate transport of pollution across the U.S. EPA notes first that this approach was more appropriate, because unlike section 107(d), section 110(a)(2)(D) suggests that EPA must more precisely quantify contribution because section 110(a)(2)(D)(i) directs EPA to identify the contribution in "amounts," thereby suggesting that quantification is appropriate. EPA also notes that the modeling done to support CAIR entailed the zero out modeling of both the NOx and SO2

emissions simultaneously, for emissions from an entire state. This is not the fine grain modeling that commenters imply.

Comment:

The commenter (0085) supported EPA's decision to solicit public comment on the designations for the 2006 $PM_{2.5}$ NAAQS. The commenter implied that EPA elected to do so in response to the commenter's challenge to the 1997 $PM_{2.5}$ NAAQS, including the challenge that it was illegal for EPA to develop the designation without notice and comment.

EPA Response:

Section 107(d) establishes a specific process for designations between States and EPA. Section 107(d)(2) explicitly provides that the designations are exempt from the notice and comment provisions of the Administrative Procedures Act. Likewise, designations under section 107(d) are not among the list of actions that are subject to the notice and comment procedures of section 307(d). Thus, neither the CAA nor the APA require notice and comment rulemaking for promulgation of the designations for this or any other NAAQS. Section 107(d)(2)(B) explicitly states that notice and comment is not required, but adds that nothing in the provision should be construed as precluding notice and comment where possible. That decision to take notice and comment, however, is clearly at the election of EPA.

Section 107(d) creates a process whereby states make an initial designation recommendation that is reviewed by EPA, EPA modifies that recommendation if necessary and provides the state with an opportunity to rebut that modification, and thereafter EPA is responsible for promulgation of the final designation. EPA believes that this statutory process is logical because it allows interested members of the public to consult with their own state, and to participate in any public process that the state may elect or be required to undertake by state law, as part of developing the state recommendation. Through this state process, sources or citizens affected by the designations could participate in the development of the initial recommendation of the state.

For the 2006 $PM_{2.5}$ NAAQS, EPA elected to solicit direct public comment on its responses to the designation recommendation of the states. EPA determined that this process would be useful to gather additional information and to assure that the Agency was more directly aware of issues raised by the designations. EPA notes, however, that it has not concluded that public comments should be accorded the same degree of weight as the initial state recommendations or the additional information provided by states in response to any EPA modification of the state's recommendation. EPA believes that given the specific process contemplated in section 107(d), it would be inappropriate to treat comments of members of the public on the same footing as the recommendations or arguments of a state, e.g., the desire of the owner/operator of a source to be excluded from a nonattainment area to evade compliance with mandatory statutory controls should

not outweigh a state's determination based upon appropriate factual support that emissions from such source are contributing to violations in the area.

Comment:

The commenter (0085) repeated its objections to the guidance issued by EPA in connection with the designations for the 1997 $PM_{2.5}$ NAAQS, and in particular with the rebuttable presumption of MSA boundaries for nonattainment area boundaries and the factors recommended by EPA for evaluating contributing areas. According to the commenter, EPA's continued use of guidance to recommend presumptions of any kind or factors of any kind to assess contribution is a violation of notice and comment rulemaking requirements.

EPA Response:

As noted, section 107(d) explicitly provides that designations themselves are exempt from notice and comment rulemaking requirements. The commenter seeks to circumvent that exemption for the designations by arguing that EPA had to use notice and comment process in order to provide any guidance to states about how to proceed with the designations process.

The guidance merely explains and clarifies existing duties under section 107(d). It explains the timeline that States and EPA must follow under the statute, and provides recommended types of information for States to consider, and for EPA to consider, in the process of developing designations on a case by case basis.

The guidance document was nonbinding on its face and EPA applied it in a nonbinding manner. The commenter seeks to quibble about verb usage and other minutia, but it is clear from the overall tone and explicit terms of the document that EPA did not intend it to be "binding." Indeed, as evidenced by the designations EPA has promulgated it is clear that the statements about the types of information that could be relevant were merely recommendations, and many States treated them as such by making recommendations that utilized information as they saw fit, including the submission of modeling, submission of alternative forms of pollution roses, submission of source apportionment studies or other forms of information that EPA did not recommend. EPA considered such information, and where appropriate, incorporated it into the Agency's analysis of a given area.

Finally, EPA has formally provided the commenter an opportunity to comment on the guidance through the designations rulemaking process. Although EPA disagrees with many of the commenters assertions with respect to the proper interpretation of the statute, or application of the statute to the facts, the commenter has had the opportunity to critique the designations, including the specifics of EPA's guidance in the June 8, 2007, Meyers Memo.

Comment:

The commenter (0085) asserted that EPA "softened" the language it used in the 2007 Meyers Guidance to emphasize that the Agency was merely "recommending" that states and tribes use information relating to the nine factors laid out in the document and any other relevant data and stating that EPA "plans" to consider the same information. According to the commenter, this language does not cure the alleged defect of not undergoing public comment to develop the guidance document.

EPA Response:

The 2007 Meyers Guidance, like the previous EPA guidance for the 1997 $PM_{2.5}$ NAAQS designations, has always been intended and utilized by the Agency as guidance. To alleviate any potential misunderstanding on this obvious point, EPA reiterated in the 2007 Meyers Guidance that EPA merely recommended that states consider relevant information in the designations, and suggested the "nine factors" as a way of insuring a thorough analysis of relevant information. The recommended process was not mandatory, as states were free to submit alternative information to support their designation recommendations, or indeed to submit no information at all. The types of information recommended in the list of factors is not an exclusive list, as EPA requested that states provide any other information or analyses that they considered appropriate. The commenter thus criticizes EPA for taking action to be clear that the 2007 Meyers Guidance was merely guidance.

Comment:

The commenter (0085) also objected to the 2007 Meyers Guidance on the grounds that the document stated that EPA was not establishing any presumption based upon the OMB defined MSA boundaries, yet still stated that EPA "anticipates that the same boundaries established for the annual $PM_{2.5}$ standard may also be appropriate for implementing the 24-hour $PM_{2.5}$ NAAQS in areas where both standards are violated." According to the commenter, "one can only conclude" that EPA is "trying to achieve pre-determined designations and rationalize them after the fact."

EPA Response:

EPA believes that one can conclude other, less absurd, reasons for EPA to make the statement about which the commenter complains. EPA stated that it merely anticipated that the same boundaries may be appropriate for an area, if it was violating both the 1997 $PM_{2.5}$ NAAQS and the 2006 24-hour $PM_{2.5}$ NAAQS. EPA did not state that this conclusion was mandatory, nor that it was the only possible outcome after appropriate consideration of the relevant information.

EPA's statement in the 2007 Meyers Guidance was intended to convey that because of the different form of an annual NAAQS and a 24-hour NAAQS that it is possible that different boundaries would be appropriate, but that based upon EPA's preliminary evaluation of the urban excess and speciated data in areas that violated both the annual and the 24-hour NAAQS, EPA had not perceived factual differences to support the general theory that different sources were contributing to the violations of each NAAQS. Thus, in the interest of providing meaningful

guidance to encourage the states to evaluate potential areas for contribution, EPA merely alerted states to this preliminary view.

Comment:

The commenter (0085) asserted that EPA has no authority to designate "islands" of nonattainment that are not contiguous to the rest of the nonattainment area, if those areas do not have a monitor measuring nonattainment or do not have a monitor, "solely because they contain power plants." According to the commenter, such "islands" are contrary to the legislative history of the CAA and past practice by EPA in connection with ozone designations.

EPA Response:

EPA disagrees with the commenter's reading of the explicit provisions of section 107(d). Section 107(d)(1)(B)(ii) specifically authorizes EPA to designate "portions" of areas, where appropriate, without specifying that such areas be contiguous. EPA can modify state recommendations, or portions thereof. Under section 107(d)(3), EPA can redesignate portions of areas. EPA also notes that Congress directed the Agency to designate "nearby" areas, not "adjacent" areas or "contiguous" areas or some other phrase that the commenters would prefer. As a result, EPA has concluded that it has authority to designate noncontiguous portions of counties where the facts support such treatment.

EPA notes that the commenter represents EGU sources and that such sources are often the single largest source of $PM_{2.5}$ or $PM_{2.5}$ precursor emissions in many areas. Often, the remainder of a county where that source is located has little or no emissions from other sources, little population, little population density, little commuting, so that there is often factual support for the conclusion that only a portion of that county is contributing to the violations of the NAAQS in another nearby area. In such circumstances, EPA concluded that it was not necessary to include entire counties where the actual contribution was clearly limited to an individual source or sources. Moreover, in many instances, EPA designated portions of counties rather than entire counties, following the recommendation of the State in which the area is located.

The commenter's assertions that EPA cannot designate partial areas, or non-contiguous partial areas, for the 2006 $PM_{2.5}$ NAAQS because EPA allegedly elected not to do so in ozone designations in the past is specious. Under section 107(d), EPA promulgates designations for a new or revised NAAQS based upon the facts and circumstances relevant to that NAAQS, and to the areas under consideration. As explained above, EPA has a reasonable basis for electing to designate only portions of some counties, and noncontiguous portions of counties in some instances. Often, this was in part due to the huge amount of direct $PM_{2.5}$ and SO_2 emissions from a source that would have been completely irrelevant to an ozone designation for the same area. If the commenter believes that States and EPA should revisit this interpretation of the statute and revert to designations of

entire counties instead, and that EPA should also do so for other NAAQS including ozone, the commenter is entitled to pursue that outcome separately.

Comment:

The commenter (0085) argued that "if a source in an adjacent county contributes to air quality problems in a nearby nonattainment area, then controls/reductions can be required of that source without designating all or part of that county as nonattainment." The commenter asserted that other mechanisms such as "orders, permit modifications, or special rules" in a SIP could achieve the desired results.

EPA Response:

This comment reflects the commenter's misconception of the requirements of section 107(d). If, as the commenter apparently conceded, a source in an adjacent county contributes to violations in another nearby area, then designation of that area as part of the nonattainment area is not optional. The commenter is correct that even if a given source is not contributing such that it must be within the designated nonattainment area, then the State and/or EPA may nevertheless impose various other emissions limitations on the source, unrelated to nonattainment area planning requirements of section 172. For example, even sources not located within designated nonattainment areas may be subjected to additional controls under section 110(a)(2)(D) or section 126 if the source interferes with maintenance of the NAAQS in another State. That a source may simultaneously be subject to other limits under Title IV, NSPS, or other applicable statutory or regulatory requirements, does not negate that the source may also be suitable for inclusion within a nonattainment area, and subject to nonattainment area SIP requirements, as appropriate.

Comment:

The commenter (0085) also asserted that EPA has stated in other Federal Register notices that means other than a nonattainment designation can be an appropriate method to achieve attainment in connection with the promulgation of the 2006 NAAQS and the revised monitoring regulations.

EPA Response:

EPA agrees, as a general proposition, that there are means short of a nonattainment designation to encourage attainment of a NAAQS. EPA contends that this is why the redesignation provisions of section 107(d)(3) are discretionary, rather than mandatory, and authorize EPA to consider a broad range of information as part of the exercise of that discretion. Section 107(d)(3) states that EPA "*may at any time"* redesignate a previously designated area for a NAAQS, and may do so on the basis of "air quality data, planning and control considerations, or any other air planning related considerations the Administrator deems appropriate." Thus, in lieu of redesignating an area to nonattainment, EPA can exercise its authority to encourage states to develop approaches to rectify the nonattainment, at least before determining that redesignation to nonattainment is the only effective means to do so.

By contrast, section 107(d) is a mandatory provision that requires EPA to promulgate a designation for all areas nationwide by a date certain after "promulgation or revision of" a NAAQS. Unlike section 107(d)(3), section 107(d)(1)(B)(i) provides that EPA "shall" promulgate these designations. As discussed above, under this provision EPA is obligated to designate as nonattainment, both those areas that violate the NAAQS and those nearby areas that contribute to those violations. Thus, the commenter is in error to assert that EPA may excuse any violating or contributing area in initial designations, on the theory that there may be other means to achieve the NAAQS.

Comment:

The commenter (0085) argues that "lack of a nonattainment designation does not threaten the health of the residents in these adjacent counties." According to the commenter, sources located in areas not designated nonattainment are already subject to requirements including state limits for SO_2, NO_x, and PM and subject to New Source Review under the CAA. Because the NAAQS are set by EPA with "an adequate margin of safety," there is no need for sources in areas monitoring attainment to do more.

EPA Response:

The commenter's argument reflects a fundamental misconception about the purposes of designations. The purpose of such a designation is very much to assure that members of the public in the area receive the full protection of the NAAQS, and are not forced to endure the adverse health impacts caused by pollution emitted by sources of any types, including those of the commenter. The mere fact that the source is located in an area that does not itself violate the NAAQS, or that does not have a monitor, does not address whether emissions from that source are injuring the health of the public in other nearby areas.

That such sources are *also* subject to controls under other provisions of the CAA (e.g., Title IV to reduce acid deposition; rules based on section 110(a)(2)(D) or section 126 to eliminate interstate transport; NSPS, MACT, or any other federal or state requirements) does not obviate their obligation to comply with nonattainment area plan requirements if they are within designated nonattainment areas. Implicit within the concept of including "contributing" areas is the notion that these areas, and the sources located within them, are part of the problem in areas that violate the NAAQS and must be part of the solution. Thus, it is appropriate that they be evaluated during the nonattainment area SIP process to ascertain what additional controls, if any, are needed and by when, in order to provide for attainment of the NAAQS as expeditiously as practicable

Comment:

Several commenters (0050, 0057, 0059, 0064, 0068, 0095, 0138, 0148, 0158) questioned why EPA is designating only areas that are violating the 2006 24-hour $PM_{2.5}$ NAAQS and not designating areas that are violating the 2005 annual $PM_{2.5}$ NAAQS. The

commenters identify seven additional areas that are violating the annual standard based upon 2005-2007 data.

The commenters argued that in 2006, EPA revised the annual $PM_{2.5}$ NAAQS because EPA eliminated the spatial averaging element that had previously been part of the 1997 annual $PM_{2.5}$ NAAQS. Due to this revision, the commenters argue that EPA has a mandatory duty under section 107 to promulgate designations for areas violating this revised standard.

EPA Response:

Section 107(d)(1)(A) requires States to make an initial designation recommendation to EPA "not later than 1 year after promulgation of a new or revised NAAQS." Similarly, section 107(d)(1)(B) requires EPA to promulgate a designation based on the State recommendations "upon promulgation or revision of a national ambient air quality standard."

The current annual $PM_{2.5}$ NAAQS was established by EPA in 1997. As established in 40 CFR section 50.13, the level of that NAAQS is 15 ug/m^3 annual arithmetic mean. In accordance with this annual standard, EPA promulgated the designations required by section 107(d) nationwide in December 2004. In a few instances, areas also violated the then-applicable 24-hour $PM_{2.5}$ NAAQS as well, and EPA designated those areas nonattainment for both NAAQS.

In 2006, EPA reviewed the 1997 $PM_{2.5}$ NAAQS, both annual and 24-hour, in accordance with section 109(d). In the course of this review, EPA concluded that it was necessary to revise the previous 1997 24-hour $PM_{2.5}$ NAAQS to lower the concentration from 65 to 35 ug/m^3. EPA did not, however, change the annual $PM_{2.5}$ NAAQS in any material way. The limit of the annual $PM_{2.5}$ NAAQS remained at 15 ug/m^3. As the commenters correctly state, EPA's only revision to the annual PM2.5 NAAQS was to eliminate a provision that would allow areas to use "spatial averaging" to establish the correct design value for an area, by combining the monitoring data from multiple monitors that met the applicable regulatory criteria.

EPA concludes that elimination of this spatial averaging provision did not constitute a "revision" of the NAAQS that requires EPA to promulgate new designations under section 107(d), because the elimination of spatial averaging was prospective only, and thus would only affect areas that would later have sought to use this method to alter the design value for nonattainment area plan development and attainment determinations, not for designations. The elimination of the spatial averaging provision would thus affect the designations of areas, only if EPA in the future were to revised the numerical limit of the NAAQS, or make other substantive changes to the form of the NAAQS (e.g., the percentile or averaging time of the NAAQS), which EPA did not do in this case.

Comment:

The commenters (0050, 0057, 0059, 0064, 0068, 0095, 0138, 0148, 0158) argued that EPA's approach to designations for the annual $PM_{2.5}$ NAAQS will result in illogical outcomes that deprive the public in some areas from the protections of the CAA. As an example, the commenters argue that EPA designated areas in 2004 that had an annual design value of 15.2 ug/m^3 as nonattainment, but in the current designation action EPA is not designating Houston Texas which currently has a design value of 15.8 ug/m3. Commenters assert that there is no reasonable justification for this disparate outcome.

EPA Response:

EPA contends that it met its mandatory obligation to promulgate the initial designations under section 107(d) for the 1997 annual PM2.5 NAAQS for all areas in December 2004. If, subsequent to that time, areas become newly violating, EPA's authority to change the designation of any area for the 1997 annual PM2.5 NAAQS, arises under section 107(d)(3). The latter provision indicates that such redesignations are discretionary, and subject to the specific requirements of that provision instead of section 107(d)(1).

While EPA believes that redesignation is not always the best or the only way to address areas that violate a NAAQS subsequent to the initial round of mandatory designations, EPA agrees that this can be an appropriate course of action where necessary. If the commenters wish EPA to revisit the designations for the annual $PM_{2.5}$ NAAQS in any specific area, the commenter may petition the Agency for a redesignation of that area, including the facts and information that would be appropriate to evaluate the area consistent with section 107(d)(3).

Comment:

The commenters (0050, 0057, 0059, 0064, 0068, 0095, 0138, 0148, 0158) asserted that "at a minimum," for any county with a monitoring design value that does not meet the standard, EPA must designate the entire county nonattainment.

EPA Response:

Although EPA agrees that county boundaries are often the most appropriate boundaries for nonattainment areas, EPA disagrees that such an approach should be adhered to in all instances. For example, counties in the western U.S. are often far larger than counties in the eastern U.S., so a decision to use county boundaries in all instances without recourse to the facts could result in areas too small in the east, and too large in the west, purely as a result of the accidents of history with respect to the size of counties established in the 18^{th} century versus the 19^{th} century, and the differing levels of population and land use that resulted in such county boundaries at that time and since.

Equally important, is the requirement of section 107(d) that EPA designate areas that violate and nearby areas that contribute to those violations. The size and location of these areas can be affected by technical facts that have little or nothing to do with county boundaries. For example, there can be topographical features that indisputably establish that only a portion of a county is within the same

airshed as the violating monitors and the sources of emissions that contribute to those emissions. In such a case, inclusion of the entire county would not be logical. In other cases, there can be reliable evidence that the violation of the NAAQS results almost exclusively from the emissions from a certain source category (e.g., residential woodburning) in an area that is surrounded by areas with no sources of emission of $PM_{2.5}$ or $PM_{2.5}$ precursors. EPA notes that county boundaries, municipal boundaries, zoning boundaries and similar legal constructs are not barriers to transport of contribution to violations, so the mere existence of such lines likewise does not answer the question of what areas are violating or contributing

EPA agrees that designating counties with violating monitors in their entirety is the correct approach in many locations, especially given the connection between such boundaries and the legal jurisdiction of local air planning organizations and the need for coordinated and comprehensive programs to attain the NAAQS, but designations require a more fact based inquiry in each area.

Comment:

The commenters (0050, 0057, 0059, 0064, 0068, 0095, 0138, 0148, 0158) strongly supported the inclusion of all of the counties within any "metropolitan statistical area" and the "combined statistical area" in the designated nonattainment area. Citing U.S. Census Bureau and OMB's definitions for these terms, commenters argued that each nonattainment area should encompass the entire metropolitan area because of their contribution to violations in each area. For this reason, the commenters provided a list of areas that included all of the MSA and CSA counties in 32 states.

EPA Response:

Again, EPA generally agrees that the MSA or CSA areas established by OMB are a rational starting place for evaluating what areas violate and contribute to violations of the $PM_{2.5}$ NAAQS, but they are not outcome determinative. In section 107(d)(4), Congress in essence established such a presumption for ozone and carbon monoxide nonattainment areas, but likewise provided a specific process by which States and EPA could evaluate whether some smaller area was appropriate based on the facts and circumstances of a specific area.

In the context of the 1997 $PM_{2.5}$ NAAQS, EPA issued guidance that recommended the MSA boundaries as a presumption, but only a rebuttable presumption, as a starting place to assure full and thorough analysis of areas that could be contributing to violations. EPA analogized to the presumptions Congress created for ozone and carbon monoxide, based upon evidence that $PM_{2.5}$ is comparable to ozone in its pervasiveness, combination of sources, secondarily formed particles, and other similarities. For the 2006 $PM_{2.5}$ NAAQS, EPA concluded that it was not necessarily appropriate to start the analysis with the CSA boundaries for areas that only violate the 24-hour $PM_{2.5}$ NAAQS, because of the possibility that such violations were the result of contribution from different,

or smaller, areas based upon the 24 hour averaging period of the NAAQS, rather than the averaging period of the annual NAAQS.

Comment:

One commenter (0104) opposed EPA's current designations for the 2006 $PM_{2.5}$ NAAQS on the grounds that there is pending litigation over the previous designations for the 1997 PM2.5 NAAQS, and that EPA's reliance on guidance factors and application of those guidance factors are currently being challenged. The commenter objected to EPA's current designations on the same general grounds.

EPA Response:

The commenter is the owner operator of numerous large sources of direct $PM_{2.5}$ and $PM_{2.5}$ precursor emissions located throughout the Southeastern U.S., that are probable candidates for additional emissions controls. EPA acknowledges that the designations for the 1997 $PM_{2.5}$ NAAQS are currently in litigation, and that certain litigants have challenged EPA's designations process. However, EPA believes that its approach to the 1997 $PM_{2.5}$ NAAQS was correct, as is evidenced by the Agency's defense of those designations and reliance on comparable principles for the designations for the 2006 $PM_{2.5}$ NAAQS. To the extent that the commenter's objections related to wanting a fuller explanation for the inclusion of its sources in Tennessee and Alabama within certain nonattainment areas, those explanations are in the TSDs for those areas and in those sections of the RTCs that relate to each area.

Comment:

The commenter (0104) argued that EPA improperly concluded that certain contributing areas are "nearby" for purposes of section 107(d). Specifically, the commenter noted that Humphreys County is 39 miles from the Clarksville area, and that Muhlenberg County is 54 miles from the Clarksville area.

EPA Response:

Section 107(d) does not define the term "nearby." Accordingly, EPA contends that what constitutes "nearby" in a given nonattainment area must be evaluated on the facts and circumstances of each area. Evidence that is relevant to this inquiry includes, but is not limited to, the geographic location of the sources in relation to the violating monitors, the amount of the emissions from the sources, the speciated data at the violating monitors (which can shed light on what types of sources are contributing to the ambient mix at the violating monitor), and meteorological information (which can shed light on the degree to which the emissions are emanating from the direction of a source towards the violating monitor on days with high ambient levels). EPA has used various forms of data and analytical tools to evaluate what nearby areas are contributing.

EPA does not believe that distance from the monitor alone provides a means to evaluate the presence or absence of contribution of sources to the violations. If distance alone were the deciding factor, EPA notes that there is strong evidence

that $PM_{2.5}$ and $PM_{2.5}$ precursors can transport hundreds of miles from their source to contribute to violations in downwind areas (see, e.g., EPA's factual basis for the Clean Air Interstate Rule). In the context of designations under section 107(d), however, EPA must ascertain which areas should be included within the boundaries of the nonattainment area to assure that the state can develop a nonattainment area SIP that provides for attainment of the NAAQS as expeditiously as practicable. Especially in the case of large stationary sources that emit substantial amounts of $PM_{2.5}$, SO_2, and NO_x, in areas that are geographically near, and meteorologically connected to, violating areas, EPA believes that its interpretation of the term "nearby" to include such sources is consistent with both the letter and the intent of the statute.

Comment:

One commenter (0132) asserts that because there are no monitors violating the 2006 24-hour $PM_{2.5}$ NAAQS located in Coshocton, Gallia, and Adams Counties Ohio, that these areas cannot be contributing to violations in the Huntington-Ashland and Columbus areas. The commenter disputes EPA's factual analysis establishing contribution, and asserts that mere high emissions from EGU sources in these areas cannot support their inclusion in their respective nonattainment areas.

EPA Response:

EPA notes that the absence of a violating monitor, and indeed the absence of any monitor, does not answer the question of whether a given area or partial area is contributing to violations in another nearby area. This conclusion is clear, based upon a plain reading of the statue.

EPA disagrees with the commenter's assertion that it has provided insufficient factual support to justify inclusion of the sources in Coshocton, Adams, and Gallia Counties. EPA's reasons are explained in more detail in the TSDs for those areas and the State RTC in the docket for this action.

Comment:

The commenter (0132) argues that EPA is wrongly designating "distant noncontiguous areas" nonattainment, when it should be relying on regional control measures like the Acid Rain program and the NO_x SIP call to address such problems. Accordingly, the commenter argues that EPA should not designate "islands" of nonattainment, and should return to requiring contiguity in nonattainment area boundaries.

EPA Response:

EPA believes that the commenter misconstrues the relationship between designations and actions under section 110(a)(2)(D) or section 126 to alleviate interstate transport. Under section 107(d), EPA must designate those areas that violate or nearby areas that contribute to those violations. Given the great distances across which emissions of direct $PM_{2.5}$ and $PM_{2.5}$ precursors can transport, this will in certain circumstances require inclusion of some EGU sources.

That such sources, whether located in designated nonattainment areas or designated attainment areas, may also be subject to control to alleviate interstate transport is not germane to the designations process. If a given source is contributing both to local nonattainment, and to interstate transport, then that source will need to be controlled sufficiently to meet local nonattainment area needs, even if that were to exceed the level of control that might be appropriate for some regional reduction program. The provisions of CAA section 172 and applicable regulations for nonattainment areas will apply to such sources, and they are not exempted from compliance with other applicable programs (e.g., CAA section 403(f) explicitly provides that participation in the Title IV acid rain program does not negate local nonattainment area requirements).

EPA notes that its decision to promulgate "noncontiguous" "islands" of nonattainment as part of certain nonattainment areas, was often at the behest of the State in question in lieu of a designation of an entire county. EPA determined both that it has statutory authority to designate "portions" of county nonattainment, and to do so where the relevant facts support such a partial designation (e.g., virtually no emissions from other portions of the county in question).

Comment:

The commenter (0132) expresses disappointment that EPA did not "provide source specific modeling to demonstrate that power plants in noncontiguous areas are 'contributing to' nonattainment areas. The commenter asserts that EPA has been "chastised" in the past for not requiring modeling to identify each source contributing to violations of the NAAQS in a nearby area, but does not provide a citation to support the point.

EPA Response:

As discussed above, section 107(d) does not require modeling to establish nonattainment areas boundaries. Although modeling can be useful to evaluate certain issues (such as the potential for EGU sources in general to contribute to violations in a nearby area), use of modeling also has limitations relating to the scale of the grid of the models, the assumptions used in the models, and other technical complications. By contrast, EPA contends that its consideration of relevant forms of information recommended in its guidance provide for a robust consideration of appropriate facts for purposes of designations. Thereafter, in the context of the development of the nonattainment area plan for such areas, the State and EPA will evaluate contribution more quantitatively and more precisely in order to ascertain which sources should be controlled to what degree, and when, in order to provide for expeditious attainment of the NAAQS.

EPA believes it highly unlikely that such specific modeling, if properly conducted, would indicate that the sources noted by the commenter in Coshocton, Gallia, and Adams Counties are not contributing substantially to the ambient

$PM_{2.5}$ levels at the violating monitors in Huntington-Ashland and Columbus. But if that proves to be the case, then these sources may not need to be further controlled to provide for expeditious attainment.

EPA also notes that the commenter implied that designations necessitate a degree of proof and certainty of contribution that is not required by section 107(d). EPA believes that to institute such a high level of proof of causation is antithetical to the designations process, and will be provided in the SIP development process as appropriate.

Comment:

The commenter (0132) argues that a number of the power plants located in Coshocton, Gallia, and Adams Counties have "installed significant pollution control devices pursuant to federally mandated regulations, significantly reducing power plant emissions of nitrogen oxides ('NO_x') and sulfur dioxide ('SO_2')."

EPA Response:

EPA appreciates actions by these sources to reduce emissions. However, having concluded that these sources contribute to violations in nearby areas, EPA must include them within the boundaries for their respective nonattainment areas. During the process of the nonattainment area SIP development, the State and EPA will examine these sources more closely to determine the necessary level of control to assure that these areas attain the 24-hour $PM_{2.5}$ NAAQS as expeditiously as practicable. It may, in the end, be determined through the appropriate process that each unit at each of these sources is appropriately controlled for direct $PM_{2.5}$, NO_x, and SO_x, emissions, so that no additional controls are required by section 172 or other applicable statutory or regulatory requirements.

Comment:

One commenter (0125) requests that EPA review all air quality changes and suggests that politicians should not take actions without scientific data. The commenter states that Alaska has local politician that are trying to do away with auto emission testing for inappropriate reasons. The commenter asserts that these political opponents of clean air, do not seem to realize that to do away with a primary measure in the SIP will have drastic effect on air quality, and may not be legal according to the Act.

EPA Response:

Today's action does not directly affect the auto emissions testing regulations, but could lead to other emissions reductions from this source category in the future. Today's action is directed under CAA section 107(d). Under this section EPA is obligated to identify every area as attainment, nonattainment, or unclassifiable. Further, in establishing nonattainment area boundaries, the Agency is required to identify the area that does not meet the 2006 $PM_{2.5}$ 24-hour standard and any nearby area that is contributing to the area that does not meet that standard. EPA is relying on all available technical information in making these designations.

Once those boundaries are established, States must develop implementation plans (SIPs) to ensure that these "nonattainment areas" achieve clean air standards. (Tribes and local air-quality agencies may collaborate in this effort.) SIPs required under the Clean Air Act must evaluate potential actions for improving fine particle levels, such as reducing emissions from autos.

Anchorage, AK is currently not under consideration to be designated as nonattainment for the 2006 24-hour $PM_{2.5}$ NAAQS. Although there are areas in Alaska that are being designated nonattainment (see 3.0 comments specific to area below). The commenter is correct in asserting that for all criteria pollutants, SIP approved control strategies are legally in effect for the duration of the SIP and will have to go through a SIP modification to effect any changes.

Comment:

One commenter (0165) believes that the SIP process should be transformed into a comprehensive multi-pollutant air quality planning process. The commenter believes that the SIP process has become a complicated, costly and largely ineffective way to further improve air quality. The commenter believes that the CAA must be revised to align responsibility for achieving NAAQS with authority to the States. The commenter believes the current SIP planning looks narrowly at one pollutant or a limited period of time.

EPA Response:

Today's action is directed under CAA section 107(d). Under this section, EPA is obligated to identify every area as attainment, nonattainment, or unclassifiable. Further, in establishing nonattainment area boundaries, the Agency is required to identify the area that does not meet the 2006 $PM_{2.5}$ 24-hour standard and any nearby area that is contributing to the area that does not meet that standard.

EPA is legally bound to carry out this directive, and therefore cannot base designation decisions for the PM2.5 NAAQS on other pollutants. All violating and nearby contributing areas must be designated nonattainment consistent with the statute. States and EPA will then address the sources of pollution in preparing implementation plans and other measures to address regional transport. Although the CAA prescribes certain planning and pollution control obligations for nonattainment and attainment areas based on the designations established in today's action, Section 107(d) does not require EPA, in essence, to "transform" the SIP process as a necessary step in promulgating the designation for the area. EPA does not have the authority to revise the SIP system which Congress has mandated through the Act, and EPA and the States must comply with the requirements of the Act unless they are changed by Congress.

Comment:

One commenter (0004) expressed a concern that when setting environmental regulations, the commenter believes that it should be a coordinated effort between the EPA,

Department Of Energy (DOE) and Department Of Defense (DOD) to consider the environment, economy and national defense.

EPA Response:

Today's action is directed under CAA section 107(d). Under this section EPA is obligated to identify every area as attainment, nonattainment, or unclassifiable. Further, in establishing nonattainment area boundaries, the Agency is required to identify the area that does not meet the 2006 $PM_{2.5}$ 24-hour standard and any nearby area that is contributing to the area that does not meet that standard.

EPA does coordinate air quality planning with other federal agencies as appropriate and permitted by the Act; however section 107 does not provide a formal role for other agencies and EPA must act consistent with the Act. EPA agrees that the environment must be considered when setting environmental regulations and EPA will consider economic and defense issues where it can. However, designations are required by section 107 without regard to economic or defense issues.

Comment:

One commenter (0136) does not object to the areas proposed for designation as nonattainment, but does object to issues in the $PM_{2.5}$ designation process.
The commenter requests that EPA designate all Interstate corridors with truck traffic greater than the truck count of 34,880/trucks/day and a 24-hour design value equal and greater than 30.5 $\mu g/m^3$ as nonattainment. First, the commenter objects to EPA's failure to designate areas where primary particles emitted from on-road vehicles on major highways are causing NAAQS violations that are not reflected in the available monitoring data for the area because the monitor is sited outside the high pollution zone near major highways.

Second, the commenter objects to EPA's determination of design values for an area without measuring or estimating the elevated concentrations of $PM_{2.5}$ near highways caused by primary particles emitted from on-road vehicles where monitored NAAQS violations from the available monitoring data for the area do not reflect the impact of highway emissions because the monitor is sited outside the high pollution zone near major highways.

Third, the commenter opines that EPA's finalization of a transportation conformity regulation that requires hot-spot analyses for certain highway projects that have significant levels of diesel truck traffic demonstrates that the incremental impact of existing highways with significant diesel traffic needs to be considered in the $PM_{2.5}$ designations and the SIP development processes.

The commenter notes that EPA has identified highways as air quality concern and believes that EPA must designate areas with major highways as nonattainment. The commenter believes that design values should be based on elevated $PM_{2.5}$ concentrations

found near highways. The commenter provides additional technical data and maps addressing the estimated contribution of on-road emissions to $PM_{2.5}$ concentrations.

EPA Response:

EPA recognizes the significant health concerns associated with exposure to fine particles in near-roadway areas. To address this issue, EPA has finalized several emission standards and fuel regulations to reduce PM-related emissions from mobile sources. EPA continues to implement the National Clean Diesel Campaign to encourage retrofits and other actions to reduce pollution in the near-roadway environment. EPA is also participating in several research studies to further our understanding of fine particle levels, composition, and health effects in the near-roadway environment.

The first point raised by the commenter is that the areas designated as nonattainment do not include certain other areas that should have been designated nonattainment if monitors had been placed in the high pollution zone near major roadways. The EPA does not believe that the designations process is the appropriate forum in which to address this potential localized hotspot issue. The designations process relies on air quality data from monitoring sites that already have been in existence and operational for at least three full years. The commenter's issue is more directly associated with the design of the $PM_{2.5}$ monitoring network established by each State. EPA's network design criteria (40 CFR Part 58, Appendix D) emphasize that $PM_{2.5}$ monitors are to be sited to represent community-wide air quality. This general approach follows from the studies on which the $PM_{2.5}$ NAAQS were established and later revised. These studies evaluated the correlation of health effects to varying levels of community-wide fine particle concentrations. However, Appendix D also requires the State to establish at least one monitoring station in a population-oriented area of expected maximum concentration. Each State is required to develop a $PM_{2.5}$ network design plan and make it available for public review prior to submitting it to EPA for approval. EPA believes that the commenter should work with the States in the network design process to explore the appropriateness of establishing new monitoring locations in the near-roadway zone. EPA does note that in analyzing potential areas for inclusion within nonattainment areas EPA did analyze traffic, commuting, and Vehicle Miles Traveled (VMT), and included counties and partial counties with major highways that were considered to be contributing to monitored violations.

The second point raised by the commenter is that the design value for an area that is designated nonattainment would be understated if the violating monitor is located outside the high pollution zone near a major roadway. Again, EPA finds that this issue more directly relates to the design of the State monitoring network than to this current designation process. In general, however, the attainment plan for an area will need to demonstrate that, based on projected emission reductions due to the implementation of control measures, all Federal Reference Method (FRM) and Federal Equivalent Method (FEM) monitors within the area will attain

the standard. Should the State add a new monitoring site in an area after it has been designated nonattainment, its attainment plan would need to show that this new site also would attain the standard. EPA recommends that the commenter work with the State monitoring programs to consider the establishment of new monitoring locations in the near-roadway zone.

The third point raised by the commenter is that because EPA finalized a transportation conformity regulation that requires $PM_{2.5}$ hot-spot analyses for certain transportation projects, this demonstrates that the impact of highways should be factored into the $PM_{2.5}$ designation process. The transportation conformity rule (40 CFR part 93) however applies only in areas already designated as nonattainment or maintenance for certain criteria pollutants including $PM_{2.5}$. Therefore, it would be inappropriate to apply specific requirements from the transportation conformity regulation to the process of initially designating nonattainment areas. The transportation conformity regulation was finalized with the specific intent of fulfilling the Act's section 176(c) requirements that transportation plans, programs, and projects not cause new air quality violations, make existing violations worse, or delay timely attainment or interim emissions reductions in nonattainment and maintenance areas. The specific $PM_{2.5}$ hot-spot requirements that the commenter refers to (40 CFR 93.123(b)(1)(i)) apply only in those areas to new highway projects with significant numbers of diesel vehicles or new projects on existing highways that have a significant increase in diesel vehicles, and as such, these requirements and the associated preamble that the commenter also refers to were not intended to be applied to existing highways nor to areas before they are designated nonattainment. As discussed above in the response to the commenter's first point however, EPA did consider the impacts of transportation activity on $PM_{2.5}$ air quality in making these designations.

Comment:

Twelve commenters (0050, 0057, 0059, 0064, 0068, 0095, 0138, 0148, 0158) claim that where adequate data are not available for 2005-2007, EPA must base nonattainment designations on the most recent 3-year period for which valid data are available.

- Commenters believe that, where an area has incomplete data for 2005-2007, EPA should designate the area based on 2004-2006 data, rather than designating the area "unclassifiable."
- Commenters also believe that EPA should base designations on 2003-2005 data, where those are the most recent complete data.
- The commenters recommend specific counties that should be designated nonattainment for $PM_{2.5}$.

EPA Response:

EPA agrees that designations should be based on the most recent 3-year period for which data are available. For the purposes of designations for the 24-hour $PM_{2.5}$ NAAQS, EPA identified violations of the NAAQS based on 2005-2007 data.

Where 2005-2007 data were incomplete, EPA evaluated 2004-2006 data, as well as 2003-2005 data.

Due to the averaging period and form of the 24-hour $PM_{2.5}$ NAAQS, the status of areas may change more quickly, depending on meteorology and other factors in a given year. Unlike an annual standard, that is statistically more stable, violations of a 24-hour NAAQS are more related to ambient values that may fluctuate on specific days. EPA believes that using data prior to the 2004-2006 data years would be inappropriate, as earlier years of data would not necessarily reflect more recent improvements in area's air quality. Section 107(d)(1)(A)(iii) requires that EPA designate as "unclassifiable" any area that cannot be classified on the basis of available information as meeting or not meeting" the NAAQS.

2.3. EPA's Technical Analysis

Comment:

A number of commenters believe that data for one or more of the areas violating the 2006 24-hour $PM_{2.5}$ NAAQS may show attainment based on 2006-2008 air quality data. These commenters ask that EPA consider 2006-2008 data for purposes of determining final area designations.

EPA Response:

EPA understands the public's concerns with using 2005-2007 data in lieu of the most recent data (2006-2008) for making designation decisions. EPA recognizes that many areas in the country are making improvements in their air quality, and believes that it is important to recognize such improvements. In making decisions about whether an area is meeting the 24-hour $PM_{2.5}$ NAAQS, EPA also believes that it is important to use the most recent air quality data. EPA will be unable to use 2008 data air quality data for the designation decisions that will be made in December 2008 because that data will not be available at that time. However, all States will still have the opportunity to benefit from improvements in air quality by using 2008 air quality data to demonstrate attainment of the 24-hour $PM_{2.5}$ NAAQS.

Prior to the effective date of final 24-hour $PM_{2.5}$ designations, States will have the opportunity to provide more recent data showing that an area is attaining the 24-hour $PM_{2.5}$ NAAQS. To do so, a State must submit its complete, quality assured, certified 2008 air quality data to the EPA earlier than the usual June 30 deadline. This early submittal deadline will be February 20, 2009 – approximately 45 days prior to the 90-day effective date of publication of the final 24-hour $PM_{2.5}$ designations. If EPA agrees that a change of designation status is appropriate based on 2006-2008 air quality data, EPA would withdraw the nonattainment designation prior to the 90-day effective date of final 24-hour $PM_{2.5}$ designations and take a new final action designating such areas consistent with the new 2008 data.

Comment:

One commenter (0132) disagrees with EPA's proposed designation of partial counties of Coshocton, Gallia and Adam's in Ohio as nonattainment. The commenter believes that EPA's Contributing Emissions Score (CES) suffers from the same limitations as the Weighted Emissions Score (WES). The commenter states that EPA failed to explain how EPA used the final score to determine contribution to nonattainment. The commenter believes that EPA failed to explain why a county with a score of 3 (Ashtabula County, OH) or 16 (Coshocton County, OH) contributes to nonattainment while a county with a score of 15 (Wayne County, OH) or 22 (Outagamie County, WI) does not. The commenter believes that the CES is ineffective as a tool to measure or represent contribution because a range of scores from 3 to 100 may indicate contribution. The commenter states that EPA has chosen to arbitrarily designate townships with Title V power plants, irrespective of the CES. The commenter believes that EPA has failed to demonstrate a nexus between power plant source emissions and nonattainment. The commenter provides additional information on controls for the Conesville Plant, Stuart Station, Killen Power Plant, Gavin Plant, and Kyger Creek Plant. The commenter states that EPA attempts to justify its partial designations on the relatively low scores of other factors which is unwarranted. The commenter believes that EPA feels compelled to address long range transport in its CES in an attempt to designate portions of counties possessing Title V power plants as nonattainment.

EPA Response:

EPA believes that the commenter does not fully comprehend the nature of what was intended in the derivation of the CES. The CES served as an initial starting point for EPA to assess what nearby counties might be contributing to a violating monitor, as a starting point for further evaluation. EPA used various forms of relevant information to help inform its designation decisions including the nine factors and comments from the State and local air agencies. There was no individual factor or analytical tool that was intended to be outcome-determinative. As for the interpretation of the score itself, it is true that any score greater than zero would indicate contribution. The CES, however, is unique to each area and cannot be compared to counties with similar scores in other areas. There is also no magnitude threshold which dictates that a particular county would be considered to be in or out of a nonattainment area. The CES simply highlights nearby counties that contribute to the violation and provides information along with data and analyses from the nine factors as well as information specific to the individual area provided by the States served as the evidence to design the nonattainment area boundaries.

Comment:

One commenter (0132) is concerned with EPA's allegedly unprecedented approach of designating as nonattainment distant noncontiguous areas. The commenter states that EPA knows that high emissions do not support contribution. The commenter states that the current structure of air pollution legislation recognizes that NAAQS address local contribution to nonattainment while regional controls such as the Acid rain program and the NO_X SIP trading budget address long range transport. The commenter states EPA failed to provide source-specific modeling to demonstrate that power plants in

noncontiguous areas are "contributing to" nonattainment in nearby areas. The commenter believes that EPA resorts to vague, broad statements in support of its decision when there is no factual basis for their inclusion (e.g., power plants have substantial emissions of precursor emissions and that winds sometimes blow toward nonattaining monitors). The commenter states the following:

- Gallia and Adams are outside of the Huntington-Ashland MSA and there are no monitors in these counties;
- Gallia is downwind of Scioto and Cabell county;
- Adams's predominant wind direction is from the southeast, thereby having little influence on either Scioto or Cabell;
- Adams and Gallia are rural in nature with very low population, projected growth, and traffic and commuting patterns;
- There is no monitor in Coshocton and the county is downwind of Franklin county; and
- Coshocton is rural in nature with very low population, projected growth, and traffic and commuting patterns.

EPA Response:

With regard to the commenter's concerns about the CES a more detailed response is provided in section 2.3 above. Please see 2.2 above for EPA's detailed responses to additional issues raised by the commenter.

EPA considered the individual facts and circumstances of each area in determining whether to include a county or part of a county as contributing to a particular nonattainment problem. Neither the CAA nor EPA's designations guidance establishes thresholds for determining the designations status of an area. For example, the guidance does not identify a set amount of a pollutant, or a specific level of commuting between counties, that would automatically require a county or part of a county to be included in a nonattainment area. Nor does the CAA or EPA's guidance provide a bright line for what constitutes a nearby area. An assessment of what areas are nearby, for purposes of designations requires an evaluation of the facts and circumstances of each area. EPA considered the geography of each area, meteorological data, speciated data, and other information in light of the distances across which $PM_{2.5}$ and $PM_{2.5}$ precursors can be transported. Mindful that "nearby" contributing areas should be within the boundaries of a given nonattainment area, EPA has used this process to identify those areas with emissions that contribute to the violations and to distinguish these emissions from more distant or regional sources that are not appropriate for inclusion within the area.

In some cases, EPA determined that the emissions from an identified power plant in a county were contributing to the violations in a nearby area. In these cases, if EPA's assessment identified little or no other emissions or emitting activity elsewhere in the area (based on assessment of factors such as emissions, population, and commuting), EPA concluded that it was appropriate to designate as nonattainment only the portion of the county where the source is located, even

if that portion is not contiguous with the remainder of the nonattainment area. The Agency adopted this approach for areas where EPA determined it to be inappropriate to include portions of a county merely because those portions were located between, and contiguous with, the large stationary source and the remainder of the designated nonattainment area. In most cases, EPA selected the boundaries for these noncontiguous portions of nonattainment areas by relying on legally recognized governmental boundaries (e.g., townships, tax districts, or census blocks) in which the source is located. EPA considered the individual facts and circumstances of each area in determining whether to include a county or part of a county as contributing to a particular nonattainment problem. Neither the CAA nor EPA's designations guidance establishes thresholds for determining the designations status of an area. For example, the guidance does not identify a set amount of a pollutant, or a specific level of commuting between counties, that would automatically require a county or part of a county to be included in a nonattainment area. Please refer to Section 4 Power Plant Issues and relevant area specific sections in the State and Tribal Comment Summary and Response Document (State and Tribal RTC) for more information.

EPA considered the individual facts and circumstances of Huntington-Ashland nonattainment area in determining whether to include a county or part of a county as contributing to the nonattainment problem. Neither the CAA nor EPA's designations guidance establishes thresholds for determining the designations status of an area. Nor does the CAA or EPA's guidance provide a bright line for what constitutes a nearby area. In order to assess what areas are nearby, for purposes of designations, requires an evaluation of the facts and circumstances of each area.

The listing of emission controls installed at Adams, Coshocton, and Gallia Counties facilities in Ohio provided EPA with information used in our final designations. Updates on emission controls added since the last emissions inventory are helpful. Knowing the latest reductions allows EPA to make a more informed decision on whether a county or partial county is contributing to violations.

After considering the controls being added, EPA determined that the partial county areas in Adams and Gallia Counties, Ohio still contribute to the violations in the Huntington-Ashland area and that in Coshocton County, Ohio still contributes to the Columbus area violations. The partial counties were designated nonattainment because they contribute to violations. Ohio needs to determine if additional measures are required beyond the planned emission controls to bring the areas into attainment. EPA has provided a detailed response to these issues in full in the State and Tribal RTC and/or the relevant area specific TSDs; please refer to these documents for additional related information.

Comment:

One commenter (0104) disagrees with EPA's recommended designations.

- The commenter requests that EPA designate Clarksville, TN-KY and McCracken County, KY as unclassifiable or in attainment. The commenter believes that if the most recent data from 2008 is used, Evansville, IN, and McCracken County, KY, are likely to be able to be in compliance.
- The commenter notes the current pending litigation and believes that many of EPA's proposals fail to articulate how the 9 factors apply to each designation and the relationship among the factors. Because the commenter believes that the EPA failed to articulate this relation the commenter disagrees to all the proposed designations for non-violating counties in Alabama, Tennessee, and Muhlenberg County, KY.
- The commenter disagrees with EPA's proposed designation for Humphreys County, TN and Muhlenberg County, KY because neither is "nearby" the violating monitor. The commenter notes the pending litigation of EPA's designation of counties that are not adjacent to violating counties.
- The commenter believes that Roane County, TN is not contributing to the violating monitor in Knox County, TN. The commenter states that contribution is not supported by EPA's CES or the speciation of emissions.
- The commenter notes that EPA's description of controls in Muhlenberg, Stewart and Humphreys counties are incorrect and provides information on the level of control from the Clean Air Markets Division.

EPA Response:

In the specific case of the Clarksville area, there is a violating monitor in Montgomery County, TN that does not meet the standard. Further, EPA has made the determination (through its analysis and the information provided by the Commonwealth of Kentucky and the State of Tennessee as fully explained in the TSD that a portion of Muhlenberg, Humphreys and Stewart Counties are contributing to the violations at the Montgomery County monitor. EPA acknowledges that updated information on controls for Muhlenberg, Stewart and Humphreys Counties became available and has considered this updated information for designation purposes for this area. EPA believes its technical analysis of the nine factors and other analysis tools was appropriate in general, clearly explained in the TSDs, and applied accurately in Clarksville. EPA concluded that even with this additional control data the facilities in the partial counties were still contributing to the monitored violations. It is important to note that air quality data and level of emissions (not necessarily level of controls) are important considerations for whether an area is violating or contributing to a violation. EPA's approach of including noncontiguous partial counties to capture sources that contribute emissions to a downwind area which has violations is consistent with the approach used for the nonattainment designations for the 1997 annual $PM_{2.5}$ standard and with the statute. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Regarding Knoxville, the commenter disagrees with the inclusion of a portion of Roane County, TN, in the Knoxville nonattainment area for the 2006 24-hour $PM_{2.5}$ standard. Speciation data from the Knoxville region indicates that the days

with the highest $PM_{2.5}$ concentrations typically occur in the warm season, with sulfate accounting for about 65 percent of the $PM_{2.5}$ mass and carbon accounting for about 32 percent of the $PM_{2.5}$ mass. The Kingston power plant in this portion of Roane County has high annual emissions (51,000 tons SO_2, 12,000 tons NO_x), and this factor combined with supporting meteorological data indicates a contribution from the Kingston plant to exceedances in Knoxville. In addition, this portion of Roane County also was included in the boundary for the 1997 $PM_{2.5}$ nonattainment area as well. The Knoxville area, with an annual design value of 15.7 ug/m^3 for 2005-2007, still has not attained the annual standard. The partial county area in Roane County was designated as part of the original nonattainment area on the basis of its contribution to annual average fine particle concentrations in nearby Knoxville. The major component of fine particle mass on an annual average basis and on the highest days is sulfate. EPA understands that scrubbers are to be installed on the nine units at the Kingston power plant in 2010. EPA applauds these steps toward cleaner air, and the resulting emission reductions can be accounted for in the State's future attainment plan for the 24-hour standard. However, since the reductions occur after December 2008, they cannot be factored into the current designation decision by EPA. For all of the above reasons, EPA finds that it is reasonable and consistent to maintain the partial county area of Roane County as part of the Knoxville nonattainment area for the 24-hour $PM_{2.5}$ NAAQS.

With regard to decisions on nonattainment boundaries in other parts of the country, EPA's designations guidance for the 2006 24-hour $PM_{2.5}$ standard states that the criteria for determining appropriate boundaries is to be made on a case-by-case basis considering the recommended nine factors and other relevant information, including information submitted in State recommendations. Not every factor was equally relevant in each area (e.g., in many eastern locations topography is not an issue), nor was every factor equally important to each area. Due to the complex and variable nature of $PM_{2.5}$, the important factors varied from one area to another based on local circumstances. EPA considered the individual facts and circumstances of each area in determining whether to include a county or part of a county as contributing to a particular nonattainment problem. Neither the CAA nor EPA's designations guidance establishes thresholds for determining the designations status of an area. For example, the guidance does not identify a set amount of a pollutant, or a specific level of commuting between counties, that would automatically require a county or part of a county to be included in a nonattainment area. While the commenter attempts to make a comparison between carbon emissions in Roane County and nine other counties in the area with less carbon emissions, EPA notes that the determination of a county's (or portion thereof) contribution is based on the totality of the analysis and not based on this individual factor alone. Roane County has a large point source (i.e., Kingston Power Plant) and high level of sulfate contribution.

The CAA defines a nonattainment area as any area that does not meet an ambient air quality standard or that is contributing to ambient air quality in a nearby area

that does not meet the standard. If an area meets either prong of this definition, then EPA is obligated to designate the area as nonattainment. EPA identifies violations of the 2006 24-hour $PM_{2.5}$ NAAQS on the basis of three years of complete, quality-assured ambient air quality monitoring data from an eligible air quality monitor. The design value for the monitor in McCracken County is 36 $\mu g/m^3$ which is above the standard and makes this county an automatic candidate for nonattainment.

Please see 2.3 above regarding the submission of 2008 data and 2.2 above for EPA's detailed responses to additional issues raised by the commenter. EPA has provided a detailed response to these issues in full in the State and Tribal RTC and/or the relevant area specific TSDs; please refer to these documents for additional related information.

Comment:

One commenter (0108) is concerned about the weight of the CES because of the following assumptions:

- Volatile Organic Carbon (VOC) emissions are not included in the calculation of CES;
- The SANDWICH algorithm was applied to FRM sites but not to the Interagency Monitoring of Protected Visual Environments (IMPROVE) sites used in the analysis in the Technical Support Document (*Derivation of the Contributing Emissions Score*, August 20, 2008) describing the generation of CES values.

EPA Response:

While EPA would have liked to have incorporated VOC emissions into the CES to provide a better indication of the impact those emissions have on the violating monitor, the science behind the chemistry of $PM_{2.5}$ formation from VOC emissions is not as advanced to the point where the relationship between secondary organic particle concentrations and VOC emissions could be reliably quantified. EPA also believes that the uncertainty about what proportion of VOC emissions in a particular county might participate in PM formation directly also precluded VOC emissions from being considered for use in the CES. Counties with predominant primary carbon emitters were more of a concern with the CES in the western United States where there was also a large wood smoke contribution. This potential problem was not as important an issue in the eastern US. However, VOC emissions were directly considered in making designations through the emissions data charts for all areas.

EPA acknowledges some ambiguity in the CES Technical Support Document (TSD) regarding the comparison between the IMPROVE and SANDWICH processed CSN data. The urban increment calculation in the CES involved using both IMPROVE and CSN data. The CSN data were processed using the SANDWICH technique to account for the loss of nitrate from the Teflon filter and the retention of water mostly among hydrated ammonium sulfate. The IMPROVE nitrate and sulfate data were also adjusted in a similar fashion so that

the data from the two networks could be used together to calculate the urban increment at each CSN site within the violating area. The CES TSD has been updated to better clarify this part of the CES methodology.

Comment:

One commenter (0085) is concerned with the following technical data in EPA's CES:

- The definition of "high" $PM_{2.5}$ days;
- The calculation of Area-normalized High Day Emissions; identification of the Urban Increment and usage of the SANDWICH algorithm;
- Implementation of trajectory and distance weighing; and
- Uncertainties associated with VOC assumptions, the SANDWICH algorithm, and back trajectories.

EPA Response:

The commenter made several comments regarding the ambiguity of explanation given in the CES technical support document regarding several aspects of the calculation of the CES. For clarification, the CES TSD has been updated to better describe how "high" days were chosen for the various components of the CES. The commenter's greatest concern is over how the high days were chosen for the urban increment calculation. To clarify this, the high days for the urban increment calculation were chosen from the highest 5 percent of days measured at each CSN site for each season and year.

In regard to how the area-normalized high day emissions were calculated, the commenter drew the correct conclusion in that the total seasonal high day emissions in an individual county were normalized to the total seasonal high days emissions from the CBSA/CSA.

The CES TSD has been updated to better clarify the comparability between the IMPROVE and SANDWICH adjusted CSN data. As the commenter indicates elsewhere, two different methods were used to calculate the crustal component. Since the crustal component itself was very small, the approximate 10 percent difference between the between the two methods for computing crustal material is also small typically on the order of a few tenths of a microgram and, therefore, does not greatly affect the urban increment for crustal material or the carbon concentrations which depend upon the non-carbon estimates.

Regarding the trajectory weighting algorithm used in the CES, the commenter has asked EPA to better clarify some of the associated details. The trajectories were run for the 10 percent highest measured $PM_{2.5}$ days for each year and season. For the calculation of the probability field of the likelihood of a trajectory passing through an individual county, all of the trajectories from each starting height level were analyzed as an entire group. For determining the individual county weights, a probability density field was calculated using Kernel Density Estimation and the results of this analysis are spread over a grid. The fraction of an individual county's average probability density to the total across all counties was used as

the weight applied to the emissions data. The sum of all of the individual county fractions is equal to one. The values presented in Table A-7 are scaled between 1 and 100 for display purposes only.

The commenter expressed confusion over how the distance weighting factor was calculated. The CES TSD states that the factor was calculated as 1/distance between the centroid of the violating county to the centroids of surrounding nearby counties.

The commenter also mentioned the absence of VOC emissions from the calculation. While the commenter admitted that "the scientific basis for developing a simple relationship between VOC emissions and organic particle concentration is limited, some sort of approximation of aerosol yields from VOC emissions would help" the CES distortion in organic carbon attribution. While EPA would have liked to have incorporated VOC emissions into the CES to provide a better indication of the impact those emissions have on the violating monitor, the science behind the chemistry of PM2.5 formation due to VOC emissions is not as advanced to the point where the relationship between secondary organic particle concentrations and VOC emissions could be reliably quantified. EPA also believes that the uncertainty about what proportion of VOC emissions in a particular county might participate in PM formation directly also precluded VOC emissions from being considered for use in the CES. Counties with predominant primary carbon emitters were more of a concern with the CES in the western United States where there is also a large wood smoke contribution. This potential problem is not an important issue in the eastern US. However, VOC emissions were directly considered in making designations through the emissions data charts for all areas.

The commenter also cited a publication regarding the error associated with using trajectories. The paper does not specifically critique the HYSPLIT model utilized by EPA in the CES. EPA assumes that the conclusion drawn by the paper applies specifically to the models and studies assessed. In that case, the paper was published ten years ago so that advances in trajectory modeling could not have been accounted for. EPA recognizes that every data source has some of level of uncertainty associated with it and that one cannot solely rely on any one piece of information in making a regulatory decision. EPA has recommended through guidance that the CES is but one of many analytical tools and data sources that could be used as a starting point for the designation process to help inform the final decision.

Comment:

One commenter (0085) believes that there was inconsistent and arbitrary application of the CES as follows:

- CES values vary enormously: nonattainment CES numbers range from 100-5 and attainment CES numbers are as high as 33 and go down to zero.

- EPA uses counties from other Consolidated/MSAs (C/MSAs) while calculating CES calculations for a given C/MSA:
    - e.g. Kanawha County, WV has CES value of 100 when calculated with the Charlestown MSA and the value of 15 when calculated with the Huntington-Ashland MSA.
    - e.g. in the Huntington-Ashland MSA, counties with CES values of 33 and higher in the MSA are all nonattainment and those below are attainment the exception to this Kanawha County which is nonattainment even though its CES as it relates to Huntington-Ashland is 15. It seems safe to assume that the Kanawha nonattainment designation is based upon its contribution to the Charleston C/MSA, but its presence in the Huntington-Ashland CES calculations makes CES values difficult to interpret in light of their relationship to nonattainment.
    - In the Cleveland-Akron MSA, Portage has a CES of 15 and is recommended nonattainment by both Ohio and EPA. Wayne County has a CES of 15 and is recommended attainment by both Ohio and EPA. Portage County is currently monitoring attainment. Lorrain County, which received a relatively high CES of 60, has been recommended by both Ohio and EPA, but is monitoring attainment.
    - In the Columbus MSA, Franklin County has a CES of 100 and is recommended nonattainment. Pickaway, Adams and Ross Counties are respectively scored 19, 18 and 18 and are recommended attainment by both Ohio and EPA. Delaware, Licking and Fairfield Counties are respectively scored 11, 10, and 9 and are all recommended nonattainment by both Ohio and EPA.
    - In the Dayton-Springfield MSA, all three MSA counties listed are nonattainment and their scores are 95 for Montgomery County, 14 for Greene County, and 5 for Clark County. Clark County is monitoring attainment.
    - In the Cleveland-Akron MSA, Lorain and Portage Counties are monitoring attainment, are recommended for nonattainment, and have CES values differing by 45 points.

EPA Response:

The commenter has made a point with several examples stating that EPA applied the CES inconsistently and arbitrarily in its nonattainment area designations. As noted in responses to other commenters, the CES was a screening tool to provide a list of counties to be considered for inclusion into the nonattainment area of a violating monitor. It was not considered outcome-determinative but one measure using information from some of the factors recommended through EPA guidance to serve as a starting point in determining nonattainment area boundaries. Additional data from a variety of different sources were then considered to better refine the designation areas to include counties which had evidence of contributing to the violating monitor. EPA does not agree that the manner in which the CES was utilized was either inconsistent or arbitrary. The CES served its purpose to highlight possible nearby contributing counties that could then be

further examined to better determine the overall contribution based the data EPA had on hand.

A particular county's CES is unique to the area being evaluated even if the county has multiple scores from being included in the evaluations of multiple violating areas. Therefore, the score for a particular county in one area cannot be compared to the score for the same county when its contribution is being assessed for another violating area. Also, it is important to realize that the CES is not outcome determinative. The CES is one analytical tool that attempts to provide an initial starting point to which additional information from the recommended factors in EPA guidance as well as data from the State and Local air agencies can be applied to inform the final decision.

Kanawha County, WV's CES value is only 15 which is low relative to the scores of the other counties included in the Huntington-Ashland area analysis because it is a greater distance from the violating monitor in Cabell County, and meteorological data indicates that its has a lesser impact on Cabell County. Prevailing winds at the Cabell County air quality monitor are north-northeast, as well as southwest and south. Only occasional winds are from the east, the direction of Kanawha County. In EPA's technical analysis for the Huntington-Ashland area, EPA determined that Kanawha County should not be included in the Huntington-Ashland nonattainment area.

Kanawha County, WV's CES value is 100 which is very high relative to other counties included in the Charleston area analysis, which is comprised of Kanawha and Putnam Counties, WV. Kanawha County has two air quality monitors showing violations of 2006 24-hour $PM_{2.5}$ NAAQS, considering 2005-2007 data. Meteorological data indicates that days with low wind speeds are more likely to record high $PM_{2.5}$ levels at the Kanawha County air quality monitors. This indicates that local emissions from Kanawha County contribute to the Charleston area's nonattainment, including emissions from the Kanawha River electric generating unit and Bayer Cropscience. In EPA's technical analysis for the Charleston area, EPA determined that Kanawha County should be included in the Charleston nonattainment area.

Counties such as Lorrain and Porter Counties, which have air quality data meeting the standards, can still contribute to violations in other counties. These contributing counties are included in the nonattainment area. Examining factors such as commuting and jurisdictional boundaries show differences between Portage and Wayne Counties. Ohio's recommendations were also considered.

In the Columbus area specifically, EPA determined that Pickaway and Ross Counties should be designated attainment based on the analysis detailed in the TSD. The analysis indicated that Delaware, Fairfield, and Licking Counties should be included in the Columbus nonattainment area. EPA used information relevant to the recommended factors, not just the emissions inventory, to determine which counties to designate as nonattainment. Factors including

population and commuting supported including Delaware, Fairfield, and Licking Counties and not including Pickaway and Ross Counties in the nonattainment area. Adams County was included in the Huntington-Ashland nonattainment area.

Clark County is monitoring a violation of the 2006 fine particulate standards based on 2005 to 2007 data. Therefore, Clark County was included in the Dayton-Springfield nonattainment area.

3.0. Comments Specific To Area

3.1. Allentown, PA

See section 2.2 for general comments relevant to this particular nonattainment area.

3.2. Baltimore, MD

Comment:

Four commenters (0095) comment that, according to EPA's AirData database, a monitor in Prince Georges County, Maryland (Prince Georges Equestrian Center monitor 2) is violating the 24-hour $PM_{2.5}$ standard based on 2005-2007 data.

EPA Response:

The monitor in question is a collocated monitor in place for quality assurance purposes only. The Maryland Department of the Environment operates this and other collocated monitors to comply with Federal regulations to quantify $PM_{2.5}$ measurement precision at 15 percent of its sites Statewide. The primary monitor, and not the collocated monitor, is used to determining compliance with the $PM_{2.5}$ NAAQS. (See 40 CFR Part 50 Appendix N, 3(d)(1).) The primary monitor at this site operates every third day. The collocated monitor operated every sixth day in 2005 and 2006, and every twelfth day starting in 2007.

$PM_{2.5}$ design values are calculated by site, not by monitor. According to 40 CFR Part 50 Appendix N, 1(c)(2), the 3-year average of annual 98^{th} percentile 24-hour average values recorded at each monitoring site (referred to as the "24-hour standard design value"). Therefore, there is no design value for the collocated monitor.

Data from the collocated monitor is used to substitute for missing data from the primary monitor, pursuant to 40 CFR Part 50 Appendix N, 3(d)(2):

> Data for the primary monitor shall be augmented as much as possible with data from collocated FRM, FEM, or Approved Regional Method (ARM) monitors. If a valid 24-hour measurement is not produced from the primary monitor for a particular day (scheduled or otherwise), but a valid sample is generated by a collocated FRM/FEM/ARM instrument (and recorded in the Aerometric Information Retrieval System Air Quality System (AQS) database), then that collocated value shall be considered part of the site data record (i.e., that site's daily value). If more than one valid collocated FRM/FEM/ARM value is available, the average of those valid collocated values shall be used as the daily value.

Since the collocated monitor takes many fewer readings than the primary monitor, its annual 98^{th} percentile values may be unrepresentatively high even if only a few high values are recorded. If a "design value" were calculated for each monitor, the result for 2005-2007 data would be 30.7 $\mu g/m^3$ for the primary monitor and 37.2 $\mu g/m^3$ for the collocated monitor. This value for the collocated monitor is

unrepresentatively high due to the small number of monitored samples which gives more weight to high values when the 98th percentile 24-hour average values are determined. The proper design value for the site is 32.0 μg/m^3 when missing data from the primary monitor is supplemented with data from the collocated monitor.

Comment:

Four commenters (0095) comment that data in the AirData database shows consistently high 24-hour $PM_{2.5}$ levels at the two monitors at 34th and Dix NE. The commenters state that, "[t]aking the higher of the values at the two monitors in each year, the site is in violation for 2005-2007."

EPA Response:

The monitors referenced above are the primary and collocated monitors at 34th and Dix Streets in Washington, D.C. It is not appropriate to simply pick the highest values at each site to determine compliance with the $PM_{2.5}$ NAAQS. As described in the response to the above comment, data from the collocated monitor is only used in design value calculations when valid data is missing at the primary monitor. The correct design value for this site is 35 μg/m^3 for 2005-2007. Therefore, this site meets the 24-hour $PM_{2.5}$ NAAQS.

Comment:

Four commenters (0095) comment that because the Washington, D.C. area is violating the $PM_{2.5}$ NAAQS and is consistently recording elevated $PM_{2.5}$ levels, EPA must designate the entire metropolitan area as nonattainment.

EPA Response:

As explained above, the Washington, D.C. area is not violating the 2006 $PM_{2.5}$ standard. It should also be noted that the $PM_{2.5}$ data referenced by the commenters was obtained from EPA's "AIRNOW/AirData" website and not the Aerometric Information Retrieval System AQS database. AQS is the database that contains all State and local agency submitted and EPA certified air monitored data and is used for determining compliance with the NAAQS.

Comment:

Four commenters (0095) comments that even if the Washington area were not itself violating the 2006 NAAQS, EPA would have to designate the area nonattainment as part of a greater Washington-Baltimore-Northern Virginia, DC-MD-VA-WV CSA nonattainment area, because Congress intended that nonattainment areas encompass the entirety of combined statistical urban areas.

EPA Response:

See section 2.2 comments regarding designating entire CSAs nonattainment.

Comment:

Four commenters (0095) comment that EPA's data and analysis show that the Washington, D.C. area contributes to $PM_{2.5}$ levels in the Baltimore area. The commenters assert that:

- The Washington, D.C. area generates substantial emissions of $PM_{2.5}$ and precursors;
- EPA's analysis shows that regional wind patterns are often southwest to northeast;
- EPA's data indicate that $PM_{2.5}$ emissions in both Montgomery and Prince Georges Counties are higher than in any county in the proposed Baltimore nonattainment area;
- Montgomery and Prince Georges Counties, combined, emit more sulfur dioxide (SO_2) than any county in the proposed Baltimore area; and
- Collectively, the Maryland counties currently in the Washington nonattainment area emit about as much $PM_{2.5}$ as and far more SO_2 than all the counties in the proposed Baltimore area, combined.

EPA Response:

Based upon public comment received, EPA determined that it was appropriate to further analyze the technical information used to support EPA's boundary recommendation for the Baltimore area. Based on EPA's further analysis of that technical information, EPA has informed Maryland that it proposes to modify the boundary of the Baltimore nonattainment area for the 2006 24-hour $PM_{2.5}$ standard to include Montgomery and Prince Georges Counties, Maryland.

EPA is taking final action on the remaining areas (the City of Baltimore and Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties) in December 2008. On December 5, 2008, EPA gave notice that it is proposing to add Prince George's and Montgomery Counties, Maryland to the Baltimore nonattainment area. EPA is giving the State the benefit of the statutory opportunity to respond to this proposal, and will not finalize the designation of these counties as part of the Baltimore area for the 120-day period provided in the statute. EPA will thus make a final designation determination whether Montgomery and Prince George's Counties should be included in the Baltimore nonattainment area for the 2006 24-hour $PM_{2.5}$ standard in April 2009.

3.3. Birmingham, AL

See section 2.3 for comments regarding this particular nonattainment area.

3.4. Canton-Massillon, OH

Comment:

One commenter (0118) supports EPA recommendations for the State of Ohio. The commenter requests that EPA designation Stark County as nonattainment. This is the same county that EPA has proposed as a candidate for a designation of nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this comment and has made the final determination that Stark County should be within the boundary for the designated Canton-Massillon area as nonattainment.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.5. Charleston, WV

See section 2.2 for general comments relevant to this particular nonattainment area.

3.6. Chicago-Gary-Lake County, IL-IN

Comment:

One commenter (0091) supports EPA recommendations that the Counties of Cook, Will, DuPage, Lake, Kane, McHenry and portions of Kendall and Grundy Counties in Illinois; and Lake and Porter Counties in Indiana be designated as nonattainment in the Chicago-Gary-Lake, IL-IN area. The commenter is concerned the modernization and expansion of the BP refinery in Whiting, IN due to be completed in 2011 or 2012. The commenter disagrees with EPA's recommended designations of a partial for Kendall County. The commenter recommends that EPA to designate the remainder of Kendall County, IL as nonattainment due to commuting and growth patterns.

EPA Response:

EPA is aware of the growth that Kendall County has experienced. Still, the emissions from Kendall County remain a small amount of the Chicago area emissions. EPA agreed with Illinois to include a portion of Kendall County in the Chicago nonattainment area. This also retains the same nonattainment area as for the 1997 fine particulate standards and the ozone area which aids in the planning process.

EPA is also designating Lake and Porter Counties in Indiana as nonattainment. Changes at a Lake County, Indiana refinery will follow the permitting process. The impact of the planned expansion on fine particulate pollution in the area will be analyzed as part of the permitting process. Illinois and Indiana will also need to include planned expansions and the resulting from the loss of CAIR as the States develops plans to bring the Chicago area into attainment.

Comment:

One commenter (0100) supports EPA's recommendation and request that EPA designate Cook, DuPage, Kane, Lake, McHenry, Will, Kendall, and Grundy (partial) counties in Illinois as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this comment and has made the final determination that Cook, DuPage, Kane, Lake, McHenry, Will, Kendall (partial), and Grundy (partial) counties should be included in the nonattainment boundary for the Chicago-Gary-Lake County area for the designations for the 2006 24-hour $PM_{2.5}$ standard.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State Tribal RTC document which explains EPA's decisions.

3.7. Chico, CA

See section 2.2 for general comments relevant to this particular nonattainment area.

3.8. Cincinnati-Hamilton, OH-KY-IN

Comment:

One commenter (0114) requests that EPA deny the exceptional events request from Kentucky Division of Air Quality, citing negative health impacts from $PM_{2.5}$. The commenter requests that EPA designate Kenton and Warren Counties as nonattainment.

EPA Response:

EPA has reviewed the Commonwealth of Kentucky's request for consideration of exceptional events and has made a determination for these requests on an individual basis depending on the event and the supporting document. As explained in EPA's June 08, 2007, guidance entitled *Air Designations for the Revised 24-hour Fine Particulate Matter Standard*,

> "Air quality monitoring data affected by exceptional events may be excluded from use in identifying a violation if they meet the criteria for such an exclusion, as specified in the Final Rule on the Treatment of Data Influenced by Exceptional Events (72 FR 13560)."

Attached to the TSD in support of EPA's final designations for the revised daily $PM_{2.5}$ standard (http://www.epa.gov/pmdesignations/2006standards) is a very detailed analysis all of the exceptional events requests for Kenton County, Kentucky. (See Enclosure 3 of TSD). While EPA did concur with this exceptional events request and thus the Kenton monitor is not shown as violating based on 2005-2007 monitoring data, EPA is designating Kenton County, KY and Warren County, OH as part of the Cincinnati-Hamilton nonattainment area because these counties have been shown through EPA's analysis as contributing to the violations in the Cincinnati-Hamilton area. This conclusion is further supported by the conclusion that was reached for this same area when EPA finalized the nonattainment designation for the Cincinnati-Hamilton area in 2005

for the 1997 annual $PM_{2.5}$ standard. The Cincinnati-Hamilton area (consisting of the same boundaries as outlined in the designations for the 2006 24-hour $PM_{2.5}$ standard) is still in violation of the 1997 annual $PM_{2.5}$ standard. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Comment:
One commenter (0118) supports EPA recommendations for the State of Ohio. The commenter requests that EPA designate Butler, Clermont, Hamilton, **Knox** and Warren counties as nonattainment. These are the same counties that EPA has proposed as candidates for a designation of nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this comment and has made the final determination that Butler, Clermont, Hamilton, **Knox** and Warren Counties in Ohio should be included in the nonattainment boundary for the Cincinnati-Hamilton area for the designations for the 2006 24-hour $PM_{2.5}$ standard.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State Tribal RTC document which explains EPA's decisions.

Comment:
One commenter (0137) supports EPA's recommendations and requests that EPA designate Boone, Campbell and Kenton counties in Kentucky as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this comment and has made the final determination that Boone, Campbell and Kenton counties in Kentucky should be included in the nonattainment boundary for the Cincinnati-Hamilton area for the designations for the 2006 24-hour $PM_{2.5}$ standard.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries.

3.9. Clarksville, TN-KY

Comment:
One commenter (0137) supports EPA's recommendations and requests that EPA designate Muhlenberg County, KY, as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this comment and has made the final determination that a portion of Muhlenberg County, KY should be included in the nonattainment boundary for the Clarksville-Hopkinsville area for the designations for the 2006 revised daily $PM_{2.5}$ standard. While it was announced in the August 19th letter from EPA to Governor Beshear, that EPA was considering the entire county of Muhlenberg for nonattainment, the Commonwealth of Kentucky has provided EPA with sufficient information regarding the source of emissions in the county to justify a partial boundary versus the entire county. Please refer to the TSD and the State and Tribal RTC document which explains the additional data and EPA's decisions.

Comment:

One commenter (0086) disagrees with EPA's recommended designation that Humphreys County, TN be designated nonattainment as a contributor to the violating monitor in Montgomery County, TN. The commenter believes that EPA based the nonattainment designation solely on presence of a power plant and believes this is inappropriate under the criteria set forth in section 107(d) of the CAA. The commenter believes that EPA's approach to designations fails to articulate a technical basis for each designation. The commenter cites the factors used in the CAIR rule for determining contribution, and implies that the same approach should be used for purposes of designations. The commenter believes that Humphreys County should be in attainment since no monitor shows a violation and the county is not contiguous to Clarksville MSA. The commenter believes that EPA improperly evaluated its own 9-factor analysis and that, at a minimum, the nonattainment area can be narrowed to the census block(s) encompassing the power plant, if it remains the cause of EPA's concern. The commenter generally endorses the comments submitted by the Tennessee Valley Authority (TVA) in response to EPA's proposed determination with respect to designating a partial county in the Clarksville KY-TN nonattainment area.

EPA Response:

EPA has evaluated additional information obtained after the announcement of EPA's initial intended recommendations as outlined in the August 19, 2008 letter from EPA to Governor Bredesen regarding designations for the 2006 $PM_{2.5}$ standard. The review of this additional information provides EPA with sufficient information to justify a partial county boundary for Humphreys County as recommended by this commenter.

Further, EPA acknowledges the commenter's concern with the consideration of emissions due to the power plant and also acknowledges the commenter's concern with the use of the factors as outlined in EPA's June 08, 2008 boundary guidance versus factors used in the CAIR. EPA believes that it is most appropriate to use the recommended nine factors that States and EPA would take into consideration, in addition to other relevant factors or circumstances specific to a particular area, in determining appropriate nonattainment area boundaries and would also note that the CAIR was recently vacated by the D.C. Circuit Court. EPA does not

believe that modeling is required by section 107(d), or necessary to make a determination for nonattainment area boundaries. EPA use relevant information such as monitoring data, emissions data, meteorological data, and other relevant information to make the determination on boundaries. Please see responses in section 2.2 above relating to inclusion of non-contiguous counties including power plant sources, relevance of litigation on prior designations, and relevance of modeling done to support CAIR. In addition, please see the TSD for this area which outlines the technical determination that based on the size of the contributing sources, location in relation to the violating monitors, meteorology, and lack of other sources, population or commuting within the county, EPA concluded that the partial county only was appropriate for inclusion within the nonattainment area.

With regard to the commenter's statement that Humphreys County should not be designated nonattainment because the county does not have a violating monitor and is not contiguous to the Clarksville MSA, EPA notes that the Act requires that EPA consider areas that contribute to violations in addition to areas that have violating monitors. EPA determined that the emissions from an identified power plant in Humphreys County were contributing to the violations in a nearby area. In this case, EPA's assessment identified that source as the most significant emissions source in the area (i.e., little or no mobile source or other human activity-based emissions), and EPA concluded that it was appropriate to designate as nonattainment only the portion of the county where the source is located, even if that portion is not contiguous with the remainder of the nonattainment area. EPA selected the boundaries for this noncontiguous portion of the nonattainment area by relying on legally recognized governmental boundaries (e.g., townships, tax districts, or census blocks) in which the source is located. EPA's 2006 $PM_{2.5}$ designation boundary guidance states that the criteria for determining appropriate boundaries is to be made on a case-by-case basis, considering the recommended nine factors in addition to other relevant factors or circumstances specific to a particular area.

EPA recognizes that many areas in the country are making improvements in their air quality, and believes that it is important to recognize such improvements. In making decisions about whether an area is meeting the 24-hour $PM_{2.5}$ NAAQS, EPA also believes that it is important to use the most recent air quality data. EPA will be unable to use 2008 data air quality data for the designation decisions that will be made in December 2008 as that data will not be available at that time. However, all States will still have the opportunity to benefit from their efforts to improve air quality by using 2008 air quality data to demonstrate attainment of the 24-hour $PM_{2.5}$ NAAQS. Please see section 2.3 regarding the submission of 2008 data.

Comment:

- Factor 1 - The commenter (0086) believes that the CES does not represent emissions of Humphreys County. The commenter provides additional information on the emissions after 2005 in the county.

EPA Response:

EPA recognizes that the distance weighting factor used in the CES affects an individual county's score. However, the difference between the weighting factor associated with a distance of 39 miles versus 50 miles is only 0.005, which is too small to make a substantial difference in the contribution from Humphrey's County. Even though the commenter recalculated the Humphreys County CES to be 84, that value is still high relative to the other CES values of the surrounding counties to warrant considering its inclusion in a nonattainment area boundary for Clarksville.

Comment:

- Factor 2 - The commenter (0086) believes that if the most recent data from 2008 is used, the violating monitor is likely to be in compliance;
- Factor 6 – The commenter cites there were only two high days according to EPA's pollution rose and on those days the average wind speed is very low, indicative of days. The commenter states that Davidson County has higher VOC, NO_X, NH_3 and carbon emissions and is closer to the violating monitor. The commenter provided additional information;
- Factor 8 – Humphreys County is not in the MSA; and
- Factor 9 – The commenter provides additional information on the controls in the county.

EPA Response:

EPA considered the individual facts and circumstances in the Clarksville nonattainment area in determining whether to include a county or part of a county as contributing to a particular nonattainment problem. Neither the CAA nor EPA's designations guidance establishes thresholds for determining the designations status of an area. For example, the guidance does not identify a set amount of a pollutant, or a specific level of commuting between counties, that would automatically require a county or part of a county to be included in a nonattainment area.

EPA acknowledges the commenters concern with EPA's use of the CES, the contribution based on meteorology and the commenter's attempt to make a direct comparison of emissions for this area and Davidson County. As EPA conducted its analysis, Davidson County was considered but a determination was made that this county is not contributing to violations in Montgomery County. Further, after review and consideration of all pertinent information as described in the TSD for this area, EPA has made the determination that only a portion of Humphreys County should be included in the Clarksville nonattainment area. It is important to note that EPA makes a case-by-case determination in considering the nine factors. Based on the emissions from Humphreys County, location in relation to

the violating monitor, and meteorology, EPA concluded that the stationary source emissions did contribute to the violating monitor even with consideration of current controls. Not every factor was relevant in each area (e.g., in many eastern locations topography is not an issue), nor was every factor equally important to each area. Due to the complex and variable nature of $PM_{2.5}$, the important factors varied from one area to another based on local circumstances. While Humphreys County is not within the MSA, EPA has made a determination that it is contributing to the violations for the Montgomery County monitor. EPA has included non-MSA counties as part of other nonattainment areas when a determination has been made that these counties, or a portion thereof, are contributing to a violation. See section 2.2 above fro general responses on 2008 data, MSA boundaries, and consideration of emissions controls.

Comment:

One of commenters (0128) disagrees with EPA's proposed designation for Muhlenberg County, KY as nonattainment. The commenter does not believe that Muhlenberg County, KY is contributing to the violating monitor in Montgomery County, TN. The commenter believes that Tennessee should be given additional time to address a Clarksville violation, referring to the State's letter. The commenter believes the CES was incorrectly applied for Muhlenberg County because the score is 100 and the commenter believes that Muhlenberg does not contribute 100 percent of the excess urban $PM_{2.5}$ emission in Clarksville, TN. The comment believes that it is improper for the EPA to use the CES because there was no public notice and comment period prior to using the metric. The commenter noted that Muhlenberg is not contiguous and is separated by Montgomery County which shows attainment. The commenter states that factors 1 and 9 are flawed because EPA does not consider controls. The commenter believes that EPA's proposal is based on MSA boundaries. The commenter notes pending litigation challenging EPA's 1997 $PM_{2.5}$ designations (e.g., nonattainment designation of isolated areas that show attainment because they contain power plants).

EPA Response:

EPA disagrees with the commenter's assertion that the application of the 9-factor analysis and how it applies to the designation decision was inappropriate. The technical support document in association with the designation rulemaking clearly articulates EPA's analysis of each factor in relation to this area. EPA has evaluated additional information obtained after the announcement of EPA's initial intended recommendations as outlined in the August 19, 2008 letter from EPA to Governor Beshear and Governor Bresdsen regarding designations for the 2006 $PM_{2.5}$ standard. The review of this additional information provides EPA with sufficient information to justify a partial county boundary for Muhlenberg County as recommended by this commenter. EPA believes it has sufficient data to make a designation for this area and thus can not delay the designation.

Further, EPA acknowledges the commenter's concern with the consideration of emissions due to the power plant and also acknowledges the commenter's concern

with the use of the recommended factors as outlined in EPA's June 08, 2008 guidance. Power plant emissions in this area account for a large amount of the emissions in this area. EPA used the nine factors to make a determination on whether this area is contributing to the violation in Montgomery County. EPA believes that it is most appropriate to use the recommended nine factors that States and EPA would take into consideration, in addition to other relevant factors or circumstances specific to a particular area, in determining appropriate nonattainment area boundaries.

With regard to the commenter's statement that Muhlenberg County should not be designated nonattainment because the commenter believes that Muhlenberg is not contributing to monitored violations in the Clarksville nonattainment area, EPA notes that the Act requires that EPA consider areas that contribute violations in addition to areas that have violating monitors. EPA determined that the emissions from an identified power plant in Muhlenberg County were contributing to the violations in a nearby area. In making this determination EPA did consider controls currently in place at this facility. In this case, EPA's assessment identified that source as the most significant emissions source in the area (i.e., little or no mobile source or other human activity-based emissions) and thus concluded that it was appropriate to designate as nonattainment only the portion of the county where the source is located, even if that portion is not contiguous with the remainder of the nonattainment area. EPA selected the boundaries for this noncontiguous portion of the nonattainment area by relying on legally recognized governmental boundaries (e.g., townships, tax districts, or census blocks) in which the source is located. EPA's 2006 $PM_{2.5}$ Designation Boundary Guidance states that the criteria for determining appropriate boundaries is to be made on a case-by-case basis, considering the recommended nine factors in addition to other relevant factors or circumstances specific to a particular area. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

The commenter is mistaken about the interpretation of the CES. The CES TSD states the total score a county receives is normalized to the highest scoring county. This means that a particular county's score is relative to the score from the county with the largest contribution. So a county with a score of 100 means that county had the highest contribution on the violating county, while a county with a score of 34 means that particular county's contribution was 34 percent of the contribution belonging to the county with the score of 100. The CES does not in any way attempt to quantify the total contribution to the violating monitor across all counties, or indicate that the county with a score of 100 is contributing all of the pollution in a given nonattainment area. Rather, it attempts to quantify the contribution any one county has on the violating county based on the largest contribution across all of the counties. Muhlenberg's score of 100 clearly supports the inclusion within the nonattainment area in conjunction with other information.

Comment:
Another commenter (0164) believes the CES was incorrectly applied in the instance of determining nonattainment for Muhlenberg County. Specifically the commenter notes the following:

- Emissions data from the 2005 NEI referenced by EPA are not representative of current emissions from Muhlenberg County;
- Insufficient information is provided by EPA to review the wind trajectory weighting factor in the CES equation; and
- The centroid method for determining distance in CES equation is not appropriate because the location of primary emission sources and taller stacks at large distances.

EPA Response:

With respect to the concern about accuracy of the 2005 NEI emissions inventory, EPA invited States to provide supplemental information to the Agency if it would indicate significant changes in emissions since 2005, and where submitted EPA took such information into consideration for the final designations decisions.

EPA believes that the pollution roses it provided illustrate the pattern of contribution to ambient high PM2.5 concentration days in this area. The trajectories that the State of Kentucky submitted have limitations in their interpretation. First, all of the trajectories are backward trajectories that start on the sixth hour of the day following the day with the exceedance. This can lead to misleading results since the air impacting the violating site arrives at the site during the day of the exceedance not following it. Thus, air patterns on the day of the exceedance can be very different than those seen even six hours after the 24-hour exceedance is captured. Another issue with Kentucky's trajectory analysis is that only State boundaries are plotted to orient the viewer as to where the trajectory paths are traversing over. There are no county boundaries to give a good indication of whether or not the trajectories are over or near Muhlenberg County.

EPA relied on more than surface wind patterns in assessing the contribution of Muhlenberg County on Clarksville, TN. HYSPLIT back trajectories were used to determine which counties' air parcels were passing through on their way to the violating monitor. Those trajectories played an essential role in the calculation of the CES. EPA used several trajectories that started from four heights at three hour intervals on the day of the exceedance. All start heights were at or below the mixing height. The commenter has questioned the methodology of how EPA calculated the mixing heights. The mixing heights were calculated directly through the HYSPLIT model at the initial starting time and then at each point the model outputted along the trajectory path. EPA also plotted the trajectories from days where the $PM_{2.5}$ concentrations were greater than the 98^{th} percentile to see where the air parcels were traversing on their way to the violating monitor. On several of those days, air passes over Muhlenberg County on its way to the

violating monitor in Clarksville, TN. In fact, the days when air passed over Muhlenberg County from 2005-2007, the Clarksville monitor measured higher concentrations than when the winds were from the south.

Although the Brode memo concluded that a 1/D1.5 weighting factor is appropriate for low-level sources and for all source types for long-term averages, the results appeared to support using the 1/D screening technique as a conservative approach to screening out sources. Since the CES is foremost a screening tool to provide an initial set of counties to be assessed for inclusion in a nonattainment area, the use of 1/D to conservatively filter out counties appearing to contribute to the violation is appropriate for the general application of the CES across the entire country. Information specific to an individual area would then have been used to further refine which counties would remain within a nonattainment area's boundaries.

With respect to the commenter's concerns about the "centroid" approach EPA adopted in the CES methodology, EPA has explained the basis for this approach in the TSD for the CES.

Comment:

The commenter (0164) also believes that the TSD does not support the inclusion of Muhlenberg County. The commenter believes the monitor placement is flawed. The commenter states that monitor #47-125-1009 is sited in an area that could result in elevated air contamination due to localized influences, and thus concentrations at this monitor would not be representative of the wider region.

EPA Response:

EPA conducted a site evaluation on the Clarksville monitor on July 9 - 10, 2008 and concluded that the site meets siting criteria of 40 CFR 58 Appendix E. A second $PM_{2.5}$ monitoring site has been established in order to verify the accuracy of data collected at the initial site and to identify any potential local influence.

Comment:

One commenter (0164) specifically notes the following:

- Factor 1 – The commenter believes the CES is inappropriate because controls were installed at one of the power plants in the county in 2006 and the data used to calculate the CES is from 2005;
- Factor 2 – There is no $PM_{2.5}$ ambient monitor in Muhlenberg County and thus no violations of the $PM_{2.5}$ NAAQS have been shown. Moreover, the monitor located between Muhlenberg County and Clarksville, TN shows compliance;
- Factor 3 – The commenter believes this factor does not support including Muhlenberg County in the designation;
- Factor 4 – The commenter believes this factor does not support including Muhlenberg County in the designation;
- Factor 5 – The commenter believes this factor does not support including Muhlenberg County in the designation;

- Factor 6 – The commenter suggests that EPA should re-evaluate the use of only surface meteorological wind speeds and directions and consider back trajectories at all atmospheric levels to determine whether or not Muhlenberg County emissions are truly in the mixed boundary layer arriving in Montgomery County. The commenter cited back trajectories submitted by Kentucky; and
- Factor 8 – The commenter believes this factor does not support including Muhlenberg County in the designation because Muhlenberg County is not included in the Clarksville MSA.

EPA Response:

EPA disagrees with the commenter's assertion that the application of the 9-factor analysis (including the CES, see response above) and how it applies to the designation decision was inappropriate. The TSD in association with the designation rulemaking clearly articulates EPA's analysis of each factor in relation to this area. The Act specifically prescribes that EPA designate any area that does not meet the standard or that contributes to an area's inability to meet the standard for a newly established or revised standard. EPA has made the determination as described in the TSD (through its analysis and the information provided by the Commonwealth of Kentucky and the State of Tennessee) that a portion of Muhlenberg County is contributing to the violations at the Montgomery County monitor. Further, EPA acknowledges that updated information on controls for Muhlenberg County became available and has considered this updated information for designation purposes for this area. It is important to note that air quality data and level of emissions (not necessarily level of controls) are important considerations for whether an area is violating or contributing to a violation. EPA concludes, as explained in the TSD, that even with additional controls on the facility in Muhlenberg the plant is still contributing to the monitored violations. EPA's approach of including non-MSA, noncontiguous partial counties to capture sources that contribute emissions to a downwind area which has violations is consistent with the approach used for the nonattainment designations for the 1997 annual $PM_{2.5}$ standard. In this case, EPA's assessment identified that source as the most significant emissions source in the area (i.e., little or no mobile source or other human activity-based emissions), and thus concluded that it was appropriate to designate as nonattainment only the portion of the county where the source is located, even if that portion is not contiguous with the remainder of the nonattainment area.

3.10. Cleveland-Akron-Lorain, OH

Comment:

One commenter (0118) supports EPA recommendations for the State of Ohio. The commenter requests that EPA designate Ashtabula (partial), Cuyahoga, Lake, Lorain, Medina, Portage and Summit Counties as nonattainment. These are the same counties that EPA has proposed as candidates for a designation of nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

Ohio supplied additional information on a power plant in Ashtabula County. The facility has permanently shut down most of its operations resulting in large decrease in emissions. Ohio has shown that the facility cannot increase emissions without obtaining a new permit. EPA initially recommended designating a partial county area of Ashtabula County as nonattainment because its emissions contributed to the violations in the Cleveland area. Based on the new data, EPA concludes that the county has lowered emissions to such an extent that the area no longer can be considered contributing to the monitored violations. Thus, EPA is designating all of Ashtabula County as unclassifiable/attainment because of the emission reductions.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.11. Columbus, OH

Comment:

One commenter (0118) supports EPA recommendations for the State of Ohio. The commenter requests that EPA designate Coshocton (partial), Delaware, Fairfield, Franklin and Licking Counties as nonattainment. These are the same counties that EPA has proposed as candidates for a designation of nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges the supporting comment and made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.12. Davenport-Moline-Rock Island, IA-IL

Comment:

One commenter (0171) supports EPA's recommendations for all of Scott County, IA, and Rock Island County, IL, to be designated as nonattainment. The commenter states that high background concentrations of fine particulate matter indicate sources outside the cities of Muscatine and Davenport are the sources are contributing to the fine particulate matter concentrations recorded.

EPA Response:

EPA recommended designating the whole county of Scott County as nonattainment due to monitored violations and an initial review of the 9-factor analysis. In October 2008, Iowa provided additional information on the area in response to EPA's 120-day letter. Based on an analysis of the data provided by the State, in conjunction with the 9-factor analysis, EPA determined that it could

not support the State's recommended boundary, but that a partial county designation was appropriate.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer the TSD and the State and Tribal RTC document which explains EPA's decisions.

Please refer to the TSD for long range transport discussion.

Comment:

One commenter (0100) supports EPA's recommendation and requests that EPA designate Rock Island County, IL, as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA recommended designating the whole county of Rock Island County as nonattainment due to its contributions in Scott County, Iowa and an initial review of the 9-factor analysis. In October 2008, Illinois and Iowa provided additional information on this bi-state area in response to EPA's 120-day letters. Based on a analysis of the data provided by the States, in conjunction with the 9-factor analysis, EPA determined that it could not support the State's recommendation to exclude Rock Island County from the designation, but that a partial county designation was appropriate.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Comment:

One commenter (0091) agrees with EPA's recommendations for the proposed Davenport-Moline-Rock Island area and for including Rock Island and Scott Counties based on measured nonattainment with the standard within that combined urbanized area.

EPA Response:

EPA recommended designating the whole county of Rock Island County, IL and Scott County, IA as nonattainment due monitored violations, contributions to those monitored violations, and an initial review of the 9-factor analysis. In October 2008, Illinois and Iowa provided additional information on this bi-state area in response to EPA's 120-day letters. Based on an analysis of the data provided by the States, in conjunction with the 9-factor analysis, EPA determined that it could not support the State's recommendation to exclude Rock Island

County from the designation, or designate a very small portion of Scott County, but that a partial county designations for both counties was appropriate.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer the TSDs and the State and Tribal RTC document which explain EPA's decisions.

Comment:
One commenter (0142) disagrees with EPA's designations. The commenter requests that Rock Island County, IL, be designated as attainment. The commenter requests a 1-year delay from the EPA for the designation of Scott County, IA.

EPA Response:

EPA noted that there was sufficient monitoring data to designate the violating area as nonattainment, and a 1-year extension to obtain additional monitoring information is not justified. EPA must designate an area as nonattainment if the area is monitoring, or contributing to, a violation of the standard based on the most recent three years of monitoring data. There is sufficient monitoring data available to make the designation.

Comment:
One commenter (0142) cites the following issues with the technical analysis:

- Factor 1 – The commenter believes EPA's Regions 5 and 7 do not provide criteria (i.e., the CES) that concludes to Rock Island contributing to Scott County. The commenter cites that the 2005 National Emissions Inventory (NEI) for Rock County are higher that the values published by the Illinois EPA.

EPA Response:

There is no specific level or value of the CES that determines whether or not a county contributes enough to a PM problem at a violating monitor. Rather, the CES provides an indication of the magnitude of a county's contribution in relation to the county with the largest contribution. Any county with a CES larger than zero can be viewed as contributing something to the violation. However, the information from the CES needs to be used in conjunction with data from other sources such as the nine factors recommended in EPA guidance to fully consider a range of factors that could possibly be contributing to the violation.

The CES suggests that Rock Island County contributes about 27 percent of the contribution that Scott County contributes to the violation. The quantities of emissions for individual particulate matter-related pollutants present a similar perspective. For two examples, for SO_2, Rock Island County versus Scott County estimated emissions are 2,169 versus 9,173 tons per year, or 24 percent, and for NOx, Rock Island County versus Scott County estimated emissions are 6,140 versus 11,317 tons per year, or 54 percent. Examination of trajectory information

also suggests that emissions in various parts of Rock Island County contribute to the violation in Davenport with a very similar frequency as do the emissions in various parts of Scott County. EPA considers these indicators of impact from Rock Island County to signify sufficiently large impact to conclude that Rock Island County contributes to violations in Scott County.

EPA utilized 2005 National Emissions Inventory (NEI) data in its technical analysis. EPA used the NEI because it is the most recent quality assured data maintenance system available nationally. The EPA promulgated nonattainment area boundary (Rock Island County and Scott County) captures 98 percent of the total SO2 emissions, 91 percent of the total NOX emissions and 63 percent of the total $PM_{2.5}$ emissions.

Comment:

- Factor 2 – The commenter (0142) believes that the background 24-hour $PM_{2.5}$ value for the state is approximately 30 $\mu g/m^3$. This is the same value measured in Rock Island County. This conclusion is supported by the monitoring data which shows that the two other monitoring sites in Scott County report very similar air quality results as the Rock Island monitor. These values are at or near the typical regional background level.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

The monitored values at the Rock Island County monitor and some of the Scott County monitors show values consistent with other monitors in Illinois. The commenter seems to attribute the Scott County violation solely to emissions from local sources. EPA feels that emissions from throughout the Davenport-Rock Island-Moline area also contribute to the Scott County violation. Local sources may add the "last increment" to cause the Scott County violation, but they are not responsible for the entire concentration. Source throughout the area also contribute to the violations. It is not surprising that monitors in other moderately

sized Illinois areas show similar concentrations to the Rock Island County value. These are areas would likely have similar emissions and thus add a similar urban increment to the regional background concentration.

Comment:
The commenter (0142) cites that Iowa DNR modeling demonstrates that the nonattainment site in Scott County is significantly influenced by local sources.

EPA Response:

As stated previously, nonattainment area designations are to include the area in violation and areas shown to contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the 300 Wellman monitor, the modeling did not demonstrate that other point sources in the Davenport-Moline-Rock Island area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other point sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Comment:

- Factors 4, 6 and 8 – The commenter (0142) cites EPA's statement from the Technical Support Document stating, "Population data give an indication of whether it is likely that population-based emissions might contribute to violations" and believes EPA did not provide any additional analysis.

EPA Response:

The urbanized portions of Scott and Rock Island counties are geographically located close to each other, i.e. the area is commonly known as the Quad Cities area. The Quad Cities area of Iowa includes the cities of Davenport and Bettendorf on the Iowa side, and Moline and Rock Island on the Illinois side. The populations in the counties evaluated are predominantly concentrated in the urbanized portions of the counties in near proximity to the 300 Wellman monitor. The EPA designated nonattainment area is focused primarily on the urbanized area of Scott County, and captures approximately 89 percent of the county population.

Rural Scott County, which comprises a relatively small portion of the county's population, is associated with relatively low population-based area source emissions and potential contribution to the violating monitor. Similarly, the near proximity of the urbanized population in Rock Island County to the violating monitor can indicate potential to contribute to the violating monitor. This supports a boundary that is focused on the urbanized portions of Scott County and Rock Island County that includes about 89 percent of the population of both counties.

There are emissions associated people such as emissions from cars, both for commuting and local trips, and houses. Population and population density are logically good indicators of these emissions.

Comment:

- Factors 4, 6 and 8 – The commenter (0142) believes EPA did not explain how these factors impact the monitored violations.

EPA Response:

In regards to vehicle miles traveled, the metropolitan area is the most heavily vehicle-traversed part of the county. As such, it is reasonable to include the contiguous metropolitan area in the nonattainment boundary. The traffic and commuting data evaluated under Factor 4 are also indicative of the vehicle related emissions and their distribution.

In evaluating the meteorology factor, the wind rose (refer to the Iowa TSD) indicates that winds most frequently occur from a generally southerly direction, from the southwest to the southeast, on high $PM_{2.5}$ days. This suggests relatively low contributions from areas located to the west, north, and east of the monitor, including Clinton County, northern portions of Rock Island County, and the most northerly portions of Muscatine County. EPA's nonattainment boundary includes potential emissions sources located upwind to the southwest, south, and southeast of the violating monitor.

In evaluating the jurisdictional boundary factor, consideration was given to existing boundaries and organizations that may facilitate air quality planning and the implementation of control measures to attain the standard. There was a review of the information regarding the Bi-State Regional Commission which represents the Metropolitan Planning Organization (MPO) for urbanized area transportation planning in the Quad Cities area. The MPO serves Henry, Mercer, and Rock Island Counties in Illinois, and Scott and Muscatine Counties in Iowa. Its web site is: www.bistateonline.org. However, the Bi-State planning area itself was not a key factor in determining the intended nonattainment boundary; other factors pointed to a more localized nonattainment area boundary.

Comment:

- Factor 9 – The commenter (0142) believes that Region 7 appropriately considers emission reductions in Clinton County but not in Rock Island.

EPA Response:

Illinois did not provide information on control of sources in Rock Island County. So, EPA assumes that the emission estimates in the 2005 inventory reasonably represent current emissions. If sources in Rock Island County had added additional controls or other emission reductions that would have lowered emissions from the 2005 levels, EPA would have considered this. Since this was

not the case for Rock Island County, the emissions considered in Factor 1 were accurate.

Comment:

One commenter (0083) requests that EPA designate a partial county boundary for Scott County, Iowa, that is within the borders of the city of Davenport, as nonattainment. The commenter cites the technical analysis from Iowa DNR that points to a point source nearby the violating monitor as justification for the nonattainment boundaries.

EPA Response:

EPA conducted a case-by-case analysis of the violating areas based on the information provided to it by the State and other relevant information. EPA must designate the violating area as nonattainment as well as the area contributing to the violation. The 120-day letter sent to the State noted that the data the State provided did not support very small partial county boundaries. The data did not demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this information was not provided to the EPA, its case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution solely from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a smaller contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day letter did not support as narrow a boundary as recommended by the State. EPA concluded that a larger partial county designation, inclusive of the townships of the major metropolitan areas includes the violating area and the nearby contributing areas. Refer to EPA's response above concerning the nature of the monitors.

Comment:

The commenter (0083) asserts that the violating monitoring sites are not representative of ambient air quality throughout the county as the violating monitors are source-oriented monitors and that "all information" indicates that the air quality violations are limited to the immediate areas around Blackhawk Foundry and Grain Processing Corporation. The commenter states that emissions from the entire three-county area have not been shown to contribute to the monitored violations and that the nonattainment area should not exceed the "representative scale" of the two monitors.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300

Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

Nonattainment area designations are to include the area in violation and areas shown to contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitors, the modeling did not demonstrate that other point sources in the Quad Cities area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other point sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Comment:

The commenter (0083) suggests that EPA should not designate entire counties as nonattainment, but should take into consideration efforts of the two named point sources to negotiate, with the State, "voluntary" control strategies.

EPA Response:

EPA recognizes the efforts by the state and the stakeholders to achieve emissions reductions as soon as possible. EPA also encourages both states to continue efforts to assist the community in implementing voluntary measures.

However, under section 107(d) of the Clean Air Act, in designating nonattainment areas, EPA must designate, as nonattainment, areas that are violating a NAAQS and areas that are contributing to the violations. This requirement does not authorize EPA to rely on the ongoing efforts to develop further control strategies in determining nonattainment boundaries. EPA's decision must be based on the statutory requirements, and EPA's promulgation of the nonattainment designations for these areas, as described in detail in the TSDs, meets the statutory requirements.

We also note that the state's submission includes a "mitigation plan" submitted by Blackhawk Foundry. The plan states that the company's intended control

strategy, when fully implemented, "will significantly reduce $PM_{2.5}$ concentrations". However, the document also concludes that, after implementation of the "preferred alternatives" identified in the company's control strategy, the "combination of the predicted concentration" from the foundry, and the background concentration, "could result in a predicted exceedance of the $PM_{2.5}$ NAAQS". ("$PM_{2.5}$ Emissions Mitigation Plan", Oct. 10, 2008, at p. 3.) This uncertainty provides additional justification for establishing a boundary to ensure that emissions from other nearby sources in the area are considered in developing the attainment demonstration control strategies for these two areas.

Comment:

One commenter (0063/0067) disagrees with EPA's designations. The commenter requests that Rock Island County, IL, be designated as attainment. The commenter believes that only a portion of Scott County, IA should be designated as nonattainment. The commenter cited the following issues with the technical analysis:

Rock Island, IL, Scott County IA (Davenport-Moline-Rock Island, IA-IL)

- Factor 1 – The commenter believes EPA gave inappropriate and distortional weight to the CES. The commenter believes EPA's Regions 5 and 7 do not provide criteria (i.e., the CES) that concludes to Rock Island contributing to Scott County. The commenter cites that the 2005 NEI for Rock County are higher that the values published by the Illinois EPA.

EPA Response*:*

EPA recognizes that the CES is one analytical tool used in the process of determining nonattainment area boundaries and should not be considered as the sole factor for EPA's conclusions. The CES is a tool to provide an initial set of potential counties contributing to a violation in an area. Those counties were then further examined using the nine factors and other information from the State and local air agencies to determine the strength an validity of the evidence for keeping or dropping counties from the initial set.

EPA is designating the partial county nonattainment area in Rock Island and Scott Counties for the 2006 24-hour $PM_{2.5}$ standard after considering each of the nine factors, as detailed in the TSD. For this decision the EPA relied most heavily on emissions, air quality, meteorology, and population. The additional modeling data provided evidence that was used to determine that a majority of emissions from nearby sources that cause or contribute to the violation should be included in the nonattainment area. EPA determined that inclusion of the local point source $PM_{2.5}$ emissions is a highly significant consideration in establishing the nonattainment boundaries. For Scott County, the boundary includes all of the local point sources. The EPA defined nonattainment includes the area violating the standard and the area that is contributing significantly to the violation. The partial county areas of Rock Island and Scott Counties fulfill this definition.

Comment:

- Factor 2 – The commenter (0063/0067) believes that the background 24-hour $PM_{2.5}$ value for the State is approximately 30 $\mu g/m^3$. The commenter cites that Iowa DNR modeling demonstrates that the nonattainment site in Scott County is significantly influenced by local sources and the monitor is designated as a SPM.

EPA Response:

As stated previously nonattainment area designations are to include the area in violation and areas shown to contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitor, the modeling did not demonstrate that other sources in the Davenport-Moline-Rock Island area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Comment:

- Factors 4 and 6 – The commenter (0063/0067) believes EPA did not explain how these factors impact the monitored violations.

EPA Response:

In regards to vehicle miles traveled, the metropolitan area is the most heavily vehicle-traversed part of the county. As such, it is reasonable to include the contiguous metropolitan area in the nonattainment boundary. In evaluating the meteorology factor, the wind rose (refer to the Iowa TSD) indicates that winds most frequently occur from a generally southerly direction, from the southwest to the southeast, on high $PM_{2.5}$ days. This suggests relatively low contributions from areas located to the west, north, and east of the monitor, including Clinton County, northern portions of Rock Island County, and the most northerly portions of Muscatine County. EPA's nonattainment boundary includes potential emissions sources located upwind to the southwest, south, and southeast of the violating monitor.

EPA determined nonattainment area includes sufficient portions of Rock Island County in Illinois to represent the predominance of population and emissions. EPA believes that sufficient commuting occurs between Rock Island County and Scott County that Rock Island County must be considered an integral part of the Davenport area.

Comment:

One commenter (0070) suggests that the EPA recommended entire county nonattainment area designation for Scott County, IA be reduced to a "3 square mile area adjacent to the foundry". The commenter believes that a whole county designation is unjust for the citizens and businesses of Scott County, IA.

EPA Response:

EPA must designate the violating area as nonattainment as well as the area contributing to the violation. The 120-day letter sent to the State noted that the technical support data it provided did not support very small partial county boundaries. The data did not demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this information was not provided to the EPA, its case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution directly from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a smaller contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day letter did not support as narrow a boundary as recommended by the State. EPA concluded that larger partial county designations, inclusive of the townships of the major metropolitan area will protect public health and allow the State greater flexibility in establishing its attainment demonstration. With respect to impacts on county residents and businesses, the State has flexibility under the CAA to consider such impacts as it develops the control strategy to bring the area into attainment of the air quality standard.

Comment:

One commenter (0079) disagrees with EPA's recommended designations. The commenter requests a one-year extension of the designation of Scott County, IA and Rock County, IL.

EPA Response:

EPA notes that there was sufficient monitoring data to designate the violating area as nonattainment, and a one-year extension to obtain additional monitoring information is not justified. EPA is obligated to designate an area as nonattainment if the area is monitoring a violation of the standard based on the most recent three years of monitoring data. There is sufficient monitoring data available to make the designation.

Comment:

The commenter (0079) believes that there is insufficient information based on the dramatically different technical conclusions between Iowa DNR and EPA based on similar technical data and that designation of a county in a statistical metropolitan statistical area is not supported by EPA's guidance and claims that EPA is not applying the guidance in designation of Scott County, IA, Rock County, IL. The commenter

believes that EPA did not follow proper procedures required by 107(d)(1)(A) by using 2005-2007 data.

EPA Response:

EPA did conduct a case-by-case analysis of the violating areas based on the information provided to it by the State and other relevant information. EPA must designate the violating area as nonattainment as well as the area contributing to the violation. The 120-day letter sent to the State noted that the data the State provided did not support very small partial county boundaries. The data did not demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this information was not provided to the EPA, its case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution solely from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a smaller contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day letter did not support as narrow a boundary as recommended by the State. EPA concluded that a larger partial county designation, inclusive of the townships of the major metropolitan areas includes the violating area and the nearby contributing areas. Refer to EPA's response above concerning the nature of the monitors.

Comment:

The commenter (0079) believes that the Blackhawk Foundry monitor is not representative of the general air quality conditions. The commenter references 40 CFR 58 to describe the special purpose monitor in Scott, County. The commenter believes that the $PM_{2.5}$ concentrations are dominated by long range transport.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA

establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

Nonattainment area designations are to include the area in violation and areas that contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitor, the modeling did not demonstrate that other sources in the Quad Cities area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Please refer to the Iowa TSD for long range transport discussion.

Comment:

One commenter (0152) disagrees with EPA's designations. The commenter requests that Rock Island County, IL be designated as attainment. The commenter believes that only a portion of Scott County, IA should be designated as nonattainment. The commenter cited the following issues with the technical analysis:

- Factor 1 – The commenter believes EPA gave inappropriate and distortional weight to the CES. The commenter believes EPA's Regions 5 and 7 do not provide criteria (CES) that concludes to Rock Island contributing to Scott County. The commenter cites that the 2005 NEI for Rock County are higher that the values published by the Illinois EPA.

EPA Response:

EPA's intent for creating the CES was to use it as an initial screening tool to emphasize nearby counties to the violating site that should be evaluated as candidates for possible inclusion in a nonattainment area based on contribution to the violations in the area. Data from other sources including the factors proposed by EPA guidance and State information provided through comment were considered for the final boundary determination. At no point in the process was any single source of information used to be outcome-determinative nor was any factor given more weight than another in making the final boundary decisions.

Comment:

- Factor 2 – The commenter (0152) believes that the background 24-hour $PM_{2.5}$ value for the State is approximately 30 $\mu g/m^3$. The commenter cites that Iowa DNR modeling demonstrates that the nonattainment site in Scott County is significantly influenced by local sources and the monitor is designated as a SPM.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site (is also situated for assessment of population exposure NAAQS compliance, but it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

As stated previously nonattainment area designations are to include the area in violation and areas shown to contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitor, the modeling did not demonstrate that other point sources in the Quad Cities area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other point sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Comment:

- Factors 4 and 6 – The commenter (0152) believes EPA did not explain how these factors impact the monitored violations.

EPA Response:

EPA determined nonattainment area includes sufficient portions of Rock Island County in Illinois to represent the predominance of population and emissions. Rock Island County has moderate emissions that commonly are blown toward the violating monitor in Scott County. EPA believes that sufficient commuting occurs between Rock Island County and Scott County that Rock Island County must be considered an integral part of the Davenport area.

Comment:

One commenter (0144) requests EPA to designate the Davenport, IA-IL area as unclassifiable pending the completion of source apportionment modeling and chemical filter analysis studies.

EPA Response:

EPA must designate the violating area as nonattainment as well as the area contributing to the violation. The 120-day letter sent to the State noted that the technical support data it provided did not support very small partial county boundaries. The data did not demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this demonstration was not made, EPA's case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution directly from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a minor contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day letter did not support as narrow a boundary as recommended by the State. EPA concluded that larger partial county designations, inclusive of the townships of the major metropolitan area will protect public health and allow the State greater flexibility in establishing its attainment demonstration. Refer to EPA's response above concerning the nature of the monitors. EPA only has authority to designate an area "unclassifiable" if it lacks sufficient information to promulgate a designation, and EPA does not lack information for this area.

Comment:

The commenter (0144) suggests that EPA's whole county recommendation is not in line with previous designations for PM_{10}. The commenter cites Buffalo, IA as a reference to its point and notes that two large point sources were contributing the violation of PM_{10} standard and subsequent consent orders "appear to have been a successful solution to the air quality issues in that area".

EPA Response:

Prior designations for PM10 areas have little, if any, relevance for the PM2.5 NAAQS. PM10 and PM2.5 are different NAAQS, with different size indicator particles, that behave differently in the atmosphere, and are often caused by emissions from different sources that may require different controls strategies. PM2.5 typically transports much greater distances in the atmosphere and typically is much more likely to consist of secondarily formed particles that result from the mixture of precursors in the atmosphere. Finally, PM10 boundaries were often designated nearly 20 years ago, and current facts and circumstances in the area may have changed.

Comment:

One commenter (0089) disagrees with EPA's recommended designation that Scott and Rock Island Counties be designated as nonattainment. The commenter requests that the counties be designated as attainment. The commenter suggests as an alternative that if EPA designates the counties nonattainment, that the boundaries are the narrower boundaries. The commenter believes that EPA is not permitted to base designations upon 2005-2007 data and must do so based upon 2004-2006.

EPA Response:

EPA has used the most recent monitoring data available to identify areas that violate the new standard. The Clean Air Act requires that EPA promulgate designations based on valid air quality data available at the time of the promulgation. That data must be quality assured in order to be considered in the designation process. That data set may change during the designation process as data is submitted by the state to the EPA each year and it is quality assured. The State was asked to make recommendations for all areas in the State to be designated as unclassifiable, attainment, or nonattainment. These recommendations were due to EPA by December 2007. Iowa based its recommendation of the entire state being attainment on the most recent quality assured data available to it at the time of the recommendation, which was 2004-2006 monitoring data. At that time the data did not indicate violations of the 2006 24-hour $PM_{2.5}$ standard. The State anticipated that more recent data might show violations and asked EPA to consider that data in making decisions. During 2008, 2007 monitoring data was quality assured and as such was ready for consideration by the State and EPA. Monitoring data from 2005-2007 showed two areas in the state with violations of the standard. Based on this more recent data the EPA informed the State of the violating monitors and requested a revised recommendation. Iowa subsequently recommended two very small partial county areas in the violating counties. In addition, EPA is not "re-designating the area" as suggested by the commenter. It is instead promulgating initial designations based on the most current information available as it is required to do.

Finally, if EPA were required to promulgate designations based upon 2004-2006 data, it could not consider more recent data from 2008 that the state may elect to submit if it were to affect the attainment status of this area prior to the effective date of the designation.

Comment:

- EPA used monitoring data from two source-oriented, SPMs with middle spatial scale ranges, that exhibited exceedance that were not representative of general air quality conditions;

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is

situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

Nonattainment area designations are to include the area in violation and areas that contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitor, the modeling did not demonstrate that other sources in the Quad Cities area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Comment:

- EPA's statements on whether sufficient data is available to properly characterize the nonattainment area are contradictory;

EPA Response:

EPA noted that there was sufficient monitoring data to designate the violating area as nonattainment, and a 1-year extension to obtain additional monitoring information is not justified. EPA must designate an area as nonattainment if the area is monitoring a violation of the standard based on the most recent three years of monitoring data. There is sufficient monitoring data available to make the designation. However, there was not sufficient data provided by the State to support a very small partial county designation as recommended by the State. Therefore EPA's statements were related to two separate issues and not inconsistent.

Comment:

- EPA has failed to follow its own policy guidance in the establishment of proposed area designations.

***EPA Response*:**

EPA did conduct a case-by-case analysis of the violating areas based on the information provided to it by the State and other relevant information. EPA must designate the violating area as nonattainment as well as the area contributing to

the violation. The 120-day letter sent to the State noted that the data the State provided did not support very small partial county boundaries. The data did not demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this information was not provided to the EPA, its case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution solely from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a smaller contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day letter did not support as narrow a boundary as recommended by the State. EPA concluded that a larger partial county designation, inclusive of the townships of the major metropolitan areas includes the violating area and the nearby contributing areas. Refer to EPA's response above concerning the nature of the monitors.

Comment:

- EPA should give consideration to the efforts already underway in the Quad Cities area to address high background levels of $PM_{2.5}$.

EPA Response:

EPA recognizes the efforts by the state and the stakeholders to achieve emissions reductions as soon as possible. EPA also encourages both states to continue efforts to assist the community in implementing voluntary measures.

However, under section 107(d) of the Clean Air Act, in designating nonattainment areas, EPA must designate, as nonattainment, areas that are violating a NAAQS and areas that are contributing to the violations. This requirement does not authorize EPA to rely on the ongoing efforts to develop further control strategies in determining nonattainment boundaries. EPA's decision must be based on the statutory requirements, and EPA's promulgation of the nonattainment designations for these areas, as described in detail in the TSDs, meets the statutory requirements.

We also note that the state's submission includes a "mitigation plan" submitted by Blackhawk Foundry. The plan states that the company's intended control strategy, when fully implemented, "will significantly reduce $PM_{2.5}$ concentrations". However, the document also concludes that, after implementation of the "preferred alternatives" identified in the company's control strategy, the "combination of the predicted concentration" from the foundry, and the background concentration, "could result in a predicted exceedance of the

$PM_{2.5}$ NAAQS". ("$PM_{2.5}$ Emissions Mitigation Plan", Oct. 10, 2008, at p. 3.) This uncertainty provides additional justification for establishing a boundary to ensure that emissions from other nearby sources in the area are considered in developing the attainment demonstration control strategies for these two areas.

Comment:

Two commenters (0155, 0150) suggest as an alternative that if EPA designates the Scott County, IA and Rock Island County, IL areas, as nonattainment, that narrower boundary designations are made as recommended by the Iowa Department of Natural Resources (DNR). The commenters believe that the monitor results are not representative of the general area air quality. The commenters believe that the monitor results are not representative of the general area air quality. One of the commenters (0155) also requests that Rock Island County, IL, be designated as attainment.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

EPA believes that Rock Island County has moderate emissions that commonly are blown toward the violating monitor in Scott County. We also believe that sufficient commuting occurs between Rock Island County and Scott County such that Rock Island County must be considered an integral part of the Davenport area.

Comment:

The commenter (0155) suggests that EPA should not designate the entire county as nonattainment but should take into consideration efforts of the named point source to negotiate, with the State, a "voluntary" control strategy.

EPA Response:

EPA recognizes the efforts by the state and the stakeholders to achieve emissions reductions as soon as possible. EPA also encourages both states to continue efforts to assist the community in implementing voluntary measures.

However, under section 107(d) of the Clean Air Act, in designating nonattainment areas, EPA must designate, as nonattainment, areas that are violating a NAAQS and areas that are contributing to the violations. This requirement does not authorize EPA to rely on the ongoing efforts to develop further control strategies in determining nonattainment boundaries. EPA's decision must be based on the statutory requirements, and EPA's promulgation of the nonattainment designations for these areas, as described in detail in the TSDs, meets the statutory requirements.

3.13. Dayton-Springfield, OH

Comment:

One commenter (0118) supports EPA recommendations for the State of Ohio. The commenter requests that EPA designation Clark, Greene and Montgomery Counties as nonattainment. These are the same counties that EPA has proposed as candidates for a designation of nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.14. Detroit-Ann Arbor, MI

Comment:

One commenter (0130) believes that the Port Huron monitor (St. Clair County) should be treated separately and EPA is inappropriately expanding regulatory scope. The commenter believes the EPA's designation of multiple counties in southeast Michigan, including Wayne, Oakland, Macomb, Washtenaw, St. Clair, Monroe, and Livingston Counties inappropriately expands regulatory scope far beyond the specific location with a specific challenge. The commenter refers to technical comments submitted by another commenter (0110) for support. Several commenters (0075, 0094, 0097, 0110, 0113, 0130) disagree with EPA's proposed designations in the Detroit nonattainment area. The commenters support Michigan Department of Environmental Quality's (MDEQ) initial recommendation that southeast Michigan be separated into three distinct nonattainment areas, reflecting the distinct circumstances that lead to measured nonattainment.

EPA Response:

EPA disagrees with the commenters assertions that EPA should follow the recommendations of the State of Michigan's to divide the Detroit nonattainment area into three separate nonattainment areas for a number of reasons. EPA generally will not divide areas because having one area allows for better planning. Instead of assessing the impact of a source on several nonattainment areas, determining the impact is simplified when there is just one area. Having a single

nonattainment area also eliminates the need to integrate planning for multiple areas.

Specifically in the Detroit area, the metropolitan planning organization addresses the seven counties of the existing nonattainment area and thus is already designed to conduct planning for the prospective nonattainment area as a whole. Michigan noted that the air quality in St. Clair and Wayne Counties may be impacted by unique sources. These counties are also impacted by the same common sources as all counties in the Detroit area. Therefore, a single Detroit nonattainment area better reflects the integrated planning that will be needed for this area. Michigan will have the opportunity in its nonattainment plan development to include specific control measures to address the air quality in St. Clair and Wayne Counties beyond the controls implemented for area-wide air quality improvement.

Please refer to the State RTC Document for a more detailed explanation of EPA's designation of the Detroit area, including EPA assessment of the State's various technical arguments that these pubic commenters endorsed. See section 2.2 of this document for EPA's responses to the various legal comments submitted by these commenters challenging EPA's interpretation of the statute and designations process generally.

3.15. Evansville, IN

Comment:

One commenter (0058) requests a 1-year extension of the designation deadline for Dubois County, IN.

EPA Response:

Indiana submitted exceptional events information for several areas in the State. EPA concurred with some of the exceptional events and adjusted the design values appropriately. As explained in the TSD, in the Evansville area, the 2005-2007 design value for Dubois County shows that it now attains the 2006 $PM_{2.5}$ air quality standards. Dubois County was recommended as nonattainment because it was considered to be violating the air quality standards. EPA reexamined the information for Dubois County and determined that after concurrences on the exceptional events claims it is neither violating the 24-hour $PM_{2.5}$ NAAQS nor is it contributing to violations in Vanderburgh County. EPA is making the designations in December 2008. EPA is designating Dubois County as attainment and a 1-year extension is not warranted because EPA has available information to support the designation.

Comment:

One commenter (0106) supports EPA's recommendation and requests that EPA designate Dubois, Gibson, Pike, Spencer, Vanderburgh, Knox and Warrick Counties in Indiana as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

Indiana submitted exceptional events information for several areas in the State. EPA concurred with some of the exceptional events and adjusted the design values appropriately. As explained in the TSD, in the Evansville area, the 2005-2007 design value for Dubois County shows that it now attains the 2006 $PM_{2.5}$ air quality standards. Dubois County was initially recommended as nonattainment because it was considered to be violating the air quality standards. EPA reexamined the information for Dubois County in light of the exceptional events claims and determined that it is neither violating the 24-hour $PM_{2.5}$ NAAQS nor is it contributing to violations in Vanderburgh County. Thus EPA is designating Dubois County as attainment.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Comment:

One commenter (0103) requests a 1-year extension from the EPA to designate the proposed Evansville, IN nonattainment area, in order to obtain sufficient information. The commenter believes that if the most recent data from 2008 is used Evansville, IN, is likely to be able to be in compliance. The commenter recommends if EPA proceeds with 2008 designations, that EPA designate as nonattainment only those counties with violating monitors. The commenter provided additional technical analysis to support its claims.

EPA Response:

EPA is required by the Clean Air Act to promulgate designations within two years of the promulgation of an air quality standard, in this case by December 18, 2008. An extension may be granted in cases where information is insufficient to promulgate designations, but because EPA believes there is sufficient information an extension is not warranted for Indiana. Therefore, EPA is making its designations in December 2008.

EPA is required by the Act to designate all areas that contribute to violations as nonattainment in addition to areas that actually violate the standard, thus EPA can not designate only the areas that have violating monitors. As for monitoring data, EPA uses data from FRM or FEM monitors to determine the air quality. If 2008 data will show that the Evansville area attains the 2006 air quality standards, then Indiana needs to submit the quality assured data to EPA within the specified period.

Please see section 2.3 above for EPA's Response regarding the submission of 2008 data. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions for this area.

The commenter supplied information to support its comments. As noted, EPA can only use FRM or FEM data in making designations. Supplied monitoring data shows the decreasing trend of $PM_{2.5}$ concentration in the Evansville area. EPA is aware of this trend. However, EPA must designate areas under the statute based on current conditions, and Evansville is currently violating the standard. Emissions data were supplied. Emissions data is one of the nine factors that EPA examined in determining the nonattainment area. Information on wind speed and direction were provided for the days of 17 "pollution episodes." The winds came from a variety of directions with a slight tendency to be from the southwest. EPA developed a pollution rose for Evansville which showed prevailing surface winds come from a variety of directions. The information provided by the commenter used just "episodes," so it is only a small sample set. Examination of the Appendix K of the comments graphs shows the wind direction is often varied even within an "episode." EPA concluded that the varying winds did support contribution from the areas included in the designation.

The commenter also supplied a number of back trajectories. The $PM_{2.5}$ concentration in a location such as Evansville is the result of complex atmospheric reactions. In addition to the $PM_{2.5}$ directly emitted, some of the concentration is formed from precursor emissions. The sources emitting the various components may be in different areas making the analysis for wind information more complex. Back trajectories also do not account for the dispersion that occurs as pollutants are carried from their source. The back trajectories illustrate that some of the pollution impacting an area is from distant sources. EPA is aware that emissions from sources around the nation contribute a regional background level of $PM_{2.5}$. EPA has developed a number of national emissions control programs to reduce the regional background concentration. The CAA provides other mechanisms to address regional pollution problems, such as section 110(a)(2)(D) and section 126. In the context of designations, however, EPA must determine what nearby areas contribute to violations within those areas, and the nonattainment area plan provisions of section 172 then address the "local" component of the nonattainment problem in the area. In the Evansville area, even accounting for the regional background, emissions from the nonattainment area counties still contribute to violations as discussed in the TSD.

Comment:

The commenter (0103) questions the use of the CES for designations.

EPA Response:

The CES is an analytical tool to provide an initial assessment of areas that may be contributing to violations in a specific area. EPA recognized this fact and therefore used additional forms of information to evaluate areas. EPA also solicited additional information from State and local agencies that was unique to the area in question. EPA made its final designations using information it had and the States provided on the recommended nine factors as well as other analytical

tools. The CES uses two seasonal factors to better weight the score based on seasonal variances in chemical composition of the $PM_{2.5}$ concentration in an area. One can see some of this seasonal variability in the speciation data charts in Appendix G of the comments. Calculating this factor for all high concentration days in areas across the nation would be a substantial undertaking. In the Evansville area, EPA used the nine factors and analytical tools in deciding that Posey County, Indiana, Henderson County, Kentucky, and other counties to the south and west of Vanderburgh County are not contributing to the monitored violations. EPA used a county-by-county evaluation to determine a nonattainment area that contains violating and contributing areas as required instead of simply including all metropolitan area counties which could have been overinclusive or just the violating counties which would have been underinclusive.

3.16. Fairbanks, AK

Comment:

One commenter (0019/0084) disagrees that Eielson Air Force Base (EAFB) contributes to the violation in Fairbanks, AK. On September 11, 2008 the commenter requested that the EPA extend the public comment period because the commenter believed there was data to show that the Eielson Air Force Base in Alaska is in attainment. On October 1, 2008, the commenter requested a 1-year extension for the designation of Fairbanks, AK, to include information from an ongoing study. The commenter provides the following reasons:

- The commenter undertook ambient air monitoring for $PM_{2.5}$ and PM_{10} during the period of October 1, 2004 through September 30, 2005 (data submitted). The commenter states that the results of this study clearly show EAFB is in attainment with the NAAQS for both 24-hour and annual standards for $PM_{2.5}$ at the time the study was completed (the 24-hour standard for $PM_{2.5}$ was 65 $\mu g/m^3$; and the EPA had not promulgated rules for excluding measurements associated with exceptional events such as wildfires). EAFB believes the values that exceeded the 2006 24-hour $PM_{2.5}$ NAAQS (in their comparison with 2004/2005 data) were due to extensive wildfires in the interior region of Alaska during that time period and high ambient $PM_{2.5}$ measurements should be excluded from the data set used to determine compliance with the 24-hour $PM_{2.5}$ standard.

EPA Response:

In its final designation, EPA has not included Eielson Air Force Base within the boundary of the Fairbanks nonattainment area for reasons explained in its TSD for the areas as well as in its State and Tribal RTC document and as further explained in these responses. However, after review of the data submitted by the EAFB, EPA disagrees with the assertion that the EAFB is in attainment with the 2006 24-hour $PM_{2.5}$ standard. This is principally because the methodology for determination of whether an area is in violation has several significant components that were not met.

Whether an area is violating a criteria pollutant standard is identified using data from FRM or FEM monitors that are sited and operated in accordance with 40 CFR Part 58, as revised on October 17, 2006 (see 71 FR 61236). The monitors used for $PM_{2.5}$ measurement are indeed FRM monitors and were for potential PSD permit related monitoring program. EPA is unable to verify whether the siting criteria were met and approved by an approved air permitting authority.

Once the siting and operating criteria are met, the design value for the criteria pollutant ($PM_{2.5}$ in this case) is computed according to 40 CFR Part 50 Appendix N, as revised on October 17, 2006. 40 CFR Part 50, Appendix N, Section 4.2 a specifically says that

> "The 24-hour $PM_{2.5}$ NAAQS is met when the 24-hour standard design value at each monitoring site is less than 35 μgm^{-3}. This comparison shall be based on 3 consecutive, complete years of data."

As EAFB conducted air pollutant monitoring only for one year, this data cannot be used to determine the attainment status of an area. Therefore, the claim that this area is in attainment of the standards based on the data submitted by EAFB is not valid. What is evident is that EAFB has one year of $PM_{2.5}$ data measured using an FRM monitor that shows a few exceedances in one year of the 24-hour $PM_{2.5}$ NAAQS in the summer months.

Even prior to the 1990 CAA, EPA has had guidance regarding the exclusion of data affected by an exceptional. For a discussion of the historical development of EPA guidance and rules on exceptional events, see the final preamble of the Exceptional Events Rule, 72 FR at 13562. For example, the Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events (exceptional events guideline) and Appendix K to 40 CFR, part 50, were issued by EPA to address, in part, the situation where natural sources strongly influence an area's PM_{10} air quality. Later, in 1996 EPA's Assistant Administrator for Air and Radiation published the Natural Events Policy Memorandum, which provided further guidance on the treatment of exceptional events. And, on Thursday, March 22, 2007, EPA published its final rule on the Treatment of Data Influenced by Exceptional Events in Federal Register Vol. 72, No. 55, pp 13650. EPA has always had a mechanism to treat data affected by exceptional events that would influence the designation status of an area. However, as the data submitted by EAFB cannot be used for designations of an area, as mentioned above, this assertion is not relevant to the discussion other than to flag high values that may potentially be attributed to natural events.

Comment:

- The commenter (0019/0084) believes EPA has substantially overestimated the amount of $PM_{2.5}$ and SO_2 emissions from stationary emission units. EAFB believes EPA used potential emissions estimates from 2002 to estimate $PM_{2.5}$ and

SO_2 emissions from EAFB. The commenter provided additional information about controls installed in 2005 at the Central Heat and Power Plant (CHPP).

EPA response:

EPA appreciates the information supplied in the attachments. The full-stream baghouses on all boilers constitutes application of good control technology to reduce direct PM emissions. However, chemical speciation of filters in the Fairbanks area indicates that secondarily formed PM is a high proportion of filter mass that leads to exceedances and violations of the $PM_{2.5}$ NAAQS. Therefore, EPA has reviewed all major sources of secondary precursors such as SO_2 and NO_x. However, in this regard, although the data shows that the EAFB has major sources of NO_x (330 tons per year or tpy) and SO_2 (280 tpy), for reasons articulated in the technical support document, the Response to State and Tribal comments and in this document for the Fairbanks area, EPA has excluded EAFB from the boundary of the Fairbanks nonattainment area.

Comment:

- The commenter (0019/0084) believes emissions from space and hot water heating sources are minor and have a small input into the $PM_{2.5}$ concentrations.

EPA Response:

Although no quantification of emissions is provided, EPA is in general agreement that heating related emissions may be minor.

Comment:

- The commenter (0019/0084) does not believe activities on military training ranges within the Fairbanks North Star Borough (FNSB) have any effect on ambient concentrations of $PM_{2.5}$ in the city of Fairbanks and the direction of prevailing winds generally out of the north and the northeast, EAFB does not believe emissions from Blair Lakes could be transported to Fairbanks.

EPA Response:

Based on the information provided by EAFB and Fort Wainwright, EPA agrees that the activity and sources in the military training ranges to the due south and east of Fairbanks do not contribute to the violation of the $PM_{2.5}$ NAAQS at the Fairbanks monitor.

Comment:

- The commenter (0019/0084) believes that the predominant wind directions during non calm conditions are from the north and northeast and the EAFB is located southeast of Fairbanks, AK. The commenter believes that winds speeds are either calm or predominantly out of the northeast, northwest, or southwest quadrants on days where the $PM_{2.5}$ concentrations exceeded 35 $\mu g/m^3$. The commenter believes during calm conditions it is unlikely that emissions from the EAFB contribute to violations in Fairbanks, AK.

EPA Response:

After EPA promulgated the latest $PM_{2.5}$ NAAQS in December 2006, States were required to submit recommendation for area designations by December 2007 based on $PM_{2.5}$ monitoring data from 2004-2006. EPA invited the State to provide a recommendation for the Fairbanks based on a through technical analysis of the data. The State submitted its recommendation for the Fairbanks area with significant data gaps and no meteorological analysis. The submission failed to conclusively establish sources that would contribute to violations at the Fairbanks $PM_{2.5}$ monitor or the meteorological conditions surrounding the exceedance events. In its letter modifying States recommendation sent to the State of Alaska on August 18, 2008, EPA used data at its disposal to designate the area nonattainment and determined the boundaries to include all potential sources that could contribute to a violation of the $PM_{2.5}$ 24-hour standards at the Fairbanks monitor. EPA's review did indicate that the City of North Pole and EAFB had major sources of criteria pollutants that could potentially contribute to Fairbanks violations.

Subsequently, on October 20, 2008, the State submitted a comprehensive technical analysis using the recommended 9 factors suggested by EPA, to identify the sources that contribute to violations of the $PM_{2.5}$ standards at the Fairbanks monitor. Further monitoring studies conducted in the winter of 2007-2008 in the Fairbanks-North Pole area provide support to the fact that $PM_{2.5}$ concentrations in the area are in phase, that is, they increase and decrease concurrently with time of day, at Fairbanks and North Pole, which indicates a homogeneous air mass. Additional data was submitted by EAFB and Fort Wainwright. The meteorological monitoring data for surface winds from EAFB was especially informative. After review of this data, EPA believes that emissions from sources in North Pole do contribute to the violations of the $PM_{2.5}$ NAAQS at Fairbanks. As emissions from EAFB are very small in relation to the emissions in the area and because the meteorological evidence supporting flow from EAFB to Fairbanks during $PM_{2.5}$ exceedances does not support a determination that emissions at EAFB are contributing to violations at the Fairbanks $PM_{2.5}$ monitor.

Comment:

- Prior to the September 2, 2008 Notice Of Availability publication in the Federal Register, the commenter (0019/0084) was unaware that EPA was considering the inclusion of EAFB and some of its training ranges in the proposed $PM_{2.5}$ nonattainment area for the FNSB. Had the commenter been aware of EPA's concerns about contributions from these sources, EAFB would have provided the information and data.

EPA Response:

After EPA promulgated the latest $PM_{2.5}$ NAAQS in December 2006, States were required to submit recommendation for area designations by December 2007 based on $PM_{2.5}$ monitoring data from 2004-2006. EPA invited the State to provide a recommendation for the Fairbanks based on a through technical analysis

of the data. It is customary at this stage for States to consult and seek advice from all jurisdictions, agencies and other interested parties that may be affected by this decision. The State submitted its recommendation for the Fairbanks area with significant data gaps and no meteorological analysis. The submission failed to conclusively establish sources that would contribute to violations at the Fairbanks $PM_{2.5}$ monitor or the meteorological conditions surrounding the exceedance events.

In its letter modifying the State's recommendation sent to the State of Alaska on August 18, 2008, EPA used available data to designate the area nonattainment and determined the boundaries to include all potential sources that could contribute to a violation of the $PM_{2.5}$ 24-hour standards at the Fairbanks monitor. EPA's review did indicate that the City of North Pole and EAFB had major sources of criteria pollutants that could potentially contribute to Fairbanks violations. In its data submission on October 20, 2008, according to EPA's knowledge, the State of Alaska did consult with all jurisdictions and agencies that would be affected and provided a comprehensive set of data, which supports our determination not to include EAFB within the boundary of the Fairbanks nonattainment area.

Comment:

- The commenter (0019/0084) requests a 1-year extension pursuant to CAA section 107(d)(1)(B)(i) for the designation of Fairbanks, AK, to include information from an ongoing study.

EPA Response:

EPA appreciates and will participate in collecting data to understand the complex mechanisms contributing to air quality problems in the Fairbanks area. EPA agrees that the collective evidence represented by the data does not warrant the inclusion of sources within the EAFB and the AEFB in the FNSB $PM_{2.5}$ nonattainment area. EPA appreciates the critical role that the EAFB and the larger DOD play in protecting the security of our nation. However, it is also important that the public health of the citizens of the United States is not be unnecessarily jeopardized in doing so. Working collaboratively, EPA is confident that EAFB will be able to balance it critical missions of protecting our national security interest while allowing the health of our citizens to be maintained. EPA appreciates the commitment of the EAFB to the goals of the CAA and the public health of the citizens of the State of Alaska. Additional data gathered in the near future will aid us in understanding the nature of the pollution in the FNSB and provide solutions that are targeted and effective. EPA believes that waiting for additional data to clarify the boundaries of the nonattainment area will provide marginal benefit at best and will delay the area from solving its air pollution issues and further jeopardize the health of its citizens. The technical analysis indicates that sources in EAFB do not contribute to violations of the NAAQS at FNSB. However sustained positive solutions to air quality issues in the area can be reached by balancing multiple goals through collaboration and innovation. At this point, based on the data submitted by the State and the DOD on October 20,

2008, EPA has adequate information to exclude the large military training ranges to the South and East of Fairbanks, and the EAFB.

EPA has authority to delay a designation under section 107(d), only when it lacks information necessary to make a designation decision. That is not the case in this area.

Comment:

- The commenter (0019/0084) believes the SIP is a better method to control and/or reduce emissions that are contributing to $PM_{2.5}$ nonattainment in the FNSB.

EPA Response:

EPA's has determined not to include the EAFB in the Fairbanks $PM_{2.5}$ NAA. Even though the EAFB will not be within the NAA, EPA encourages the EAFB to work collaboratively through the SIP process with the EPA, Alaska Department of Environmental Conservation (ADEC), and the FNSB to address all sources of emissions in order to protect public health .

Comment:

One commenter (0098) requests EPA to draw boundaries of the Fairbanks, AK nonattainment area to include only those areas with a demonstrated record of nonattainment. The commenter is concerned that the construction of pipelines may temporarily increase particulates and support areas some of which may be located in the EPA's proposed nonattainment area. The commenter believes that designation of a larger nonattainment area will complicate a project that will provide air quality benefits in Fairbanks, AK (a reliable supply of clean burning natural gas can be brought in to displace particulate generating fuels in the region).

EPA Response:

EPA agrees with the commenter that usage of natural gas as a heating source for Fairbanks and the availability of a gas infrastructure for Fairbanks will greatly reduce Fairbanks' dependence on fuel that generates significant air pollution. EPA also agrees that availability of a clean burning fuel will improve the air quality throughout the United States.

After EPA promulgated the latest $PM_{2.5}$ NAAQS in December 2006, States were required to submit recommendation for area designations by December 2007 based on $PM_{2.5}$ monitoring data from 2004-2006. EPA invited the State to provide a recommendation for the Fairbanks based on a through technical analysis of the data. The State submitted its recommendation for the Fairbanks area with significant data gaps. The submission failed to conclusively establish sources that would contribute to violations at the Fairbanks $PM_{2.5}$ monitor. In its letter modifying the State's recommendation sent to the State of Alaska on August 18, 2008, EPA used available data to designate the area nonattainment and drew the boundaries to include all potential sources that could contribute to a violation of the 2006 24-hour $PM_{2.5}$ standards at the Fairbanks monitor.

Subsequently, on the 20th of October 2008, the State submitted a comprehensive technical analysis using the recommended nine factors suggested by EPA, to identify the sources that contribute to violations of the $PM_{2.5}$ standards at the Fairbanks monitor. After careful review of the information, EPA is substantially in agreement with the $PM_{2.5}$ boundary recommended by the State of Alaska. EPA has determined that the final boundary will capture the sources that contribute to the violation of the $PM_{2.5}$ NAAQS at the Fairbanks monitor. Further, EPA believes that controlling the sources identified in the State's recommended boundary will also help the areas attain the standard and ensure that the health of the citizens is maintained.

Comment:

Four commenters (0034, 0040, 0053, 0092) request a 1-year extension of the designation deadline for Fairbanks, AK. Three of the commenters (0034, 0040, 0092) believe that additional data will assist in the characterization of the sources of $PM_{2.5}$ emissions and determination of the boundary. The commenters cite an ongoing study that the commenter believes will assist in determining the sources and boundary for the area.

EPA Response:

EPA appreciates and will participate in collecting data to understand the complex mechanisms contributing to air quality problems in the Fairbanks area. Additional data gathered in the near future will aid us in understanding the nature of the pollution in the Fairbanks area and provide solutions that are targeted and effective. At this point, based on the data submitted by the State and the DOD, EPA has adequate information to determine the boundary of the Fairbanks, AK nonattainment area.

EPA does not have authority to delay an designation when it has adequate information to make a determination, as it does in this area So while the EPA encourages collection and analysis of more information that will be helpful in solving the $PM_{2.5}$ nonattainment issues in Fairbanks, it does not find any need to delay the designation to collect this information.

Comment:

The commenter (0102) believes that the nonattainment boundary that EPA proposed for Fairbanks is too large. The commenter recommends that EPA delay the designation for a 1-year period as provided under CAA Section 107(d)(1)(B)(i) to include information from significant efforts taken by Fairbanks and DEC. The commenter believes that there is a lack of Alaska specific data which will result in incorrect recommendations and decisions on air quality issues in their nonattaining communities.

EPA Response:

After EPA promulgated the latest $PM_{2.5}$ NAAQS in December 2006, States were required to submit recommendation for area designations by December 2007 based on $PM_{2.5}$ monitoring data from 2004-2006. EPA invited the State to

provide a recommendation for the Fairbanks based on a through technical analysis of the data. The State submitted its recommendation for the Fairbanks area with significant data gaps. The submission failed to conclusively establish sources that would contribute to violations at the Fairbanks $PM_{2.5}$ monitor. In its letter modifying the State's recommendation sent to the State of Alaska on August 18, 2008, EPA used at its disposal to designate the area nonattainment and drew the boundaries to include all potential sources that could contribute to a violation of the $PM_{2.5}$ 24-hour standards at the Fairbanks monitor.

Subsequently, on the 20th of October 2008, the State submitted a comprehensive technical analysis using the recommended nine factors suggested by EPA, to identify the sources that contribute to violations of the $PM_{2.5}$ standards at the Fairbanks monitor. After careful review of the information, EPA is in agreement with the $PM_{2.5}$ boundary recommended by the State of Alaska. EPA has determined that the final boundary will capture the sources that contribute to the violation of the $PM_{2.5}$ NAAQS at the Fairbanks monitor. Further, EPA believes that controlling the sources identified in the State's recommended boundary will also help the areas attain the standard and ensure that the health of the citizens is maintained.

EPA does not have authority to delay an designation when it has adequate information to make a determination, as it does in this area. So while the EPA encourages collection and analysis of more information that will be helpful in solving the $PM_{2.5}$ nonattainment issues in Fairbanks, it does not find any need to delay the designation to collect this information/

Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions on this nonattainment area.

Comment:

The commenter (0102) provides an assessment of the nine factors as follows:

- Factor 1 – The commenter states it is not apparent why there is a discussion of CES. The commenter recommends removal of the discussion on CES because EPA specifically states at the end of the discussion that CES was not considered in Alaska.

EPA Response:

EPA agrees with this comment and has revised the TSDs for the State of Alaska to better explain references to the CES.

Comment:

The commenter (0102) comments that ADEC's positive matrix factorization (PMF) analysis identifies the principle sources of sources of $PM_{2.5}$ emissions or their precursors. EPA acknowledges this and the fact that the contribution of mobile sources is less conclusive and points to the need for a more detailed analysis.

The fact that more analysis is needed to identify the mobile source contribution is the reason the commenter provided additional Congestion Mitigation and Air Quality Funds to Fairbanks Metropolitan Area Transportation System (FMATS) to fund the coming winter study, including the ability to use those funds beyond the current nonattainment area to ensure that all mobile source contributions are identified.

Because a source exists does not mean the source is contributing to the air quality problems and extending the boundary to include that source makes no sense. Sources such as Eielson AFB are considerably east and south of the current carbon monoxide maintenance area. While it is possible that emissions "might" be transported, the fact that they "might" impact does meet one of the key issues referenced in the presentation on "Designations for the 2006 $PM_{2.5}$ Standards: Evaluating the Nine Factors in Setting Non-attainment Area Boundaries".

Because they "may" contribute is a reason to continue to study and determine whether they do or do not contribute to the air quality violations. If the boundary is extended before this is known, the borough, State and the Air Force will have to use the same limited resources to, not only study whether they impact, but design and implement control measures that may not be needed.

EPA Response:

As mentioned in the response to the letter above, EPA agrees with the State of Alaska's recommendations for the $PM_{2.5}$ nonattainment boundaries based on additional information submitted on October 20, 2008.

Comment:

- Factor 2 – The commenter (0102) states EPA's inclusion of the City of North Pole is unsupported by any data. Without data, it is unacceptable to assume the community or any of the emissions sources within the community actually cause or exacerbate the air quality violations in or near the City of Fairbanks. A source's existence is not conclusive evidence of contributing to the problem. During the development of the carbon monoxide designation, actual monitoring data was used to determine the boundary should include North Pole. In this instance, no FRM or FEM monitoring data exists to justify the inclusion of North Pole.

  Given the distance, the low wind speeds, prevailing wind drift (north/northeast), and the fact that North Pole is east and south of the City of Fairbanks, it is unknown whether North Pole contributes to the nonattainment problems in Fairbanks. The commenter is aware that a very limited number of samples were taken during one winter that may indicate elevated levels in North Pole, but no information exists to show the elevated levels are more than a local phenomenon. The commenter believes this fact will not be known until the winter study is completed and actual monitoring data is collected. To include the North Pole prior to collecting that information is unreasonable.

EPA Response:

The State of Alaska submitted additional information on the October 20, 2008 in support of their recommended boundary for the $PM_{2.5}$ nonattainment area. This data clearly establishes that there are emission sources, wind transport and monitored levels of $PM_{2.5}$ that indicate exceedances of the standard when there are high readings in the Fairbanks monitor. Based on this data, EPA finds that the City of North Pole and populated areas around it are contributing to the violations of the $PM_{2.5}$ NAAQS at the Fairbanks monitor and therefore needs to be part of $PM_{2.5}$ nonattainment area for Fairbanks. Additionally, the State of Alaska has recommended that the City of North Pole as part of the $PM_{2.5}$ nonattainment area.

Comment:

- Factor 3 – The commenter (0102) states that the population data provided rightly concludes the focus should be on the FNSB. However, "…the inference that violations in the area are the result of contributions from…" the City of North Pole are not supported by data.

The commenter also expresses concern is that large portions of unpopulated areas within the Borough were included within the boundary recommended by EPA. To highlight this concern, the commenter obtained a copy of the FNSB's Department of Community Planning a chart of population density using 2000 census data. A copy of the chart is attached to the comment letter and shows most of the Borough is either unpopulated or has a density of less than 10 people per square mile. More importantly, the entire region to the south of the FMATS is unpopulated. This region, between the Tanana River and the southern boundary of the Borough, is included in EPA's proposed nonattainment boundary. Since there has been no population growth within this area (i.e., the 2000 Census data are still valid), EPA should revise the southern boundary to edge of the populated area (i.e., the Tanana River).

General meteorological data shows the prevailing wind is from the north/northeast. The City of North Pole is south and east of the City of Fairbanks. There is no conclusive data showing emissions from North Pole contribute to air quality conditions in Fairbanks. Until the extensive monitoring study is completed this winter, it is unreasonable to expand the nonattainment area to include the City of North Pole.

EPA Response:

Based on data submitted by the State of Alaska on the October 20, 2008 and the State's recommendations, EPA agrees that sources of emissions in the large military reservations to the South and East of the City of Fairbanks do not contribute to the violations of the $PM_{2.5}$ NAAQS at the Fairbanks monitor. Accordingly these are areas are not included in the nonattainment area for Fairbanks. However, as mentioned above, the data submitted by the State and the State's recommendations do support inclusion of the City of North Pole in the nonattainment area.

Comment:

- Factors 4 and 5 – The commenter (0102) states that the traffic volumes presented in Table 4 of the comment letter contain inaccuracies. First, commuting in the traditional sense probably does not exist because of the long distances involved just within the Borough. The FNSB is huge in comparison to other States: the Borough covers 7,444 square miles. This area is larger than any of the five smallest States.

  The commenter states that Table 4 and 5a of the comment letter contain significant errors. The population and VMT growth rates have remained relatively stable. However, there is a significant error in the actual VMT reported. EPA used only the VMT from the "Collector" streets and has failed to include the VMT from the rest of the road system.

  The mileage VMT in Table 4 of the comment letter is for the "Collector" streets only and fails to include the VMT from the rest of the urban road system. "Collector" streets, while important to compute the emissions from mobile sources, tend to have slower speeds and only account for approximately 27 percent of the VMT. The total VMT reflected in Table 5a of the comment letter is shown as 315 (million). It should really be 1,147 (million) in 2006. Given the time frame available to respond, we were not able to provide the corrected 2005 VMT because there was a change in classification for the Fairbanks urbanized area. Please contact the local Metropolitan Planning Organization (MPO) for additional information.

EPA Response:

EPA has updated its technical data based on the information submitted by the State of Alaska. EPA appreciates the State's submission of accurate, quality assured data that is used in making scientifically based assessments.

Comment:

- Factors 6 and 7 – The commenter (0102) states that Fairbanks experiences strong low level ground based inversions during the winter. As with all microclimates, there may be some wind drift (as noted in EPA's discussion to be from the northerly direction). Any inclusion of areas to the east, west and south beyond those recommended by the State and local staff should be excluded pending the completion of the extensive monitoring study this winter.

  State and local staffs have been working with the National Weather Service and the University of Alaska Fairbanks to understand the ground based inversions for over 30 years. The complexity of the relationship of these inversions to air quality is not simple or straight forward. These past efforts led to the establishment of temperature dependent national standards for light-duty vehicles.

  Through this work we have learned that the lack of Alaska specific information can incorrectly bias EPA recommendations and decisions on air quality issues in our nonattainment communities. These concerns are again appearing in EPA's

proposed recommendations to the $PM_{2.5}$ nonattainment boundaries proposed for Fairbanks. The proposed boundaries are excessive, and clearly ignore the recommendations from local and State experts who have spent years studying emission sources and air quality within the community. The analysis provided by EPA does not provide a compelling basis to dramatically increase the size of the nonattainment area recommended by ADEC.

EPA's analysis identifies and clearly calls for the collection and consideration of additional meteorological, emissions and monitoring data. Since EPA's analysis acknowledges the need for additional data, why go beyond the local knowledge and expertise to unreasonably expand the boundary, especially if State and local staff is diligently undertaking extensive efforts to obtain additional data.

Instead, EPA should be supporting the efforts with staff and resources that at least match the State and local efforts to obtain the additional information. A reasonable and prudent course would be to delay designation until these the additional information become available and have been analyzed. Under the Act such an option exists for the EPA.

EPA Response:

As mentioned in the response to the letter above, EPA agrees with the State of Alaska's recommendations for the $PM_{2.5}$ nonattainment boundaries based on additional information submitted on October 20, 2008. .

Comment:

- Factor 8 – The commenter (0102) states that EPA should drop any reference to "ozone areas" in the heading for this section. At this time there are no ozone areas in Alaska and this reference only leads to confusion for the general reader. The planning and jurisdictional boundary discussion correctly concludes that ADEC and the FNSB can, and have, implemented a cohesive set of controls to address air quality nonattainment issues.

EPA Response:

EPA will delete any reference to ozone areas to avoid any confusion that may arise due to that.

Comment:

- Factor 9 – The commenter (0102) comments that ADEC has legal authority to control industrial emission sources and has an approved permit program. Taking EPA's analysis on face value, it appears the nonattainment boundary was expanded to include a facility known as Pump Station 8 on the Alaska Oil Pipeline. This facility, while once permitted, is not operational and there are no emissions from the facility. To expand the boundary to include this facility is not warranted. Expansion of a boundary to capture sources because they exist is unreasonable until they are shown to have an impact on the proposed nonattainment area.

The inclusion of this particular source is an excellent example of why EPA should not extend the boundaries beyond those recommended by the State until such time as the State and local staff working on the winter study have concluded their efforts. Instead, EPA should be supporting the efforts of local staff. A reasonable and prudent course would be to delay designation until the additional information is know. Under the Act such an option exists for the EPA.

EPA Response:

Based on additional information by the State of Alaska, EPA has determined that its recommended nonattainment boundary is appropriate. As explained above, EPA does not see the need to delay the designation. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions on this nonattainment area.

3.17. Grand Rapids, MI

Comment:

One commenter (0035) believes that Ottawa County be designated attainment because according to the $PM_{2.5}$ monitor in Ottawa County it is not violating. The commenter also requested that designation be based on 2006-2008 data and that the public comment period should be extended another 60 days. Another commenter (0075) disagrees with EPA's proposal that Kent and Ottawa Counties in Michigan should be designated as nonattainment. The commenter believes that the most recent data represents attainment.

EPA Response:

EPA included Ottawa County in the Grand Rapids nonattainment area. EPA determined that Ottawa County contributes to the violations in Kent County using the recommended nine factor analysis. The details of the analysis are provided in the TSD. A nonattainment designation informs the public that the concentration of a pollutant exceeds the air quality standards. The state will be able to select the desired emission controls as it plans how to bring the area into attainment of the standards.

See section 1.0 for EPA's response to an extension of the public comment period and section 2.3 for comments regarding the use of 2008 data.

Comment:

One commenter (0097) also believes that if 2006-2008 data are applied both Kent and Ottawa Counties would be designated as attainment and the seven counties in Southeast Michigan would remain designated as nonattainment. If 2005-2007 data are considered then only Kent County should be designated as nonattainment.

EPA Response:

See section 2.3 for EPA's response the use of 2008 data. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.18. Green Bay, WI

Comment:

One commenter (0127) disagrees with EPA's proposed designation for Brown County, WI. The commenter believes that if the most recent data from 2008 is used, Brown County, WI is likely to be able to be in compliance. The commenter supports the comments from commenters 0082 and 0109.

EPA Response:

See section 2.3 for EPA's response on the use of 2008 data.

Comment:

One commenter (0119) requests that EPA expand the nonattainment area designations. The commenter requests that EPA designate Winnebago and Outagamie Counties in Wisconsin as nonattainment. The commenter believes that Winnebago and Outagamie Counties contribute to violations in Brown County. The commenter cites negative health impacts from $PM_{2.5.}$

EPA Response:

EPA considered the impacts of Outagamie and Winnebago Counties on the Green Bay area. While Outagamie County has moderate emissions and population similar to that of Brown County, these emissions and this population are primarily associated with Appleton, which is a separate urban area that is monitoring attainment of the standard. Only a small fraction of commuters from the Appleton area commute into the Green Bay area. Appleton is at the southern end of Outagamie County, further reducing its impact on concentrations in Green Bay, at the northern end of Brown County. Winnebago County has low commuting and economic integration to the Green Bay area. No other factor warrants inclusion of any other county besides Brown County in the nonattainment area. The technical analysis shows that a single county nonattainment area is appropriate.

Comment:

One commenter (0082) believes that if the most recent data from 2008 is used, Dane and Brown Counties in Wisconsin are likely to be able to be in compliance.

EPA Response:

See section 2.3 for EPA's response on the use of 2008 data.

Comment:

One commenter (0096) believes that if the most recent data from 2008 is used, Dane and Brown Counties are likely to be able to be in compliance. The commenter added that analysis from data clearly shows that commuting is insignificant for these area's emissions.

EPA Response:

The CAA requires EPA to designate areas failing to meet an air quality standard and areas that contribute to violations as nonattainment areas. Even if an area is monitoring attainment or lacks air quality monitoring, it is to be designated as nonattainment if it contributes to a violation. The counties nearby a violating county must be evaluated for a contribution to the violation. Other factors including population and commuting are also reviewed for these nearby counties. The CAA requires defining nonattainment areas to include the full set of contributing areas along with areas experiencing violations, as a means of assuring that the State planning process takes comprehensive consideration of nearby areas where controls can help improve air quality.

Designations are based on current air quality. Current values are also used for the other factors such as emissions and emission controls. The trend of improved air quality in many areas is commendable. Still, the possibility that an area may achieve the air quality standards in the future is not a basis for an attainment designation. Similarly, projections of future emission reductions or increases of population and commuting may not prove accurate and are not a basis for determining the size of a nonattainment area. Therefore, EPA designated counties nonattainment as part of the Green Bay, Madison, and Milwaukee areas using the current monitoring, emissions, and other data. EPA is also allowing Wisconsin and the other States to submit 2008 monitoring data prior to the effective date of the designations. This ensures that the latest monitoring data are considered. Please see section 2.3 above regarding the submission of 2008 data. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions for this area.

3.19. Harrisburg-Lebanon-Carlisle, PA

See section 2.2 for general comments relevant to this particular nonattainment area.

3.20. Huntington-Ashland, WV-KY-OH

Comment:

One commenter (0137) supports EPA's recommendations and requests that EPA designate Boyd and Lawrence (partial) Counties in Kentucky as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this supporting comment and has made a determination based on the technical analysis and information provided from the Commonwealth of Kentucky that Boyd and a portion of Lawrence Counties in Kentucky should be included as part of the Huntington-Ashland nonattainment area for the 2006 24-hour $PM_{2.5}$ standard.

Comment:

One commenter (0080) disagrees with EPA's recommended designations for Adams County, OH. The commenter provides additional information relating to the estimated emissions reductions for Stuart Station and Killen Station in Adams County, OH.

***EPA Response**:*

EPA used this additional information in its assessment of this county in the Huntington-Ashland area. EPA determined that even after the implementation of new emission controls the remaining emissions from the Adams County, Ohio power plants are still significant enough to warrant inclusion in the Huntington-Ashland nonattainment area. The remaining large emissions, location in relation to the violating monitor, and meteorology all support inclusion of Adams County in the nonattainment area. However, as explained in the TSD Adams County did not rank high for other factors and thus the low population and commuting supported a partial county designation for only the townships with contributing power plants. EPA has provided a detailed response to this issue in full in the State and Tribal RTC and/or the TSD; please refer to these documents for additional related information.

Comment:

One commenter (0118) supports EPA recommendations for the State of Ohio. The commenter requests that EPA designation Adams (partial), Gallia (partial), Lawrence, and Scioto counties as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this supporting comment and has made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.21. Imperial County, CA

Comment:

One commenter (0066) requests that only the city of Calexico be designated as nonattainment and not the whole of Imperial County in part because the commenter believes there is a unique situation in the area. The commenter claims that the $PM_{2.5}$ violations in Calexico are due to the in impact of transport from sources in Mexicali, Mexico. The commenter provides additional information about the sources in Mexicali, Mexico.

***EPA Response**:*

As requested by EPA, CARB provided additional information showing that the $PM_{2.5}$ emissions in the Calexico area are different from those in the rest of Imperial County. The 2007 emission inventory for the entire Imperial County indicates the major sources are fugitive windblown dust, unpaved road dust and farming operations. The violating monitor in Calexico indicates that $PM_{2.5}$ is 48 percent organic carbon and 22 percent ammonium nitrate. This speciation data indicates that primary sources in Calexico are residential and/or open burning and mobile sources. These sources correlate with population centers and location of major highways.

California has noted that emissions from activities in Mexicali and at the border crossing contribute significantly to $PM_{2.5}$ levels in Calexico. The Calexico population is 30,000, compared to 1 million in Mexicali, Mexico. Heavy truck traffic at the border crossing contributes to mobile source emissions. The data also show that the high levels of $PM_{2.5}$ emissions occur primarily in the winter months when residents south of the border heavily depend on wood as a fuel source.

EPA agrees that the $PM_{2.5}$ designation for Imperial County should be limited to the areas where local sources account for the contribution to the fine particle levels on exceedance days. Therefore, EPA has promulgated a nonattainment area that includes the bulk of the direct $PM_{2.5}$ and $PM_{2.5}$ precursor emissions in Imperial County, that are predominant located in the cities of Calexico, El Centro and Brawley and environs. This nonattainment area covers 690 square miles, or 15 percent of the entire County, and it captures 86 percent of the population, as well as all major highways and stationary sources.

Comment:

One commenter (0066), in conjunction with factual arguments, asserted that violations of the 2006 24-hour $PM_{2.5}$ NAAQS in Imperial Valley, California, are "caused" by emissions from adjacent Mexico, and that the emissions contributed from Mexico should be a basis for EPA designating only a small portion of Imperial Valley as nonattainment.

EPA Response:

EPA agrees that a substantial portion of the pollution contributing to violations in Imperial Valley emanates from Mexico. However, EPA disagrees with the commenter's implicit argument that EPA should use the existence of international transport as a reason to alter the designation for this area, contrary to the requirements of section 107(d).

Under section 107(d), States and EPA are obligated to designate as "nonattainment," both those areas that are violating the NAAQS, and those nearby areas that are "contributing" to those violations. The statute does not define nonattainment in terms of "causing" violations of the NAAQS, and instead refers to areas that "contribute" to the violations. This is logical because violations of the $PM_{2.5}$ NAAQS are the result of the cumulative impacts of emissions from many different types of sources of direct $PM_{2.5}$ and $PM_{2.5}$ precursors that in the aggregate result in violation of the NAAQS.

As correctly noted by the commenter, EPA has no authority to designate portions of a foreign country as part of this area. EPA does, however, have a responsibility to designate that portion of California that contains the domestic sources of emissions that are contributing to this violation. EPA cannot ignore the domestic sources of $PM_{2.5}$ and $PM_{2.5}$ precursors that also contribute to violations of the NAAQS in Imperial Valley. EPA is therefore designating that portion of Imperial

Valley that contains emissions sources and activities that the Agency believes are contributing to the violation, in conjunction with emissions from Mexico. The State of California and the local air district will need to develop a nonattainment area SIP for this area that appropriately evaluates and controls these domestic sources of emissions.

EPA notes that under section 179B of the CAA, the State of California may take the international transport from Mexico into consideration in the development of a nonattainment area plan for this area. The CAA does not, however, completely exempt areas subject to international transport from compliance with the statutory and regulatory requirements for nonattainment areas. Thus, although California will not need to over control its own sources to compensate for transport for Mexico, it will have the obligation to address domestic sources to insure that the residents of this area are accorded some protection from unhealthy levels of ambient $PM_{2.5}$, even if it is not possible to assure attainment of the NAAQS without further reductions from Mexico. EPA agrees that further international efforts to address transport from other countries is necessary and has initiatives underway to achieve this end.

3.22. Indianapolis, IN

See section 2.2 for general comments relevant to this particular nonattainment area.

3.23. Johnstown, PA

See section 2.2 for general comments relevant to this particular nonattainment area.

3.24. Juneau, AK

Comment:

One commenter (0116) requests that a 1-year extension from the EPA for the Juneau, AK nonattainment area. The commenter requests the EPA consider 2008 monitoring data prior to finalizing designations. The commenter is concerned that the EPA's proposed boundary is larger than the State of Alaska's recommendation, and encouraged EPA to carefully consider information submitted by the State of Alaska. The commenter also provided additional information about previous PM_{10} boundary.

EPA Response:

EPA recognizes and commends the CBJ and Alaska for having implemented a successful PM_{10} related woodstove control ordinance and for proactively updating it to address the latest 24-hour $PM_{2.5}$ NAAQS. Burn bans, incentives to procure pellets stoves and road paving have collectively provided effective control of coarse particle pollution and improved the health of the citizens of Juneau.

After EPA promulgated the latest $PM_{2.5}$ NAAQS in December 2006, States were required to submit recommendation for area designations by December, 2007 based on $PM_{2.5}$ monitoring data from 2004-2006. Based on this data Juneau was in attainment of the 24-hour $PM_{2.5}$ NAAQS. However, the monitor in Mendenhall Valley measured several exceedences in December 2007. A

preliminary review of the 2005-2007 $PM_{2.5}$ monitoring data in April 2008 indicated that the area may potentially be in violation of the 24-hour $PM_{2.5}$ NAAQS. A subsequently final review of this data by the EPA confirmed that the 2005-2007 design value for the area violated the 24-hour $PM_{2.5}$ NAAQS. Based on this review, EPA invited the State to provide a recommendation for the Juneau area based on a through technical analysis of the data. The State submitted its recommendation for the Juneau area in June 2008, as nonattainment for the $PM_{2.5}$ 24-hour standard based on the monitoring data and recommended the old PM_{10} nonattainment area boundary as the $PM_{2.5}$ boundary without any further technical justification. In its letter modifying States recommendation sent to the State of Alaska on August 18, 2008, EPA used data from 2005-2007 and available data at its disposal to designate the area nonattainment and proposed the boundaries for the Juneau area.

Subsequently, on the 20th of October 2008, the State submitted a comprehensive technical analysis using the nine factors approach suggested by EPA, to identify the sources that contribute to violations of the $PM_{2.5}$ standards at the Mendenhall Valley monitor. After careful review of the information, EPA agrees that the $PM_{2.5}$ boundary recommended by the State of Alaska captures the sources that contribute to the violation of the $PM_{2.5}$ NAAQS to the Mendenhall Valley monitor. Further, EPA believes that controlling the sources identified in the State's analysis will also help the areas attain the standard and ensure that the health of the citizens is maintained.

EPA recognizes that many areas in the country are making improvements in their air quality, and believes that it is important to recognize such improvements. In making decisions about whether an area is meeting the 24-hour $PM_{2.5}$ NAAQS, EPA also believes that it is important to use the most recent air quality data. EPA will be unable to use 2008 data air quality data for the designation decisions that will be made in December 2008. However, all States will still have the opportunity to benefit from their efforts to improve air quality by using 2008 air quality data to demonstrate attainment of the 24-hour $PM_{2.5}$ NAAQS.

Prior to the effective date of final 24-hour $PM_{2.5}$ designations, States will have the opportunity to provide more recent data showing that an area is attaining the 24-hour $PM_{2.5}$ NAAQS. To do so, a State must submit its complete, quality assured, certified 2008 air quality data to EPA earlier than the usual June 30 deadline. This early submittal deadline will be approximately 45 days prior to the 90-day effective date of publication of the final 24-hour $PM_{2.5}$ designations. If EPA agrees that a change of designation status is appropriate based on 2006-2008 air quality data, EPA would withdraw the nonattainment designation prior to the 90-day effective date of final 24-hour $PM_{2.5}$ designations and the area would be designated as in attainment.

Comment:

The commenter (0102) believes that the nonattainment boundaries that EPA proposed for Juneau is too large. The commenter recommends that EPA delay the designation for a 1-year period as provided under CAA Section 107(d)(1)(B)(i) to include information from significant efforts taken City Borough of Juneau (CBJ) and Alaska Department of Environment Conservation (ADEC). The commenter believes that there is a lack of Atlanta specific data which will result in incorrect recommendations and decisions on air quality issues in their nonattaining communities.

EPA Response:

After EPA promulgated the latest $PM_{2.5}$ NAAQS in December 2006, States were required to submit recommendation for area designations by December, 2007 based on $PM_{2.5}$ monitoring data from 2004-2006. Based on this data Juneau was in attainment of the 24-hour $PM_{2.5}$ NAAQS. However, the monitor in Mendenhall Valley measured several exceedance in December 2007. A preliminary review of the 2005-2007 $PM_{2.5}$ monitoring data in April 2008 indicated that the area may potentially be in violation of the 24-hour $PM_{2.5}$ NAAQS. Based on this review, EPA invited the State to provide a recommendation for the Juneau area based on a through technical analysis of the data. The State submitted its recommendation for the Juneau area in June 2008, as nonattainment for the $PM_{2.5}$ 24-hour standard based on the monitoring data and recommended the old PM_{10} nonattainment area boundary as the $PM_{2.5}$ boundary without any further technical justification. In its letter modifying States recommendation sent to the State of Alaska on August 18, 2008, EPA used data from 2005-2007 and available data at its disposal to designate the area nonattainment and drew the boundaries to include all potential sources that could contribute to a violation of the $PM_{2.5}$ 24-hour standards at the Mendenhall Valley monitor.

Subsequently, on the 20th of October 2008, the State submitted a comprehensive technical analysis using the nine factors approach suggested by EPA, to identify the sources that contribute to violations of the $PM_{2.5}$ standards at the Mendenhall Valley monitor. After careful review of the information, EPA agrees that the $PM_{2.5}$ boundary recommended by the State of Alaska captures the sources that contribute to the violation of the $PM_{2.5}$ NAAQS to the Mendenhall Valley monitor. Further, EPA believes that controlling the sources identified in the State's analysis will also help the areas attain the standard and ensure that the health of the citizens is maintained.

EPA does not have authority to delay an designation when it has adequate information to make a determination, as it does in this area So while the EPA encourages collection and analysis of more information that will be helpful in solving the $PM_{2.5}$ nonattainment issues in Fairbanks, it does not find any need to delay the designation to collect this information.

Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions on this nonattainment area.

Comment:
The commenter (0102) provides an assessment of the nine factors as follows:

- Factor 1 – The commenter states it is not apparent why there is a discussion of CES. The commenter recommends removal of the discussion on CES because EPA specifically states at the end of the discussion that CES was not considered in Alaska.

EPA Response:

EPA agrees with this comment and has revised the TSDs for the State of Alaska to better explain references to the CES.

Comment:
The commenter (0102) believes that further analysis on emissions from adjacent "counties" and their impact on violations in the Mendenhall Valley are not necessary. The distances are relatively large (although smaller than those found in the Fairbanks area) and the emissions compared to Juneau are small. Furthermore, there are no roads linking the communities and the coastal environment (including mountains and winds) limits any transport to the Mendenhall Valley.

Meteorological information is limited because of the sparse population and the complexity of the coastal environment. The need to employ local knowledge of the climate, geological, environment and emissions is the very reason why EPA should not just arbitrarily expand the nonattainment area and use national "top down" processes that forced the use of meteorological information from a community almost 200 miles away from Juneau.

EPA Response:

Based on this and other information EPA agrees with the Alaska's recommendation for the 2006 24-hour $PM_{2.5}$ nonattainment area.

Comment:

- Factor 2 – The commenter (0102) states the analysis correctly concludes there are no monitors in neighboring counties/communities. This is due to the knowledge of State staff regarding the air quality in those areas. While there may be small areas that could be influenced by local emissions in the neighboring counties/communities, it is this local experience that has allowed State staff to focus the extremely limited resources to those areas that have (and in the case of the Mendenhall Valley) demonstrated the potential for higher concentrations. This same local knowledge is what has limited the monitoring to just the Mendenhall Valley.

In fact, the commenter understands that a $PM_{2.5}$ monitor was operated in a neighboring valley (the Lemon Creek area) within the Juneau area that had no violation of the $PM_{2.5}$ standard. It is interesting to note that EPA has included Lemon

Creek valley as part of the proposed nonattainment, even though it did not have high concentrations.

The commenter states that ADEC conducted a short term monitoring program in the downtown area of the City and Borough of Juneau and did not document any high values of $PM_{2.5}$, NO_X or SO_X associated with the summer cruise ship traffic. During the summer months, the cruise industry brings over 750,000 passengers to the Juneau area. Please note that the summer cruise ship season is our busiest time of the year and has no impact on the high wintertime values of $PM_{2.5}$ in the Mendenhall Valley. Yet this area was also included in the recommendation to expand the nonattainment value. Since neighboring valleys have had monitoring data that show they do not exceed the standards, the recommendation by EPA to expand the boundary for Juneau are completely unsupported and should be revised. DEC and the CBJ will be submitting local data which supports the selection of more reasoned boundaries. Under the CAA, such an option exists for the EPA.

EPA Response:

Availability of monitoring data from different areas by itself does not qualify an area to be designated. Whether an area is violating a criteria pollutant standard is identified using data from Federal Reference Method (FRM) and Federal Equivalent Method (FEM) monitors that are sited and operated in accordance with 40 CFR Part 58, as revised on October 17, 2006 (see 71 FR 61236).

Once the siting and operating criteria are met, the Design Value for the criteria pollutant ($PM_{2.5}$ in this case) is computed according to 40 CFR Part 50 Appendix N, as revised on October 17, 2006. 40 CFR Part 50, Appendix N, Section 4.2 a specifically says that,

> "The 24 hour $PM_{2.5}$ NAAQS is met when the 24 hour standard design value at each monitoring site is less than 35 μgm^{-3}.As the ADEC short term monitoring program for a year does not meet these criteria, this data cannot be used to determine the attainment status of an area."

The mere presence of a monitor showing attainment does not, however, answer whether that area is contributing to a violation in a nearby area.

Nevertheless, the state has submitted substantial emissions and meteorological evidence that support the fact that the violations of the NAAQS and the sources contributing to the violations at the Mendenhall Valley monitor are limited to the recommended nonattainment area boundary, which coincides with the previously designated PM10 nonattainment area boundary for Juneau. EPA notes that this area is appropriate because of the unique topographical and meteorological facts and circumstances in this area, not because PM2.5 and PM10 are interchangeable. Based on this information EPA agrees with the State's recommendation for the $PM_{2.5}$ nonattainment area.

Additionally, as the state's information provides an adequate basis for determining a $PM_{2.5}$ boundary, EPA does not find the need to extend the designation date.

Comment:

- Factor 5 – The commenter (0102) states that the assumption that population has remained stable (i.e., there has been no growth) is accurate. The ability of the City and Borough of Juneau to grow is limited by its geography (the community is land/sea locked and surrounded by the Tongass National Forest) and the availability of new jobs. The assumption that vehicle travel has grown by 62 percent, however, is completely unsupported and is contradicted by extensive vehicle traffic count data collected by the commenter. The commenter questions the difference between EPA's estimate and their actual AADT. At this point, the reason for the difference is not apparent but the fact remains that AADT is directly related to VMT and has decreased over the past 10 years. It is not possible to have an increase in VMT if our traffic counts are down as reflected in Table 1 of the comment letter.

The commenter states that the assertion that vehicle emissions may be higher are totally flawed and not supported by any data. The commenter also states that the assumption of growth is so flawed that it alone suggests any increase in the proposed nonattainment area beyond the State's recommendation should not be considered.

For this reason, the commenter recommends EPA reduce the nonattainment recommendation to those provided by the State or provide compelling proof that such an expansion is justified by data that truly reflects local conditions and not a "top down" national approach.

EPA Response:

EPA utilizes national databases for it information and directly pulls data from federal agencies such as the U.S. National Oceanic and Atmospheric Administration (NOAA), the U.S. Department of Transportation (DOT), and the U.S. Census Bureau to name a few. The quality and accuracy of data is determined by those agencies and is only as good as the data that is submitted and available to those agency databases. EPA appreciated receiving this updated data, and has updated it analysis to reflect this update. After review of information submitted by the Alaska, EPA agrees with the state's assessment and agrees with the state's recommendation for the 2006 24-hour $PM_{2.5}$ nonattainment area.

Comment:

- Factor 6 – The commenter (0102) states that the meteorological assumptions presented for Juneau are seriously flawed; there is no reason to believe that meteorological data from a community almost 200 miles away and separated by the tallest coastal mountain range in North American could provide insight into conditions in Juneau.

Microclimates are extremely variable in Juneau, and are not even comparable. The Figure 5 discussion on page 30 of EPA's attachment to the Governor indicates this and states that the Yakutat data is "…not representative of conditions in Juneau." Since EPA acknowledges in the document that the meteorological data is not representative of weather in Juneau, to designate an area larger than recommended by the State at this time is not reasonable.

A much better solution would be to use the following two local sources of data for Juneau. Both are at http://juneau-winds1.rap.ucar.edu/JuneauOps/combo_table.html or from our road weather web page at http://roadweather.alaska.gov. The Juneau Wind Profiler is a national program developed, in part, by the National Center for Atmospheric Research (NCAR) for the Alaska Airlines arrival/departure safety program.

The serious and significant flaws associated with the incorrect application of meteorology information justifies returning to the State's recommendations for the Juneau nonattainment area. In light of the use of meteorological data from over 200 miles away to represent the low meteorological conditions experienced during the nonattainment period, the department recommends EPA adopt the State's recommended nonattainment area.

EPA Response:

The State Of Alaska submitted substantial meteorological information and an analysis based on that information supporting a $PM_{2.5}$ nonattainment area recommendation. This data was collected over the years from 2005-2007 from the NOAA and NWS offices in the Mendenhall Valley area and the UAF South Campus. The data is representative of local climactic and weather conditions and provides technical support for EPA to reach its decision on the boundary for the $PM_{2.5}$ nonattainment area for Juneau.

Comment:

- Factor 7 – The commenter quotes "the geography/topography analysis...might have an effect on the air shed…distribution of $PM_{2.5}$ over the Juneau and Mendenhall Valley" goes to the heart of the problem. The commenter states that the geography/topography and local meteorological conditions have everything to do with the distribution of the emissions. This is the very reason that the recommendations for the nonattainment area were made in the State's request and should have been accepted by EPA.

Large tracts of land incorporated by EPA in the expanded nonattainment area are lands in the Tongass National Forest. The expanded boundary also includes portions of the Juneau Ice Field. Attachment 2 provides a better depiction of the topographical characteristics. The department recommends EPA drop the expanded boundary and accept the recommended boundary for the Juneau nonattainment area. It is unnecessary to include large tracks of the national forest that cannot be developed, including portions of the Juneau Ice Field.

EPA Response:

The updated information provided by the State of Alaska on the 20th of October 2008 supports this comment. That updated information provides more detail on the topography in the Mendenhall Valley, Lemon Creek, and Downtown Juneau areas. Based on this and other information EPA agrees with the State recommendation for the $PM_{2.5}$ nonattainment area.

Comment:

- Factor 8 – The commenter (0102) states that EPA should drop any reference to "ozone areas" in the heading for this section. At this time, there are no ozone areas in Alaska and this statement only leads to confusion for the general reader.

EPA Response*:*

EPA will delete any reference to ozone areas to avoid any confusion that may arise due to that.

3.25. Klamath Falls, OR

Comment:

One commenter (0043) believes "regulations concerning $PM_{2.5}$ are draconian and overbearing due to the few days of the year that Klamath Falls exceeds EPA standards."

EPA Response:

The Peterson School monitoring site in Klamath Falls has documented a violation of the 24-hour $PM_{2.5}$ NAAQS using ambient air quality data collected by the State during the years 2005 through 2007 (please see the TSD for this action). Thus, the area violates the 24-hour $PM_{2.5}$ NAAQS as established in federal regulations, 40 CFR part 50. Achieving compliance with the health based NAAQS will reduce adverse public health effects from exposure to PM.

The CAA requires EPA to work with States and designate areas that violate the NAAQS, and nearby areas with sources that contribute to violations, as nonattainment (please see section 107(d)(1)(B) of the CAA). EPA has no leeway under the Act to designate such areas attainment or unclassifiable even if the monitored violations occur only on a few days.

Designation as nonattainment initiates a State process to develop a SIP that will more clearly analyze the sources that cause or contribute to violations of the NAAQS and implement appropriate control measures for those sources to bring the area back into attainment. The burden of control will be addressed by the State as it develops its SIP.

Comment:

One commenter (0060) disagrees with EPA's recommendation for expanding the nonattainment area of Klamath Falls beyond the Urban Growth Boundary (UGB). The commenter requests that EPA follow the ODEQ proposed NAA or delay to allow further

data collection, technical analysis and appropriate review. The commenter cites the following issues with the technical analysis:

- Factor 1 – The commenter believes that EPA should allow more time to develop and refine a current emission database to show the predominant contributors to the exceedences if residential wood combustion is an important contributor.

EPA Response:

With regard to emissions data, EPA believes that there is currently sufficient information on sources in the Klamath Falls area to establish a boundary of the NAA. The most recent emission data provided by Oregon is for the year 2007. This year coincides with the time frame ambient air quality data was collected for determining nonattainment. This inventory includes major stationary sources, area sources and mobile sources and is adequate for establishing the NAA boundary.

EPA also believes that previous year inventories are also representative of the relative contribution of various sources and source categories due to the very limited growth of the area. These inventories also are dominated by woodstove emissions. Providing ODEQ additional time to prepare another emission inventory is not warranted and not permitted by the Act, which allows delay only if there is insufficient information which EPA concludes is not the case here.

Comment:

- Factor 2- The commenter (0060) believes that the major industrial sources included in the proposed NAA do not emit large emissions or contribute to the exceedances.

EPA Response:

The State of Oregon provided additional information to EPA demonstrating that there were essentially no emission sources of $PM_{2.5}$ in areas to the south of the Klamath Falls Air Quality Zone (AQZ). See discussion of EPA's response to Oregon's supplemental information contained in the Response to State Comments document elsewhere in the docket to this action. EPA concluded that the major sources in the AQZ do in fact have emissions that contribute to the violating monitor, and that the AQZ does include all of the emissions sources in the area. Thus EPA has determined the NAA boundary should be the AQZ.

Comment:

- Factor 3 – The commenter (0060) cites low population numbers and no sources of industrial emissions outside of the Klamath Falls UGB as justification of why the NAA should not be expanded.

EPA Response:

EPA agrees that most of the population resides within the UGB. However, there are major industrial sources of $PM_{2.5}$ as well as residential units with the potential to have wood stove emissions located just outside the UGB. The CAA requires

that areas with sources that contribute to nonattainment be included in the nonattainment area. Thus, the NAA boundary must include all major industrial sources and area sources that contribute to nonattainment. The entire AQZ meets this criteria and therefore is appropriate for defining the nonattainment area boundary.

Comment:

- Factor 4 – Traffic and commuting patterns are significant only within the UGB area and any sources that could impact exceedances could originate from beyond the proposed boundaries. The commenter (0060) questions the conclusion to expand the NAA boundary based on this information.

EPA Response:

The CAA does not make a distinction between significant and non-significant contribution. Thus, the area boundary must include areas with sources that contribute regardless of significance. Oregon has submitted information that demonstrates that there are no sources to the south of the urbanized area of Klamath Falls, thus the AQZ is an appropriate boundary for the NAA as it covers all the areas with sources that contribute to nonattainment. Although traffic and VMT may not have been a significant factor in extending the boundary to the AQZ, there are still some mobile source emissions in this area and coupled with the stationary sources in this area led EPA to conclude that the AQZ was an appropriate boundary for the nonattainment area.

Comment:

- Factor 5 – The commenter (0060) cited the Oregon Land Use laws that inhibit high growth rates outside of the UGB area.

EPA Response:

EPA understands that Oregon Land Use laws generally regulate growth and development to areas within the UGB. However, these laws are not federally enforceable and thus not a significant consideration for a federal decision. In consideration of the other recommended 8 factors and other information in the boundary analysis, the AQZ meets the requirements of the CAA. Additional high growth outside of the UGB may currently be limited, but there are sufficient existing sources of emissions within the AQZ to justify expansion of the nonattainment area to include all of the AQZ. Further, local land use laws that are not incorporated into a SIP could be changed in the future if the nonattainment area does not include all sources currently contributing to nonattainment.

Comment:

- Factor 6 – The commenter (0060) believes that the HYSPLIT back trajectory modeling analysis shows some influences on the UGB originating outside the area. The commenter states that EPA hones quickly in on the couple of industrial facilities on the UGB border, as if there are unknown major industrial complexes outside the UGB dumping emissions into the UGB. EPA's conclusion from

factor 6 is inappropriate and inaccurate. The commenter believes EPA's analysis is inaccurate and inappropriate.

EPA Response:

In addition to the HYSPLIT modeling results, Oregon provided meteorological data that demonstrates high $PM_{2.5}$ concentrations occur during periods of intense ground based inversions, low wind speed and cold winter temperatures. A stable atmosphere with no wind to disperse pollution would indicate that major industrial sources located just outside the UGB have a strong potential for contributing to violations of the NAAQS within the UGB. Thus a nonattainment area larger than the UGB is warranted. The AQZ is larger than the UGB and contains all the major industrial sources. Thus EPA concluded that the AQZ is an appropriate nonattainment boundary based on this factor as well as many other factors.

Comment:

- Factor 7 – The commenter (0060) stated there is no data available to support the expansion of the NAA boundary. The commenter believes that geography plays a role in limiting dispersion of ground level smoke, yet not so much to warrant a 4000 to 5000 ft NAA zone.

EPA Response:

Additional information provided by the State supports a smaller NAA boundary than the full county originally proposed by EPA. As discussed in the TSD supporting this action, the AQZ is the appropriate boundary based on consideration of this factor as well as several other factors.

Comment:

- Factor 8 – The commenter (0060) believes that there is not enough justification in EPA's analysis of sources to warrant the expansion of the NAA zone to the California-Oregon border.

EPA Response:

This comment is not relevant to factor 8, jurisdictional boundaries. This factor is to consider existing legal boundaries such as city limits, county boundaries, or other legal boundaries. The UGB and the AQZ are both legal entities established by Klamath County. EPA has determined the AQZ is the appropriate NAA boundary based on analysis of all of the factors. EPA agrees that based on analysis of all the data including the new data submitted it is not appropriate in this case to expand the boundary to the California border.

Comment:

- Factor 9 – The commenter (0060) states that EPA was not able to determine whether or not controls on the stationary sources are federally enforceable and did not consider such data in their final recommendation. The commenter presents information that shows the industrial sources in and near the UGB are well

controlled. The commenter also shows that any increase in emissions from sources outside a NAA must demonstrate no more than 1 $\mu g/m^3$ impact in the NAA. The commenter goes further to say that a broad NAA boundary creates unnecessary economic hardship, in that any new source in a NAA needs to offset the increase in emissions which in a small community like Klamath Falls is difficult.

EPA Response:

EPA is required and constrained by the CAA to designate those areas that violate the NAAQS and those areas that contribute to violations. The CAA does not, however, define contributing. Therefore, EPA's guidance recommends consideration of factors relevant to contribution, including the recommended nine factors identified in EPA's designations guidance. EPA concludes that even with current controls the stationary sources in the AQZ are contributing to the monitored violations. Section 107 does not include a materiality test; any sources that are contributing to the violating monitors must be included in the nonattainment designation. EPA cannot take into account the hardship of sources to comply with the requirements of the Act in making designations under section 107; these are proper considerations for the State in developing a nonattainment area SIP. Please see section 2.2 above for further response on these general legal issues.

Comment:

One commenter (0170) disagrees with EPA's recommendation for expanding the nonattainment area of Klamath Falls beyond the UGB. The commenter requests that EPA follow the Oregon Department of Environmental Quality (ODEQ) proposed NAA or delay to allow further data collection, technical analysis and appropriate review. The commenter believes that EPA's CES is flawed. The commenter believes that the TSD needs more data under all factors to support the proposed boundary. The commenter believes that EPA reached critical conclusions from inadequate scientific and factual data and made faulty assumptions. The commenter cites the following issues with the technical analysis:

- Factor 1 –The commenter believes there is extremely limited contemporaneous data upon which EPA based its decision.

EPA Response:

EPA believes the emission inventory data presented by the State are adequate to determine those sources that cause or contribute to violations of the 24-hour $PM_{2.5}$ NAAQS. All industrial source emissions, estimation of area source emissions, and mobile source emissions are the most current available. Due to the slow growth rate of population and the resulting slow growth of area and mobile sources in this area, emissions data from 2005-2006 are representative of current emissions. The data are also contemporaneous with the air quality data collected during 2005-2007 that was used to determine whether the area violates the 24-hour $PM_{2.5}$ NAAQS. EPA believes there is reliable emissions data to determine the nonattainment boundary. The data on which the CES was based were the

most available up-to-date information at the time to be released within the current schedule for State and public comment by October 2008.

Comment:

- Factor 2 – The commenter (0170) believes that there is insufficient information upon which to make air quality conclusions, as the monitoring site at Peterson School appears to be the sole genesis of data. Furthermore, it is difficult to follow the logic supporting so extensive a proposed boundary of the NAA and the extent to which wood smoke factored into the analysis. Clearly more data and analysis is required.

EPA Response:

Air quality data from the Peterson School monitoring site for 2005-2007 meets EPA monitoring and quality assurance requirements and was submitted by the State of Oregon to EPA for inclusion in the National data base. Any and all data that meets EPA monitoring and quality assurance requirements must be used to determine whether the NAAQS are met. Air quality data from the Peterson School monitor demonstrates the 24-hour $PM_{2.5}$ NAAQS is not met and thus the area does not attain the NAAQS. EPA cannot delay under the statute to collect additional data where sufficient data exists to make a nonattainment designation. The next step in the process is to determine the extent of the NAA boundary.

The recommended nine factor analysis is used by EPA to determine the extent of the nonattainment boundary. EPA considered the county boundary as the basic jurisdictional element for determining the nonattainment area boundaries, consistent with past designation practice. The State provided adequate evidence that an area smaller than the county be designated nonattainment and initially recommended the UGB. EPA disagreed with the State's recommendation as it clearly did not include all sources that potentially could contribute to $PM_{2.5}$ levels at the Peterson School Site. Some major industrial sources and areas with residential wood combustion are not located within the UGB.

EPA used its best professional judgment, along with the information provided in the State's recommendation to determine the boundary of the NAA. EPA initially proposed a conservative boundary assuring all areas with sources potentially contributing to nonattainment were included. EPA's proposed boundary for the partial Klamath County designation generally used topography features and County's southern boundary, simplified by using Township-Range survey lines.

The State provided additional data after reviewing EPA's proposed boundary, showing the chemical composition of particulate captured on monitoring filters and the distribution of population and wood stoves in the area surrounding the City of Klamath Falls. Elemental and organic carbons are the most predominate species in the 'filter catch' indicating wood smoke is the primary source of emissions. After carefully reviewing this new information, EPA believes that the AQZ as a revised recommendation from the State is appropriate. It is a boundary

larger than the UGB but smaller than EPA's original proposed boundary. The AQZ includes all wood stove emission sources and industrial sources that contribute to $PM_{2.5}$ concentrations at the Peterson School monitoring site. See the TSD for further information on EPA's rational for selecting the AQZ as the NAA boundary.

Comment:

- Factor 3 – The commenter (0170) states the majority of lands lying outside the UGB are Federal and agricultural land typically irrigated during the growing season and covered by snow during the winter months.

EPA Response:

EPA acknowledges that much of the land to the south of the UGB is rural agricultural and federal land. These lands are not sources of $PM_{2.5}$ emissions during the winter season when exceedances of the level of the $PM_{2.5}$ standard are recorded due to snow cover and frozen ground. EPA has thus removed these areas from the NAA boundary. EPA is designating the AQZ as nonattainment based on analysis of all the factors as detailed in the TSD.

Comment:

- Factor 4 – The commenter (0170) believes that EPA's emphasis upon organic carbon is somewhat inconsistent with concerns regarding vehicular emissions. Apparently EPA desires to capture other potential sources.

EPA Response:

The commenter is correct. EPA includes all potential sources that cause or contribute to $PM_{2.5}$ levels in the Klamath Falls area, including mobile sources as well as wood smoke and industrial sources.

Comment:

- Factor 5 – The commenter (0170) states that there is no significant growth outside of the UGB and the proper focus of an analysis of growth rates is within the proposed boundary itself.

EPA Response:

EPA agrees with the comment; however, EPA concludes that the AQZ is an appropriate boundary based on consideration of all of the factors. Although future growth may be limited to the UGB, there are current sources outside the UGB and within the AQZ that are contributing emissions to the violating monitor and thus must be included within the nonattainment area.

Comment:

- Factor 6 – The commenter (0170) states that it is unclear whether any [meteorology] data was obtained locally. There are no data suggesting unknown sources are contributing PM into the air. Consequently, commentary regarding wind direction does not have analytical value absent concrete data.

EPA Response:

Oregon provided meteorological data from the Peterson School monitoring site. The data demonstrates that during periods of high $PM_{2.5}$ concentrations, the area is experiencing ground based inversions and very low wind speed. This data would indicate local sources including those outside the UGB are contributing to the high $PM_{2.5}$ level. For this reason EPA is designating the AQZ as the nonattainment boundary.

Comment:

- Factor 7 – The commenter (0170) believes that EPA's reliance upon topography and 5000 ft contours is extremely difficult to reconcile with the EPA proposed boundary.

EPA Response:

The State of Oregon presented additional technical information concerning emissions sources that demonstrates the AQZ for Klamath County is the appropriate boundary for the nonattainment area. Thus, EPA is designating the AQZ as nonattainment and is no longer relying on topography alone to limit the size of the nonattainment area.

Comment:

- Factor 8 – The commenter (0170) states that EPA emphasizes that other potential sources lie outside the UBG. While this may be true, there are no data ties to a particular potential source and no logical nexus to these sources. The county assumes, without being sure, that EPA entirely is concerned with industrial sources within the current AQZ. If so, this fact would strongly support a conclusion that the NAA coincide with the AQZ. If the concern is simply that the NAA contain potential sources, more data needs to be collected to identify how those sources contribute to the air quality problems at issue.

EPA Response:

EPA agrees with this comment and is designating the AQZ as nonattainment based on current emissions from the area.

Comment:

- Factor 9 – The commenter (0170) states that EPA appears to be concerned with rebutting the State's position that the UGB is an appropriate boundary for the NAA, primarily emphasizing that four major industrial sources lie outside the UGB. Absent additional data and factual support, factor 9 does not support EPA's proposed boundary.

EPA Response:

The UGB is not an appropriate boundary for the nonattainment area since there are major industrial sources located just outside the UGB. EPA is also concerned that the NAA boundary includes all the woodstoves. The State has provided

information that the AQZ includes the industrial and area sources that contribute to violations of the NAAQS. EPA is designating the AQZ as nonattainment based on this additional data and analysis of all factors and analytic tools.

3.26. Knoxville-Sevierville-La Follette, TN

Comment:

One commenter (0045) requests that Knox County, TN be designated nonattainment. The commenter believes that the air quality is horrible and that EPA action will force positive change.

EPA Response:

EPA acknowledges this comment and has made the determination that Knox County, TN should be included in the nonattainment boundary for the Knoxville area for the designations for the 2006 24-hour $PM_{2.5}$ standard.

3.27. Lafayette-Frankfort, IN

See section 2.2 for general comments relevant to this particular nonattainment area.

3.28. Lancaster, PA

See section 2.2 for general comments relevant to this particular nonattainment area.

3.29. Libby, MT

See section 2.2 for general comments relevant to this particular nonattainment area.

3.30. Liberty-Clairton, PA

Comment:

Five commenters (0059, 0095) express disagreement with EPA's previous designation of the Liberty-Clairton nonattainment area as separate from the Pittsburgh-Beaver Valley nonattainment area for the 1997 $PM_{2.5}$ standard. The commenters state that the entire metropolitan area is cohesively defined for transportation and regional planning purposes as well as economic development, and should be so for air pollution control measures as well.

EPA Response:

For the designations for the 1997 $PM_{2.5}$ NAAQS, the Pennsylvania Department of Environmental Protection (PADEP) provided extensive documentation to support a recommendation that a separate, nonattainment area be designated within the Pittsburgh nonattainment area. PADEP resubmitted this material in its October 20, 2008 letter to EPA regarding boundary recommendations for the 2006 $PM_{2.5}$ NAAQS. This document can also be found on the following website, listed as Appendix 1 of Pennsylvania's Remarks to EPA's Response: http://www.epa.gov/pmdesignations/1997standards/rec/region3.htm.

EPA determined that the materials provided by Pennsylvania justify the designation of Liberty-Clairton as a separate, distinctively local-source impacted

nonattainment area be designated within the Pittsburgh-Beaver Valley nonattainment area. Because of a localized source of emissions and unique topography which contains these emissions in the area, EPA determined that it was appropriate to establish Liberty-Clairton as a separate nonattainment area from the Pittsburgh nonattainment area for the 1997 $PM_{2.5}$ NAAQS designations. The recommended Liberty-Clairton area was specified as the area in the vicinity of the Clairton Coke Works, which was previously designated nonattainment for the PM_{10} NAAQS as the "Clairton & 4 Boroughs area."

Comment:

Four commenters (0095) comment that higher monitor readings in one part of the nonattainment area indicates the presence of a major source of pollution in the vicinity. The commenters state that a large single source should argue for a larger nonattainment area since the emissions from that large source are likely blown throughout the entire Pittsburgh metropolitan region, into multiple States as well as across the international border. The commenters assert that previous studies[1] demonstrate the widespread impact of the emissions from such large sources, and therefore the nonattainment designation should reflect the entire Pittsburgh-New Castle, PA CSA, including all of Allegheny County, as one area.

EPA Response:

EPA agrees that, in the case of the Liberty-Clairton area, higher monitor readings at one monitor in Allegheny County indicate the presence of a major source of pollution in the vicinity. This major source is the Clairton Cole works. However, as described in EPA's August 18, 2008 Technical Analysis for Liberty-Clairton Area, emissions from the Clairton Coke Works do not contribute to PM levels in the Pittsburgh-Beaver Valley area or other points downwind. The Clairton Coke Works is a large and complex facility that emits a combination of particulates, sulfur dioxide, ammonia, and hundreds of VOCs. Although the coke plant has numerous existing emission controls, the combination of a large amount of low-level emissions in a narrow river valley creates a local air quality problem which is uniquely different from the remainder of the area.

There are eight air quality monitors in Allegheny County. $PM_{2.5}$ design values at seven of the eight monitors correlate well. However, the $PM_{2.5}$ design value at Liberty Borough is considerably higher. The 2005 - 2007 design value at the Liberty Borough monitor is 60.9 $\mu g/m^3$, while the design values at the other seven monitors in Allegheny County are between 34 and 40 $\mu g/m^3$. The large local sources plus unusual topographical features results in much higher $PM_{2.5}$ monitored values at the Liberty Borough monitor than the other monitors in Allegheny County.

[1] e.g., *The Particulate-Related Health Benefits of Reducing Power Plant Emissions* by Abt Associates for the Clean Air Task Force, October 2000; and *Introduction to Visibility* by W.C. Malm, National Park Service Visibility Program, Colorado State University, 1999.

The commenters referenced a report entitled *The Particulate-Related Health Benefits of Reducing Power Plant Emissions* in order to compare Clairton Coke Works emissions to that of other large sources of particulates, such as power plants. However, the emissions from the Clairton Coke Works are much less than those from a power plant. In 2004, Clairton Coke Works had SO_2 emissions of 1654 tons and NO_X emissions of 4,368 tons. By contrast, the Cheswick and Bruce Mansfield power plants in the Pittsburgh-Beaver Valley area emitted substantially more SO_2 and NO_X in the same year. Cheswick in Allegheny County emitted over 40,900 tons of SO_2 and 4,900 tons of NO_X; and Bruce Mansfield Beaver County emitted over 37,900 tons on SO_2 and 24,000 tons of NO_X in 2004. Carbon emissions are also higher at the power plants. However, a direct comparison cannot be made. Carbon monoxide (CO) emissions are reported for Clairton Coke works, 3,894 tons in 2004. Carbon dioxide (CO_2) emissions are reported for the power plants; in 2004 emissions were nearly 3,198,900 tons from Cheswick and over 17,654,000 tons from Bruce Mansfield.

Furthermore, in its October 20, 2008 letter to EPA regarding boundary recommendations for the 2006 $PM_{2.5}$ NAAQS, PADEP stated that the Clairton Coke Works facility has stack heights that are lower than normal power plant stacks. This would mean that the effects of a source like the Coke Works would impact the ground at a much closer location locally than a power plant. The highest fine particulate concentrations occur at the Liberty Borough monitor when we see the south-southwesterly winds along with a morning inversion. A morning inversion occurs when the ground is cooler than the air above it; normally at night, the area is under the control of high pressure and clear skies. With the warmer air being above the cooler air, vertical mixing is at a minimum. Therefore, anything exhausted in the boundary layer with an inversion in place will remain trapped in that layer. For example, as the Coke Works' low level sources emit emissions, the plume of emissions will only rise to the top of the inversion layer. At that point, the pollution is spread out horizontally. These inversions usually set up only a few hundred feet above the surface. Therefore, fine particulate levels can become very high near the surface. In this case, the plume impacts the hillside across the river as well; the plume is actually not traveling large distances. This is evident from the speciation data from two sites, Liberty and Lawrenceville. The Lawrenceville monitor is actually downwind from the Pittsburgh metro area (the monitor sits atop the Allegheny County Health Department building in Lawrenceville, which is to the west of the Allegheny River).

The figures below display the results of the 2003-2005 speciated components of the fine particulates at these two monitors.

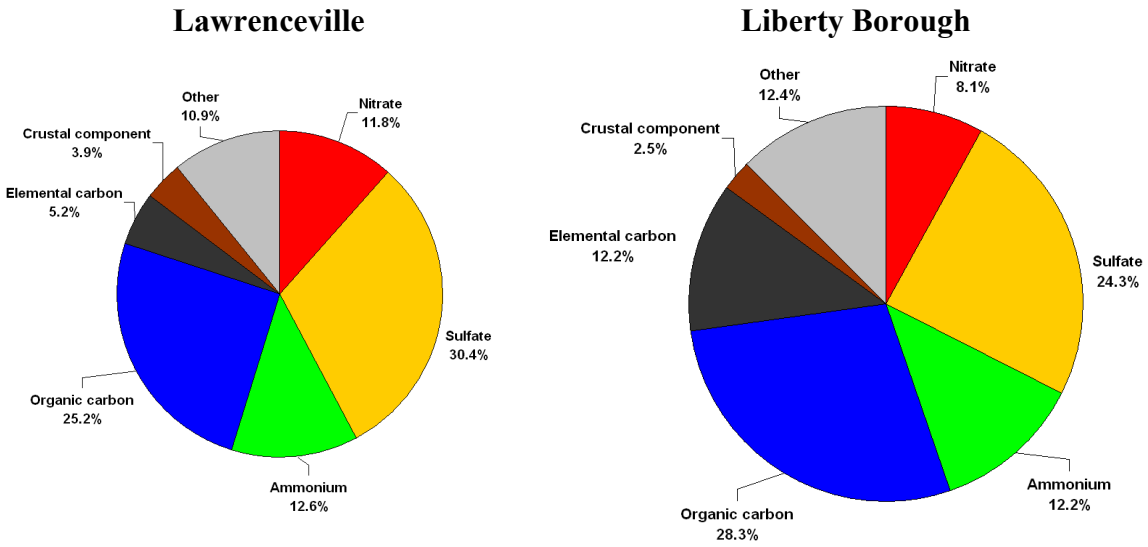


Figure 1. 2003-2005 Speciated components at the Lawrenceville and Liberty Borough Monitors.

The following figure looks at the difference between the Lawrenceville and Liberty monitors, also know as the Liberty Excess.

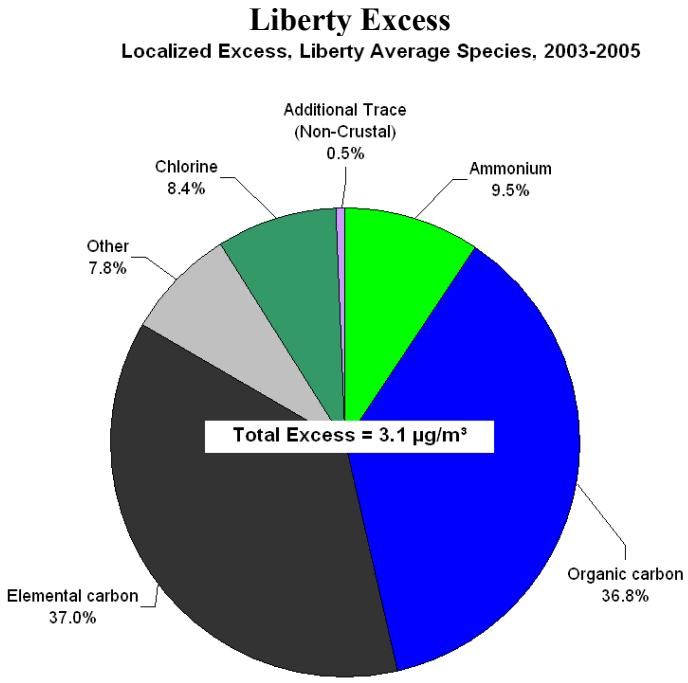


Figure 2. Difference between 2003-2005 speciated components at the Liberty and Lawrenceville monitors.

Regional pollutants, such as sulfates and nitrates, are not showing up in the Liberty Excess. In this case, carbon (elemental and organic) is playing a big role in the actual $PM_{2.5}$ measurements at Liberty. The Clairton Coke Works facility is a large contributor to elemental and organic carbon.

Comment:

One commenter (0059) stated it found no support for the assumption that the emissions from the major source at Liberty-Clairton are isolated from the air quality in the surrounding Pittsburgh metropolitan area, including air quality in Allegheny County and Westmoreland County, both of which are in the Pittsburgh-Beaver Valley area.

EPA Response:

As explained in EPA's August 18, 2008 Technical Analysis for Liberty-Clairton Area, speciation data further illuminates Liberty-Clairton area's unique local problem. The Allegheny County Health Department (ACHD) conducted an 18-month study which compared $PM_{2.5}$ speciation data at the Liberty Borough monitor to another monitor in Allegheny County, the Lawrenceville monitor. (See, "$PM_{2.5}$ Chemical Speciation and Related Comparisons at Lawrenceville and Liberty: 18-Month Results," dated June 7, 2005, prepared by Jason Maranche, Allegheny County Health Department, and available at http://www.achd.net/airqual/pubs/pdf/speciation_report.pdf.) The Lawrenceville monitor, # 42-003-008, is located in Pittsburgh, downwind from the central business district. The Liberty Borough monitor site is located in the Monongahela Valley, which contains a mix of urban residential, heavy industrial and rural areas.

The ACHD study showed that the Lawrenceville monitor is impacted by sulfates during warmer weather and nitrates when it is cold. The Liberty Borough monitor showed similar levels of nitrates and sulfates, depending on the season. However, the main species detected year-round at Liberty Borough were organic and elemental carbon.

Thus, the high concentrations of carbon at the Liberty Borough monitor indicate a unique local problem in the area. The additional carbon is, on average, approximately equal to the difference between the Liberty Borough design concentration and the concentration for the remainder of the surrounding Pittsburgh area.

3.31. Logan, UT-ID

Comment:

One commenter (0099) recommends that EPA designate two separate nonattainment areas bounded by the State line between Utah and Idaho. The commenter is concerned about the difficulty of conducting various air quality planning efforts (especially transportation conformity analysis) while having to coordinate with one MPO, two State Departments of Transportation, two State Departments of Environmental Quality and two separate Regional EPA Offices.

EPA Response:

The Cache Valley is a bowl-shaped valley measuring approximately 60 kilometers north to south and 20 kilometers east to west and almost entirely surrounded by mountain ranges. There is no topographic physical barrier that separates the populated areas of Cache County, Utah and Franklin County, Idaho

and it is clear that the portions of the two counties being designated nonattainment are located in the same airshed. EPA's analysis of the meteorology of the area included wind direction, speed, and pollution rose data. High $PM_{2.5}$ days occur during winter temperature inversions and the highest concentrations were with light winds from the NW and SE directions. These factors in combination with a low mixing height acting as a lid over the air mass prevents dispersion into the upper atmosphere. Thus, the high terrain areas surrounding the air mass and exceeding the mixing height act to essentially define its boundaries.

Nationwide, there are numerous areas that are multi-state and multi-jurisdictional that have been designated as one nonattainment area and have been able to coordinate together to address common air pollution issues. Past experience indicates that States are capable of working collaboratively in SIPs to resolve nonattainment area problems that cross state lines. The transportation conformity analysis has a collaborative process formally outlined in Section XII "Transportation Conformity Consultation" of Utah's SIP and addresses issues such as: transportation conformity consultation, specific roles and responsibilities, the interagency collaboration and consultation process, and the dispute resolution process.

There are options available to administer the transportation conformity requirements in the entire boundary area for Cache and Franklin Counties (or any other geographic area). To address these transportation conformity issues, and many other situations, EPA's Office of Transportation and Air Quality (OTAQ) has produced two documents; "Companion Guidance for the July 1, 2004, Final Transportation Conformity Rule; Conformity Implementation in Multi-Jurisdictional Nonattainment and Maintenance Areas for Existing and New Air Quality Standards" (EPA420-B-04-012, July, 2004), and "Interim Guidance for Implementing the Transportation Conformity Provisions in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)" (EPA420-B-06-90, February, 2006.)

The "Companion Guidance" document (EPA420-B-04-012) outlines options for establishing the $PM_{2.5}$ motor vehicle emissions budgets (MVEB) on a nonattainment area-wide basis or subarea basis. In addition, the MPO/States may revert from using nonattainment area-wide budgets to demonstrate conformity by meeting selected respective subarea emission budgets if the MPO/States make concurrent conformity determinations that demonstrate consistency of their respective plans and programs with their individual subarea budgets. Likewise, at any time in the future, the MPO/States may switch from using subarea budgets to using nonattainment area-wide budgets. This is allowed as long as they once again perform a joint conformity determination and the sum of their subarea motor vehicle emissions are equal to or less than the established nonattainment area-wide $PM_{2.5}$ MVEBs. This process is allowed provided that it is established in the respective SIPs. The guidance provides great flexibility for the MPO/States to jointly meet the necessary SIP budget(s) and represents a unified process for addressing transportation conformity.

3.32. Los Angeles-South Coast Air Basin, CA

See section 2.2 for general comments relevant to this particular nonattainment area.

3.33. Louisville, KY-IN

Comment:

One commenter (0137) supports EPA's recommendations and requests that EPA designate Bullitt and Jefferson counties in Kentucky as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this supporting comment and has made the determination that Bullitt and Jefferson counties in Kentucky should be included in the nonattainment boundary for the Louisville area for the designations for the 2006 revised 24-hour $PM_{2.5}$ standard.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Comment:

One commenter (0114) requests that EPA deny the exceptional events request from the Kentucky Division of Air Quality, citing negative health impacts from $PM_{2.5}$. The commenter requests that EPA designate Bullitt and other counties that exceed or contribute to violations of the NAAQS as nonattainment.

EPA Response:

As explained in EPA's June 08, 2007, guidance entitled, Air Designations for the Revised 24-hour Fine Particulate Matter Standard, "Air quality monitoring data affected by exceptional events may be excluded from use in identifying a violation if they meet the criteria for such an exclusion, as specified in the Final Rule on the Treatment of Data Influenced by Exceptional Events (72 FR 13560). Attached to the August 19th letter from EPA to Governor Beshear (http://www.epa.gov/pmdesignations/2006standards/rec/letters/04_KY_EPAMOD.pdf) is a very detailed analysis all of the exceptional events requests, including Bullitt County, Kentucky. (See Enclosure 3). While EPA did concur with some of the exceptional events requests made for the Louisville area, as explained in the TSD EPA is designating Bullitt County as part of the Louisville nonattainment area because this county has a monitor that is violating the standard with a design value of 36 for the 2005-2007 time period even after consideration of all proposed exceptional events and exclusion of those approved by EPA. Please see the TSD and exceptional events attachment for full discussion of these issues.

3.34. Madison-Baraboo, WI

Comment:

Four commenters (0082, 0096, 0109, 0134,) disagreed with EPA's recommended designations for Columbia County in Wisconsin. All of the commenters believe that the emissions from Columbia County do not contribute to the violation in Dane County. Two of the commenters (0082, 0096) believe that if the most recent data from 2008 is used, Dane and Brown counties are likely to be able to be in compliance. One of the commenters (0109) requested a 1-year extension from EPA to designate because the commenter believes that if the most recent data from 2008 are used the area will be in attainment. One of the commenters (0082) requests that in the event EPA is unwilling to reconsider the proposed nonattainment designation, the commenter believes that a partial county boundary confined in the Town of Pacific because it encompasses Columbia Energy Center.

- Factor 2 – The commenter believes that Columbia County is surrounded compliant monitors (Sauk and Dodges Counties) and therefore the county is not contributing. The commenter believes that the Department of Natural Resources (DNR) data prove that stationary sources contribute a minute fracture of the total $PM_{2.5}$. The commenter requests that EPA review the NO_X emissions in Table 1 of the comment letter because the commenter believes there are no coal-fire emission units that are irregularly high;
- Factor 6 – The commenter believes Columbia County does not have significant emissions on upwind days with high concentrations of $PM_{2.5}$. The commenter believes that the prevailing winds displayed on EPA's pollution roses indicate that prevailing winds (71 percent) are from the directions of south or southwest.

EPA Response:

EPA initially recommended designating Columbia and Dane Counties as nonattainment. EPA considers the Columbia County emissions to contribute to the violations in Dane County base on analysis of all factors and analytic tools. Additional information shows that Columbia County emissions are mostly generated at a power plant. Consistent with what EPA did in other areas where a single source or closely located group of sources is responsible for a large portion of a contributing county's emissions, EPA is designating a partial county area as nonattainment. In the Madison area, EPA is designating Pacific Township in Columbia County as nonattainment and the rest of the county as attainment. Meteorological data indicates the wind comes from a variety of directions in the Madison area. There is no dominating wind direction. Also, the atmosphere chemistry forming fine particulate from precursor emissions is complex, so it is not as simple as the wind carrying the pollution from one area to another. EPA concluded based on this meteorology coupled with the size of emissions from Pacific Township, location in relation to the violating monitor, low population and commuting that a partial county designation including Pacific Township was appropriate. Please see section 2.2 for general comments on materiality of emissions and attaining monitors between a source and a violating monitor.

EPA is providing Wisconsin and the other states an opportunity to submit 2008 monitoring data before the designations are effective. Should this data show that

the entire area meets the air quality standards, EPA will reconsider the appropriate designation. Further detail is provided above in section 2.3.

Comment:
One commenter (0119) requests that EPA expand the nonattainment area designations. The commenter requests that EPA designate Grant County, WI as nonattainment. The commenter believes that Grant County contributes to violations in Dane County. The commenter provides additional information about the impact of future modifications at Nelson E. Dewey Unit 3. The commenter cites negative health impacts from $PM_{2.5}$.

EPA Response:
Additional information on a proposed Grant County source expansion was also provided. EPA uses the current conditions to set nonattainment areas. Just as EPA cannot use projected emission controls on a large source to exclude a county from the area, the Agency cannot use the projected new source expansion to add Grant County to the Madison nonattainment area. Wisconsin needs to include planned emission increases like the Grant County power plant expansion mentioned in the comment when it develops plans to bring the Madison area into attainment. In addition, any new or modified facilities must comply with applicable new source review requirements.

3.35. Milwaukee-Racine, WI

Comment:
One commenter (0082) disagrees with EPA's recommended designations for Racine and Waukesha counties in Wisconsin. The commenter believes that the emissions for the Racine and Waukesha counties do not contribute to the violations in Milwaukee County.
Racine County, WI.

- Factor 1 – The commenter believes that the emissions are minimal and should not be characterized as contributing. The commenter believes that the DNR data prove that stationary sources contribute a minute fracture of the total $PM_{2.5}$;
- Factor 4 – The commenter believes that emissions from the county to Milwaukee County are minimal, using EPA's emission factors for light-duty trucks and passenger cars and data from the U.S. Census Bureau, which the commenter attached to its submission; and
- Factor 9 – The commenter believes that all the stationary sources in Racine County are fully controlled.

Waukesha County, WI

- Factor 1 – The commenter believes that the emissions are minimal and should not be characterized as contributing. The commenter believes that the DNR data prove that stationary sources contribute a minute fracture of the total $PM_{2.5}$. The commenter requests that EPA review the NO_X emissions in Table 1 because the commenter believes there are no coal-fire emission units are irregularly high;
- Factor 4 – The commenter believes that emissions from the county to Milwaukee County are minimal, using EPA's emission factors for light-duty trucks and passenger cars and data from the U.S. Census Bureau, which the commenter attached to its submission; and

- Factor 9 – The commenter believes that all the stationary sources in Waukesha County are fully controlled.

EPA Response:

The CAA requires EPA to designate areas failing to meet an air quality standard and areas that contribute to violations as nonattainment areas. Even if an area is monitoring attainment or lacks air quality monitoring, it is to be designated as nonattainment if it contributes to a violation. The counties nearby a violating county must be evaluated for a contribution to the violation. Other factors including population and commuting are also reviewed for these nearby counties. The CAA requires defining nonattainment areas to include the full set of contributing areas along with areas experiencing violations, as a means of assuring that the State planning process takes comprehensive consideration of nearby areas where controls can help improve air quality.

Designations are based on current air quality. Current values are also used for the other factors such as emissions and emission controls. The trend of improved air quality in many areas is commendable. Still, the possibility that an area may achieve the air quality standards in the future is not a basis for an attainment designation. Similarly, projections of future emission reductions or increases of population and commuting may not prove accurate and are not a basis for determining the size of a nonattainment area. Therefore, EPA designated counties nonattainment as part of the Green Bay, Madison, and Milwaukee areas using the current monitoring, emissions, and other data. EPA is also allowing Wisconsin and the other States to submit 2008 monitoring data prior to the effective date of the designations. This ensures that the latest monitoring data are considered. Please see section 2.3 above regarding the submission of 2008 data.

Specifically, Waukesha County has a relatively large amount of emissions for this area, even considering current emission controls. Racine County has moderate emissions considering controls. Section 107 does not include a materiality test, any area that contributes to the violations must be included in the nonattainment areas. EPA analyzed the counties and found both counties make a contribution to the violations in the adjacent Milwaukee County considering emissions, emission controls, location in relation to the violating monitors, population, commuting and meteorology. Commuting data from 2005, more recent then that cited by the commenter, shows the 97 percent of Waukesha County workers and 88 percent of Racine County workers commute within the Milwaukee area.

Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions on this area.

Comment:

Two other commenters (0096, 0134) also disagree with EPA's recommended designations for Racine and Waukesha Counties in Wisconsin. The commenters believe

that the emissions for the Racine and Waukesha Counties do not contribute to the violations in Milwaukee County, and that commuting from these areas is low.

EPA Response:

The CAA requires EPA to designate areas failing to meet an air quality standard and areas that contribute to violations as nonattainment areas. Even if an area is monitoring attainment or lacks air quality monitoring, it is to be designated as nonattainment if it contributes to a violation. The counties nearby a violating county must be evaluated for a contribution to the violation. Other factors including population and commuting are also reviewed for these nearby counties. The CAA requires defining nonattainment areas to include the full set of contributing areas along with areas experiencing violations, as a means of assuring that the State planning process takes comprehensive consideration of nearby areas where controls can help improve air quality.

Designations are based on current air quality. Current values are also used for the other factors such as emissions and emission controls. The trend of improved air quality in many areas is commendable. Still, the possibility that an area may achieve the air quality standards in the future is not a basis for an attainment designation. Similarly, projections of future emission reductions or increases of population and commuting may not prove accurate and are not a basis for determining the size of a nonattainment area. Therefore, EPA designated counties nonattainment as part of the Green Bay, Madison, and Milwaukee areas using the current monitoring, emissions, and other data. EPA concluded as described in the TSD that based on emissions, emission controls, population, commuting and meteorology Racine and Waukesha do currently contribute to the violations in Milwaukee.

EPA's commuting data shows that Racine and Waukesha Counties have a high fraction of workers who commute within the Milwaukee area. This helps to show that the counties are a part of the area. Wisconsin did not supply any county-to-county commuting information for EPA to review. Still, EPA determined that Racine and Waukesha Counties contribute to the Milwaukee County violation based on the recommended nine factor analysis. The commuting data certainly was not the sole factor in EPA's designations.

EPA is also allowing Wisconsin and the other States to submit 2008 monitoring data prior to the effective date of the designations. This ensures that the latest monitoring data are considered. Please see section 2.3 above regarding the submission of 2008 data. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions for this area.

Comment:

One commenter (0119) requests that EPA expand the nonattainment area designations. The commenter requests that EPA designate Kenosha, Ozaukee, and Washington Counties in Wisconsin as nonattainment. The commenter believes that Kenosha,

Ozaukee, and Washington counties contribute to violations in Milwaukee County. The commenter cites negative health impacts from $PM_{2.5}$.

EPA Response:

EPA determined that Milwaukee, Racine, and Waukesha Counties make up the Milwaukee nonattainment area and that Kenosha, Ozaukee, and Washington Counties do not belong in the Milwaukee nonattainment area.

The 2005 emissions inventory shows high emissions in Kenosha County, but these 2005 emissions were attributable in large part to the WEPCO Pleasant Prairie power plant. By the end of 2006, this plant had highly effective NOx control equipment in place on both units, and by the end of 2007 the plant had highly effective SO_2 control equipment in place on both units. As a result, Kenosha County now has relatively low emissions which EPA believes no longer contributes to violations in Milwaukee County. Ozaukee and Washington Counties have moderate emissions and a moderate fraction of the commuters from these counties commute into Milwaukee County. However, the population and emissions in these counties is sufficiently lower than the population and emissions in Milwaukee, Racine, and Waukesha Counties for EPA to determine that these counties do not contribute to the violations.

Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions for this area.

3.36. Morgantown, WV

Comment:

One commenter (0131) requests that EPA follow the law and perform the duties of the office in protecting the public in Monongalia County, WV. The commenter comments that the people and other assets will not be protected in the near-term or the decades ahead unless the nonattainment status is appropriately applied. The commenter believes that the following power plants: Ft. Martin, Beechurst, Hatsfield Ferry in Pennsylvania, Rivesville and another unnamed power plant located on the Cheat River in Preston County, contribute to the violation in Monongalia County. The commenter notes the impacts of underground and surface mining on particulates. The commenter notes the increase of truck traffic. The commenter notes the impacts of: West Virginia University, unemployment, growth, open burning and other fine particulate contributors in Monongalia County.

EPA Response:

EPA considers the designation of nonattainment areas with appropriate boundaries to be an important step toward the attainment of the 2006 24-hour $PM_{2.5}$ NAAQS. To promulgate the designations, EPA followed the process set forth in section 107(d) of the Act. In determining what specific areas to include with the boundaries of a designated nonattainment area, EPA followed the definition of "nonattainment" in section 107(d)(1)(A)(i). That provision requires EPA to designate as nonattainment any area that does not meet the NAAQS, or

that contributes to ambient air quality in a nearby area that does not meet the NAAQS. EPA indentified areas that were violating the NAAQS based upon monitors that registered violations of the NAAQS over a 3-year period (2005-2007). In order to determine what nearby areas were contributing to these violations, EPA evaluated a broad range of information. In order to determine what nearby areas were contributing to these violations, in accordance with the Agency's June 8, 2007 guidance, EPA evaluated a broad range of available information and technical data related to the nine factors. For the Morgantown Area, the information evaluated included vehicular data and emissions and controls (current and projected) data for ten electrical generating units (EGUs) with SO_2 plus NOx emissions greater than 5000 tons, including: the Fort Martin Power Station located in Monongalia County, WV; the Hatfield's Ferry Power Station located in Greene County, PA; the Rivesville Facility located in Marion County, WV; and, the Albright Facility located in Preston County, WV. The Fort Martin Power Station and the Morgantown Energy Facility (referred to as "Beechurst" by the commenter) are located in Monongalia County, WV, which is being designated as nonattainment for the 2006 $PM_{2.5}$ NAAQS as part of the Morgantown Area. The Hatfield's Ferry Power Station is located within the portion of Greene County, PA which is being designated as nonattainment for the 2006 $PM_{2.5}$ NAAQS as part of the Pittsburgh Nonattainment Area. EPA recognizes the commenter's concern relating to various other potential sources of fine particulate emissions within Monongalia County, WV, and believes that the designation of this area as nonattainment for the 2006 $PM_{2.5}$ NAAQS is an important step towards improving ambient air quality within this area.

Comment:

One commenter (0176) requests EPA to designate Monongalia County as nonattainment. The commenter provides details for each of the nine factors for analysis:

- Factor 1 – The commenter stated there are two coal-fired facilities in the area and a third facility in construction, and that emission data of these facilities will have to be collected by a third-party environmental scientist;
- Factor 2 – The commenter notes that there are no dust suppression equipment currently used for open coal piles, river barge loading plants, rail loading cars, coal waste sites, and coal mixing facilities. The commenter also notes idling trucks on County Route 53 and smelling flue gas several times a year. The commenter suggests asking landowners to put new monitors on their property to gather data;
- Factor 3 – The commenter notes the building of townhouses and schools in town and that vehicles used for coal mining are common throughout the county;
- Factor 4 – The commenter states that traffic is very heavy county-wide, including Interstate 79;
- Factor 5 - The commenter states that Monongalia County is growing quickly but not responsibly;
- Factor 7 – The commenter notes that there are a number of villages, farmland, forestland, rolling hills and valleys; and

- Factor 9 – The commenter states that more enforcement and heavier fines are needed to control the air pollution and more oversight is needed by EPA.

EPA Response:

In EPA's August 18, 2008 letter to West Virginia Governor Joe Manchin, III, the Agency proposed designating Monongalia County as the Morgantown nonattainment area for the 2006 24-hour $PM_{2.5}$ standard. This recommendation was based on EPA's technical analysis for the Morgantown area, which included a review of the recommended nine factors in the Agency's June 8, 2007 guidance which addressed many of the factors noted by the commenter. Consistent with that position, EPA is now designating the Morgantown area, which includes all of Monongalia County, nonattainment for the 2006 24-hour $PM_{2.5}$ standard. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions. West Virginia will now have to prepare a SIP for the area demonstrating attainment by controlling the various sources noted by the commenter. The State has discretion to decide which sources to control and the commenter will have the opportunity to participate in public comment on the draft SIP.

3.37. Muscatine, IA

Comment:

One commenter (0171) supports EPA's recommendations for all of Muscatine County, IA, to be designated as nonattainment. The commenter states that high background concentrations of fine particulate matter indicate sources outside the cities of Muscatine and Davenport are the sources are contributing to the fine particulate matter concentrations recorded.

EPA Response:

EPA proposed designating the whole county of Muscatine County as nonattainment due to monitored violations and an initial review of the 9-factor analysis. In October 2008, Iowa provided additional information on the area in response to EPA's 120-day letter. Based on an analysis of the data provided by the State, in conjunction with the 9-factor analysis, EPA determined that it could not support the State's recommended boundary, but that a partial county designation was appropriate.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries.

Please refer to the Iowa TSD for long range transport discussion.

Comment:

One commenter (0089) disagrees with EPA's proposed designation that Muscatine County be designated as nonattainment. The commenter requests that the county be

designated as attainment. The commenter suggests as an alternative that if EPA designates the county nonattainment, that the boundary is the narrower boundary recommended by Iowa Department of Natural Resources. The commenter believes the following:

- That Section 107(d)(1)(A) of the CAA bases designations on the monitored values from 2004-2006 and EPA's designation was improperly conducted by accounting for design value monitoring data from 2005-2007.

EPA Response:

EPA has used the most recent monitoring data available to identify areas that violate the new standard. The Clean Air Act requires that EPA promulgate designations based on valid air quality data available at the time of the promulgation. That data must be quality assured in order to be considered in the designation process. That data set may change during the designation process as data is submitted by the state to the EPA each year and it is quality assured. The State was asked to make recommendations for all areas in the State to be designated as unclassifiable, attainment, or nonattainment. These recommendations were due to EPA by December 2007. Iowa based its recommendation of the entire state being attainment on the most recent quality assured data available to it at the time of the recommendation, which was 2004-2006 monitoring data. At that time the data did not indicate violations of the 2006 24-hour $PM_{2.5}$ standard. The State anticipated that more recent data might show violations and asked EPA to consider that data in making decisions. During 2008, 2007 monitoring data was quality assured and as such was ready for consideration by the State and EPA. Monitoring data from 2005-2007 showed two areas in the state with violations of the standard. Based on this more recent data the EPA informed the State of the violating monitors and requested a revised recommendation. Iowa subsequently recommended two very small partial county areas in the violating counties. In addition, EPA is not "re-designating the area" as suggested by the commenters. It is instead promulgating initial designations based on the most current information available as it is required to do.

Comment:

- EPA used monitoring data from two source-oriented, SPMs with middle spatial scale ranges that exhibited exceedence that were not representative of general air quality conditions; EPA's statements on whether or not sufficient data is available to properly characterize the nonattainment area are contradictory.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a

continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

Nonattainment area designations are to include the area in violation and areas that contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitor, the modeling did not demonstrate that other sources in the Quad Cities area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Commenter (0089) stated that EPA's proposed nonattainment boundaries were in conflict with EPA's 2007 guidance provided to the states, that EPA did not make its recommendation on a case-by-case basis, that EPA did not include only "areas" shown to have a significant contribution to exceedance events, and that culpability of sources in the larger area could not be established because only the source oriented monitors were exceeding.

EPA Response:

EPA did conduct a case-by-case analysis of the violating areas based on the information provided to it by the State and other relevant information. EPA must designate the violating area as nonattainment as well as the area contributing to the violation. The 120-day letter sent to the State noted that the data the State provided did not support very small partial county boundaries. The data did not demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this information was not provided to the EPA, its case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution solely from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a smaller contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day

letter did not support as narrow a boundary as recommended by the State. EPA concluded that a larger partial county designation, inclusive of the townships of the major metropolitan areas includes the violating area and the nearby contributing areas. Refer to EPA's response above concerning the nature of the monitors.

Comment:

- EPA should give consideration to the efforts already underway in the Muscatine area to address high background levels of $PM_{2.5}$.

EPA Response:

EPA recognizes the efforts by the state and the stakeholders to achieve emissions reductions as soon as possible. EPA also encourages both states to continue efforts to assist the community in implementing voluntary measures.

However, under section 107(d) of the Clean Air Act, in designating nonattainment areas, EPA must designate, as nonattainment, areas that are violating a NAAQS and areas that are contributing to the violations. This requirement does not authorize EPA to rely on the ongoing efforts to develop further control strategies in determining nonattainment boundaries. EPA's decision must be based on the statutory requirements, and EPA's promulgation of the nonattainment designations for these areas, as described in detail in the TSDs, meets the statutory requirements.

Comment:

Two commenters (0150, 0151) suggest as an alternative that if EPA designates the Muscatine County, IA, area as nonattainment, that a narrower boundary designation is made as recommended by the Iowa Department of Natural Resources and consider voluntary control strategies at the named point sources.

EPA Response:

EPA recognizes the efforts by the state and the stakeholders to achieve emissions reductions as soon as possible. EPA also encourages both states to continue efforts to assist the community in implementing voluntary measures.

However, under section 107(d) of the Clean Air Act, in designating nonattainment areas, EPA must designate, as nonattainment, areas that are violating a NAAQS and areas that are contributing to the violations. This requirement does not authorize EPA to rely on the ongoing efforts to develop further control strategies in determining nonattainment boundaries. EPA's decision must be based on the statutory requirements, and EPA's promulgation of the nonattainment designations for these areas, as described in detail in the TSDs, meets the statutory requirements.

Comment:
Commenters (0150 and 0151) believe that the monitor results are not representative of the general area air quality.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

Comment:
The commenter (0151) asserts that because EPA has not "promulgated an approved method for quantifying $PM_{2.5}$ emissions data can be suspect absent an acceptable method". "…Without an approved testing method, accurate modeling, and better understanding of $PM_{2.5}$ origins, a premature $PM_{2.5}$ nonattainment designation could result in industries being required to undertake expensive process controls that have little or no impact on local $PM_{2.5}$ readings.

EPA Response:

EPA cannot decline to promulgate designations, or delay designations, based upon a purported lack of a test method. EPA has adequate estimates of direct PM2.5 and PM2.5 precursors for designation purposes in the 2005 NEI. Better information will be developed by the State and EPA in the process of developing the SIP for each nonattainment area.

The Clean Air Act requires that EPA promulgate designations based on valid air quality monitoring data available at the time of the promulgation from monitors eligible for comparison with the NAAQS ($PM_{2.5}$ in this case). Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58. Two of these monitors are violating the NAAQS and therefore EPA must promulgate nonattainment area designations.

Comment:
One of the commenters (0151) also believes that Section 107(d)(1)(A) of the CAA bases designations on the monitored values from 2004-2006 and EPA's designation was improperly conducted by accounting for design value monitoring data from 2005-2007.

EPA Response:

EPA has used the most recent monitoring data available to identify areas that violate the new standard. The Clean Air Act requires that EPA promulgate designations based on valid air quality data available at the time of the promulgation. That data must be quality assured in order to be considered in the designation process. That data set may change during the designation process as data is submitted by the state to the EPA each year and it is quality assured. The State was asked to make recommendations for all areas in the State to be designated as unclassifiable, attainment, or nonattainment. These recommendations were due to EPA by December 2007. Iowa based its recommendation of the entire state being attainment on the most recent quality assured data available to it at the time of the recommendation, which was 2004-2006 monitoring data. At that time the data did not indicate violations of the 2006 24-hour $PM_{2.5}$ standard. The State anticipated that more recent data might show violations and asked EPA to consider that data in making decisions. During 2008, 2007 monitoring data was quality assured and as such was ready for consideration by the State and EPA. Monitoring data from 2005-2007 showed two areas in the state with violations of the standard. Based on this more recent data the EPA informed the State of the violating monitors and requested a revised recommendation. Iowa subsequently recommended two very small partial county areas in the violating counties. In addition, EPA is not "re-designating the area" as suggested by the commenters. It is instead promulgating initial designations based on the most current information available as it is required to do.

Comment:
One commenter (0083) requests that EPA designate a partial county boundary for Muscatine County. IA, that is within the borders of the city of Muscatine, as nonattainment. The commenter cites: the technical analysis from Iowa DNR that points to a point source nearby the violating monitor as justification for the nonattainment boundaries. The commenter provides background on the Gerdau's mill and SSAB mill in Muscatine. (Note: Gerdaus is referred to as Ameristeel and SSAB is referred to as IPSCO steel in R7s TSD)

EPA Response:

EPA conducted a case-by-case analysis of the violating areas based on the information provided to it by the State and other relevant information. EPA must designate the violating area as nonattainment as well as the area contributing to the violation. The 120-day letter sent to the State noted that the data the State provided did not support very small partial county boundaries. The data did not

demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this information was not provided to the EPA, its case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution solely from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a smaller contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day letter did not support as narrow a boundary as recommended by the State. EPA concluded that a larger partial county designation, inclusive of the townships of the major metropolitan areas includes the violating area and the nearby contributing areas. Refer to EPA's response above concerning the nature of the monitors.

Comment:

The commenter (0083) asserts that the violating monitoring sites are not representative of ambient air quality throughout the county as the violating monitors are source-oriented monitors and that "all information" indicates that the air quality violations are limited to the immediate areas around Blackhawk Foundry and Grain Processing Corporation. The commenter state that emissions from the entire three-county area have not been shown to contribute to the monitored violations and that the nonattainment area should not exceed the "representative scale" of the two monitors.

EPA Response:

There are multiple monitoring objectives served by the State's monitoring network. In the instance of the Davenport area, the violating monitor at the 300 Wellman site is situated to assess the potential for source level impacts in the neighborhoods surrounding several industrial facilities. The Adams School site is situated to assess population exposures in direct comparison with the NAAQS. The Jefferson School site is also situated for assessment of population exposure NAAQS compliance, and it also incorporates chemical speciation and a continuous monitor to establish a clearer picture of $PM_{2.5}$ behavior in the Davenport area. Monitor network design is largely influenced by the data collection priorities of each individual State. Annual monitoring network plans are submitted by each state and are reviewed and approved by EPA. EPA establishes minimum monitoring network requirements in the code of federal regulations, but States are allowed and encouraged to invest in more thorough data collection systems. Both of the violating monitors are designated as eligible for comparison with the NAAQS consistent with 40 CFR Part 58.

Nonattainment area designations are to include the area in violation and areas shown to contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitors, the modeling did not demonstrate that other point sources in the Quad Cities area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other point sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

Comment:

The commenter (0083) suggests that EPA should not designate entire counties as nonattainment, but should take into consideration efforts of the two named point sources to negotiate, with the State, "voluntary" control strategies.

EPA Response:

EPA recognizes the efforts by the state and the stakeholders to achieve emissions reductions as soon as possible. EPA also encourages both states to continue efforts to assist the community in implementing voluntary measures.

However, under section 107(d) of the Clean Air Act, in designating nonattainment areas, EPA must designate, as nonattainment, areas that are violating a NAAQS and areas that are contributing to the violations. This requirement does not authorize EPA to rely on the ongoing efforts to develop further control strategies in determining nonattainment boundaries. EPA's decision must be based on the statutory requirements, and EPA's promulgation of the nonattainment designations for these areas, as described in detail in the TSDs, meets the statutory requirements.

Comment:

Commenters (0093) request that EPA designate a partial county boundary for Muscatine County, IA. The commenter cites the technical analysis from Iowa Department of Natural Resources as justification for the nonattainment boundary.

EPA Response:

EPA's detailed analysis of air quality data for Muscatine County is included in the Technical Support Documents (TSDs) for eastern Iowa. EPA agrees that on a number of exceedance days the Muscatine monitor is influenced by "local" events and by regional events outside the state. EPA also acknowledges that the monitor is located near the Grain Processing facility. However, the Clean Air Act (section 107(d)(1)(A)(i)) instructs us to designate, as nonattainment, areas which violate a National Ambient Air Quality Standard (NAAQS), and nearby areas which contribute to violations. Iowa uses the variations in area monitored values to support its argument that only a very few sources in the Muscatine area contribute

to violations in any meaningful way. EPA does not believe this provides sufficient information (without filter analyses or similar studies) to conclude that some local $PM_{2.5}$ sources contribute to violations and others do not. (EPA recognizes that Iowa argues that monitored data is only one factor in its "cumulative weight-of-evidence" approach, and addresses other factors raised by Iowa in the TSDs and below in the response to comments. However, EPA does not believe that the monitoring comparison argument can be given weight in justifying exclusion of a substantial number of local sources from the nonattainment boundary.)

Notwithstanding the proximity of the Muscatine (Garfield School) monitor to the Grain Processing facility, we note that it is a federal reference method monitor (classified as population-oriented, neighborhood scale), and is designated under 40 CFR Part 58 as eligible for comparison with the 24-hour $PM_{2.5}$ NAAQS. The state has not claimed that any specific data are invalid or otherwise unrepresentative of air quality in the area. The monitor meets EPA siting criteria. Iowa has not provided sufficient information concerning values recorded by the monitor for EPA to conclude that local source influence does not include contributions from sources outside the narrow boundary recommended by the state. Also, as explained below and in the TSD for Iowa, there is no speciation data available for the monitor which would indicate source contribution.

Comment:

One commenter (0144) disagrees with EPA's proposed whole county designation of Muscatine, IA. The commenters suggest that EPA's whole county recommendation is not in line with previous designations for PM_{10}.

EPA Response:

Prior designations for PM_{10} areas have little, if any, relevance for the $PM_{2.5}$ NAAQS. PM_{10} and $PM_{2.5}$ are different NAAQS, with different size indicator particles, that behave differently in the atmosphere, and are often caused by emissions from different sources that may require different controls strategies. $PM_{2.5}$ typically transports much greater distances in the atmosphere and typically is much more likely to consist of secondarily formed particles that result from the mixture of precursors in the atmosphere. Finally, PM_{10} boundaries were often designated nearly 20 years ago, and current facts and circumstances in the area may have changed.

EPA must designate the violating area as nonattainment as well as the area contributing to the violation. The 120-day letter sent to the State noted that the technical support data it provided did not support very small partial county boundaries. The data did not demonstrate a lack of contribution from other sources in the area, nor did it demonstrate that only the sources in immediate proximity to the violating monitors contributed to violations. As this demonstration was not made, EPA's case-by-case review resulted in a decision to notify the State of its intent to include county-wide areas in the nonattainment

area boundaries. Since that time the State responded to EPA's 120-day letter and submitted more data for review. However, this data also did not demonstrate that no other sources in the area were contributing to the violation, nor did it demonstrate an overwhelming contribution directly from the point sources nearest to the violating monitors. On the contrary it showed a considerable contribution (almost 50 percent of the total filter mass) of secondary formation attributable to emissions transported from a longer range in addition to a minor contribution of secondary formation from local point source emissions. The State's technical response to EPA's 120-day letter did not support as narrow a boundary as recommended by the State. EPA concluded that larger partial county designations, inclusive of the townships of the major metropolitan area will protect public health and allow the State greater flexibility in establishing its attainment demonstration. Refer to EPA's response above concerning the nature of the monitors.

Comment:

One commenter (0144) requests EPA to designate the Muscatine, IA area as unclassifiable pending the completion of source apportionment modeling and chemical filter analysis studies.

EPA Response:

Nonattainment area designations are to include the area in violation and areas that contribute to the violation. Although modeling data provided by the state demonstrates that the two named local sources influence the violation at the monitor, the modeling did not demonstrate that other sources in the Quad Cities area do not contribute to the violation as well. For the reasons detailed in the TSDs for the Davenport-Moline-Rock Island area and Muscatine, EPA has determined that other sources in the area contribute to violations of the NAAQS. Thus, EPA is establishing a nonattainment area boundary to include these sources. Refer to EPA's TSDs for Iowa and Illinois which address these issues in greater detail.

3.38. New York City-North New Jersey-Long Island, NY-NJ-CT

See section 2.2 for general comments relating to this particular nonattainment area.

3.39. Nogales, AZ

See section 2.2 for general comments relating to this particular nonattainment area.

3.40. Oakridge, OR

Comment:

One commenter (0161) disagrees with EPA and believes that Westfir, OR does not exceed the NAAQS and that the use of wood stoves does not contribute to the violation in Oakridge, OR. The commenter provides the following reasons:

- The commenter states that the proposed NAA boundary for the Oakridge area that includes the City of Westfir is especially egregious considering no one from EPA

has come to talk with the community, nor, at least to their knowledge, has even been here to observe and document local conditions.

EPA Response:

EPA staff has toured Oakridge, its neighborhoods, and Westfir. Lane Regional Air Pollution Agency (LRAPA) provided meteorological data from Oakridge that indicates during episodes of high $PM_{2.5}$ concentrations, there are strong, ground based inversions with calm to low wind speed. Wind flow is down valley at night and up valley during daytime hours. Westfir is separated from Oakridge by a mountain ridge that extends above the inversion layer. However, Oakridge and Westfir are less than 3 miles up-river from the confluence of the Middle Fork of the Willamette River and the North Fork of the Middle Fork of the Willamette River respectively. In other words, 5-6 miles via road 'down and around the mountain ridge.' Down valley air flow from both towns mix at the confluence of the two rivers and during daytime migrate up-valley into Oakridge. Thus, EPA concludes that emissions from Westfir do contribute to the monitored violation in Oakridge.

Comment:

The commenter does not believe the City of Westfir violates the 24-hour $PM_{2.5}$ NAAQS, nor contributes to violations in neighboring Oakridge. There is no monitoring data demonstrating Westfir violated the NAAQS.

EPA Response:

There is no documentation of violations of the $PM_{2.5}$ NAAQS in Westfir because there is no monitor located in Westfir. However, the CAA requires that areas that have sources that contribute emissions to areas that violate the NAAQS also be included in the nonattainment area. EPA believes that due to the down-valley up-valley wind flow and the relatively short distance between Oakridge and Westfir, that woodstove emissions in Westfir do contribute to $PM_{2.5}$ levels in Oakridge. Considering the distance between Westfir and Oakridge is approximately three miles, even with low wind speeds, smoke from Westfir could impact Oakridge over a multi-hour inversion period.

Comment:

The commenter states that there is no empirical data that indicates smoke from Westfir impacts the Oakridge area.

EPA Response:

As discussed above, meteorological data coupled with emissions and geography strongly suggest that wood smoke emissions in Westfir do impact Oakridge.

Comment:

The commenter states that there seems to be the perception that all has been done that can be done to improve Oakridge's air quality, therefore adjacent communities (which are

separated by topographic features) must contribute to the problem. This proposition is flawed in several ways in the following:

- About 21 percent of the particulates measured in 1991 are road dust related, and there is a substantial rock crushing immediately adjacent to the monitoring station in Willamette City;
- EPA's technical support report accompanying its recommendation to the State dismisses traffic patterns and commuting despite that State Highway 58 is one the three main east-west transportation corridors in the State; and
- There is also a rail yard in Oakridge that occasionally to often have diesel engines idling for hours. Have these sources of particulates has been addressed, measured and/or regulated? If not, it is premature to begin additional restrictions in outlying areas that may not solve the immediate problem.

EPA Response:

Analysis of the particulate matter ($PM_{2.5}$) captured on sampling filters from Oakridge is 87 percent elemental and organic carbon, indicators of wood smoke. PM emissions from rock crushing operations tend to be in the coarse fraction (i.e., larger than 2.5 micrometers), and are not collected in the $PM_{2.5}$ sampling train. Most emissions from rock crushing operations do not contribute to $PM_{2.5}$ mass loadings. While it is true that there are sources of mobile source emissions in Oakridge, EPA concludes as explained in the TSD that residential wood combustion sources in Westfir also significantly contribute to the violating monitor. The State and LRAPA should consider emissions from mobile sources as they develop the SIP to achieve compliance with the NAAQS.

Comment:

The commenter believes EPA's boundary is arbitrary and capricious. The commenter states that the boundary which uses cadastral survey lines has no bearing to air flow patterns nor topography, and EPA's proposed NAA boundary does not include the High Prairie north of Oakridge which has a higher population than Westfir. The commenter states that EPA's supporting information does not adequately demonstrate that Westfir contributes to the Oakridge problem

EPA Response:

EPA proposed the nonattainment area based on township-range survey lines to simplify the boundary delineation and incorporate the mountain ridges that define the valleys. EPA believes that the technical analysis described in the TSD does demonstrate that Westfir is contributing to the violating monitor. EPA did not have evidence that the High Prairie contributed to the violation notwithstanding its population, based primarily on topography and meteorology.

Comment:

The commenter questions the assertion that the bulk of Oakridge's particulate problem is created by wood stove burning, or at least that other sources contribute less than 25 percent of particulates. The commenter believes that EPA's conclusions are based on

17-year old emission data. The commenter states that transportation and rock crushing emission sources should be investigated prior to any regulatory changes.

EPA Response:

Filter analysis of PM collected during the winter of 2007 during winter days with high $PM_{2.5}$ concentrations demonstrates that 87 percent of the $PM_{2.5}$ mass is wood smoke. See the TSD for details. All appropriate sources will be considered by the state for control in developing the nonattainment SIP.

Comment:

The commenter is concerned about the financial implications to the City as well as the citizens. The commenter in general felt that a nonattainment designation would be an economic hardship on the community, and states that if the designation is made, the commenter would expect the Federal Government to provide assistance to provide low and middle income members of the community with an alternative source of heat.

EPA Response:

The Act does not provide for financial implications to be a consideration in nonattainment area designations. EPA is likewise concerned about the financial implications of air quality planning and implementation. The State should take such considerations into account as it develops its plan that will bring the area back into attainment. EPA provides LRAPA financial support for the planning process. See section 2.1 above for additional EPA responses regarding wood smoke.

Comment:

Another commenter (0139) suggests that the designation boundary for the Oakridge, OR area should be the PM_{10} boundary. The commenter believes that is no evidence that Westfir emissions are impacting Oakridge, OR. The commenter believes that the Oakridge UGB is appropriate, and the larger rectangular boundary is unjustified by the technical information. The commenter provides additional information relating to topography, meteorology, wind roses, visual observations and photographs.

EPA Response:

EPA disagrees with the commenter's conclusion. While the UGB contains most of the area with sources that contribute to violations of the $PM_{2.5}$ NAAQS, EPA believes it does not include all areas with sources that contribute. As explained above and in the TSD, EPA has concluded that emissions from Westfir do contribute to the violations. Thus, EPA is designating as nonattainment EPA's original proposed nonattainment area.

1. Wind Rose discussion: The wind rose provided by the commenter is located at the Oakridge Willamette Activity Center in Oakridge. Oakridge is located in a narrow river valley (Middle Fork of the Willamette River). Wind flow is predominately up-valley and down-valley (east-west flow). Approximately 70 percent of the time when exceedences are reported, calm wind (<2.0 mph) is

recorded. Thirty percent of the time winds speeds of greater than 2.0 mph are recorded. There is no flow directly from Westfir which is located approximately one mile to the north-north-west of Oakridge separated by a ridge rising a few hundred feet above the valley floor. This information would tend to indicate Westfir emissions do not impact Oakridge.

However, Westfir is located on the North Fork of the Middle Fork of the Willamette River, approximately 1.0 mile up river from the confluence with the Middle Fork of the Willamette. Oakridge is located approximately 2.5 miles up river of the confluence of the two rivers. Thus, by river bed, Westfir is 3.5 miles from Oakridge, 'down and around the mountain.'

During winter inversion conditions, there is no vertical mixing in the atmosphere and emissions are trapped at ground level. With the down-valley and up-valley flows observed by the meteorological station, even at very low wind speeds emissions from Westfir travel down-valley to the confluence of the two rivers and during times of up-valley flow, migrate to Oakridge.

The wind rose information provided by the commenter does not provide evidence that Westfir emissions do not contribute to Oakridge $PM_{2.5}$ levels.

2. Photos of Oakridge from ridge: The photos of Oakridge from the ridge separating it from Westfir shows definite ground based inversions and smoke in the valley. EPA concurs that emissions from Westfir most likely do not travel up and over the ridge separating the two towns.

The photographic documentation provided by the commenter does not, however provide evidence that Westfir emissions do not contribute to Oakridge $PM_{2.5}$ levels as the air mass mixes at the confluence of the two forks of the Willamette River.

3. Graph of long term $PM_{2.5}$ trends: $PM_{2.5}$ levels in Oakridge have been steadily declining during the 1990's, leveling off after 1999 to levels below 65 $\mu g/m^3$, but above the level of the revised $PM_{2.5}$ NAAQS of 35 $\mu g/m^3$. This data provides evidence that the area does not attain the NAAQS. It does demonstrate that the commenter has been very successful in reducing emissions and adverse health effects from wood smoke but more is still needed to attain the revised 24-hour $PM_{2.5}$ NAAQS.

4. Meteorological data for 'exceedence days' during 2005-2007: The commenter provides meteorological data for 'exceedence' days for 2005-2007. There were 33 days above the level of the 24-hour $PM_{2.5}$ NAAQS. Generally those days are characterized by stable (inversion) atmospheric conditions ranging from 12 hours to 21 hours each day and the number of hours with wind speeds below 2 mph ranging between 12 and 24. EPA agrees that Oakridge experiences high $PM_{2.5}$ levels during winter stagnation, poor ventilation, and low wind speed.

However, even with low wind speeds and little vertical mixing, over a 24-hour period, the air mass can travel several miles. (e.g., at 1 mph and 10 hours of down-valley flow the air mass can travel 10 miles.) Thus even at low wind speeds, emissions from Westfir migrate down-valley and up-valley and contribute to Oakridge $PM_{2.5}$ levels.

5. Nephelometer (PM levels) as a function of wind speed: The commenter provides a graph of $PM_{2.5}$ levels (nephelometer readings) as a function of wind speed from data collected 2005-2007. This data shows that generally as wind speed decreases, $PM_{2.5}$ levels increase. EPA agrees that as wind speed decreases, atmospheric dispersion decreases and local emissions dominate the $PM_{2.5}$ levels. However, even at low wind speed with time, emissions can migrate miles in a 24-hour period. (e.g., at 0.5 mph an air parcel can travel 12.5 miles in 24-hours)

6. Figure 1, graph of diurnal variation of wind speed, temperature differential, and $PM_{2.5}$ levels (1/30/2005-2/4/2005): EPA agrees with the commenter that the graph shows $PM_{2.5}$ levels increase during nighttime inversions and low wind speeds. However, the graph does not demonstrate that at low wind speed air parcels do not migrate between Westfir and Oakridge, a distance of three to four miles.

Please see the TSD for more information.

3.41. Paducah-Mayfield, KY-IL

Comment:

One commenter (0114) requests that EPA deny the exceptional events request from Kentucky Division of Air Quality, citing negative health impacts from $PM_{2.5}$. The commenter requests that EPA designate McCracken and the other counties that exceed or contribute to violations of the NAAQS as nonattainment.

EPA Response:

As explained in EPA's June 08, 2007, guidance entitled, Air Designations for the Revised 24-hour Fine Particulate Matter Standard, "Air quality monitoring data affected by exceptional events may be excluded from use in identifying a violation if they meet the criteria for such an exclusion, as specified in the Final Rule on the Treatment of Data Influenced by Exceptional Events (72 FR 13560). Attached to the August 19th letter from EPA to Governor Beshear (http://www.epa.gov/pmdesignations/2006standards/rec/letters/04_KY_EPAMOD.pdf) is a very detailed analysis all of the exceptional events requests, including McCracken County, Kentucky. (See Enclosure 3 in the comment letter). While EPA did concur with an exceptional event request made for the Paducah area, EPA is designating McCracken County as part of the Paducah-Mayfield nonattainment area because McCracken County has a monitor that is violating the standard with a design value of 36 $\mu g/m^3$ for the 2005-2007 time period.

Comment:
One commenter (0137) supports EPA's recommendations and requests that EPA designate McCracken County, KY, as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this comment and has made the determination that McCracken County, Kentucky should be included in the nonattainment boundary for the Paducah-Mayfield area for the designations for the 2006 revised 24-hour $PM_{2.5}$ standard.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries.

Comment:
One commenter (0100) supports EPA's recommendation and request that EPA designate Massac County, IL, as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA has determined the major source in Massac County, Illinois is responsible for a fair portion of the County's emissions. The emissions are large enough to contribute to the violations being monitored in McCracken County, Kentucky. Therefore, EPA designated a partial county area in Massac County, Illinois as nonattainment in the Paducah-Mayfield area.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries.

Comment:
One commenter (0019) applauds EPA's recommendation for including Massac County in the proposed Paducah KY-IL nonattainment area.

EPA Response:

EPA has determined the major source in Massac County, Illinois is responsible for a portion of the County's emissions. The emissions are large enough to contribute to the violations being monitored in McCracken County, Kentucky. Therefore, EPA designated a partial county area in Massac County, Illinois as nonattainment in the Paducah-Mayfield area.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of recommended nine factors described in the June 2007 guidance as

well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Comment:
One commenter (0108) believes that Massac County, IL should be designated as attainment. The commenter supports the State of Illinois' recommendation that Massac County should not be included in the Paducah-Mayfield, KY-IL nonattainment area because the commenter believes that the sources contained in Massac County, IL do not contribute to the exceedences experienced by the McCracken County, KY monitor. The commenter believes that calculation of $PM_{2.5}$ emissions is still an inexact process because AP-42 allows different approaches to determine $PM_{2.5}$ emission estimates.

EPA Response:

The CAA defines a nonattainment area as any area that does not meet an ambient air quality standard or that is contributing to ambient air quality in a nearby area that does not meet the standard. If an area meets either prong of this definition, then EPA is obligated to designate the area as nonattainment. The design value for the monitor in McCracken County is 36 $\mu g/m^3$ which is above the standard and makes this county an automatic candidate for nonattainment.

EPA has determined the major source in Massac County, Illinois is responsible for a portion of the County's emissions. The emissions are large enough to contribute to the violations being monitored in McCracken County, Kentucky. Therefore, EPA designated a partial county area in Massac County, Illinois as nonattainment in the Paducah area.

EPA used emissions data from the National Emissions Inventory for Factor 1 of the technical analyses. As there were no emission cutoff levels, EPA used the emissions factor information to help determine which counties are contributing. Even if there were some differences in the calculated emissions from different power plants due to the AP-42 factors, this is unlikely to change the county emission totals much and have outcome on the determination. For example in the Paducah area, the emissions from McCracken County, Kentucky and Massac County, Illinois are much higher than those of any of the other nearby counties. These counties would still standout from the other counties when examining the emissions data.
EPA reviewed the data provided by Illinois. EPA is also aware of the Joppa Power Plant's emissions. The emissions from this source are a fair portion of the Massac County emissions, so EPA is designating that part of Massac County in which the source is located as nonattainment in the Paducah-Mayfield area.

Comment:
One commenter (0063/0067) disagrees with EPA's designations. The commenter requests that Massac County, IL, be designated as attainment. The commenter requests a 1-year extension for the designation of McCracken County, KY to allow further data

collection. The commenter cited the following issues with the technical analysis for Massac County, IL, McCracken County, KY (Paducah-Mayfield, KY-IL):

- The commenter believes that EPA predicated on the existence of the emissions coming from Electric Energy, Incorporated's Joppa Generating Station and did not provide an assessment of the impact in the technical analysis;
- Factor 1 – The commenter believes the CES does not represent the distance of the emission source to the monitor that measures nonattainment.
- Factor 2 – The commenter believes that EPA did not provide an assessment of this factor. There is no monitor in Massac County; and
- Factor 6 – The commenter cites EPA: "…potential emissions contributing originating from a northeasterly direction should be eliminated" and believes it supports excluding Massac County.

EPA Response:

EPA is required by the Act to promulgate designations within two years of the promulgation of an air quality standard. An extension may be granted in cases where information is insufficient to promulgate designations, but EPA does not believe those criteria for an extension is not warranted for McCracken County. EPA has complete air quality data for McCracken County. So, EPA cannot designate the area as unclassifiable. The CAA defines a nonattainment area as any area that does not meet an ambient air quality standard or that is contributing to ambient air quality in a nearby area that does not meet the standard. If an area meets either prong of this definition, then EPA is obligated to designate the area as nonattainment. However, EPA is allowing the early submission of 2008 monitoring data prior to designation effective data. If Kentucky follows the procedure detailed above in section 2.3, EPA will reconsider the appropriate designation. There is no monitor in Massac County. Therefore, EPA could not use Factor 2 to evaluate Massac County. The absence of a violating monitor alone does not eliminate counties from nonattainment status. Massac County has been evaluated based on the weight of evidence of the recommended nine factors and other relevant information.

EPA recognizes that oddly shaped counties could potentially give anomalous results in the CES analysis. Thus, EPA indicated that the CES is but one analytical tool for identifying areas that are potentially contributing, and that the results must be evaluated along with other forms of information. Other sources of information from the recommended nine factors and data provided by the State also were considered in addition to the CES in making the final decision. No one tool served as the sole determinative factor in the decision, but the overall collection of evidence provided the necessary information in EPA's final decision.

EPA reviewed the data provided by Illinois. EPA is also aware of the Joppa Power Plant's emissions. EPA has determined the major source in Massac County, Illinois is responsible for a fair portion of the County's emissions. The emissions are large enough (26,000 tpy SO2 and 5,000 tpy NOx) to contribute to the violations being monitored in McCracken County, Kentucky. The meteorological data indicated that winds come from a variety of directions in the

Paducah area including the direction of the Joppa power plant. So, Massac County emissions were found to contribute to the McCracken County violation. Therefore, EPA designated a partial county area in Massac County, Illinois as nonattainment in the Paducah-Mayfield area.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Comment:

Another commenter (0142) disagrees with EPA's designations. The commenter requests that Massac County, IL, be designated as attainment. The commenter cited the following issues with the technical analysis:

- The commenter believes that EPA identified the emissions coming from Electric Energy, Incorporated's Joppa Generating Station and winds but did not use all nine factors to arrive at the conclusion;
- Factor 1 – The commenter believes the CES does not represent the distance of the emission source to the monitor that measures nonattainment;
- Factor 2 – The commenter believes that EPA did not provide an assessment of this factor. There is no monitor in Massac County; and
- Factor 6 – The commenter cites EPA: "…potential emissions contributing originating from a northeasterly direction should be eliminated" and believes it supports excluding Massac County.

EPA Response:

The CAA defines a nonattainment area as any area that does not meet an ambient air quality standard or that is contributing to ambient air quality in a nearby area that does not meet the standard. If an area meets either prong of this definition, then EPA is obligated to designate the area as nonattainment. EPA has adequate information to make a judgment on designation for this area so a one-year extension is not appropriate. The design value for the monitor in McCracken County is 36 micrograms per cubic meter which is above the standard and makes this county an automatic candidate for nonattainment.

The meteorological data indicated that winds come from a variety of directions in the Paducah area. So, Massac County emissions were found to contribute to the McCracken County violation.

EPA reviewed the data provided by Illinois. EPA is also aware of the Joppa Power Plant's emissions. EPA has determined the major source in Massac County, Illinois is responsible for a fair portion of the County's emissions. The emissions are large enough to contribute to the violations being monitored in McCracken County, Kentucky. Therefore, EPA designated a partial county area in Massac County, Illinois as nonattainment in the Paducah-Mayfield area.

EPA is required by the Act to promulgate designations within two years of the promulgation of an air quality standard. An extension may be granted in cases where information is insufficient to promulgate designations, but EPA does not believe those criteria for an extension is not warranted for McCracken County. EPA has complete air quality data for McCracken County. So, EPA cannot designate the area as unclassifiable. However, EPA is allowing the early submission of 2008 monitoring data prior to designation effective data. If Kentucky follows the procedure detailed above in section 2.3, EPA will reconsider the appropriate designation. There is no monitor in Massac County. Therefore, EPA could not use Factor 2 to evaluate Massac County. The absence of a violating monitor alone does not eliminate counties from nonattainment status. Massac County has been evaluated based on the weight of evidence of the recommended nine factors and other relevant information.

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.42. Parkersburg-Marietta, WV-OH

Comment:

One commenter (0118) supports EPA proposed designations for the State of Ohio. The commenter requested that EPA designate Washington County as nonattainment. This is the same county that EPA has proposed as candidate for a designation of nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions. EPA had designated Washington County Ohio as part of this area.

3.43. Philadelphia-Wilmington, PA-NJ-DE

See section 2.2 for comments regarding this particular nonattainment area.

3.44. Pinehurst, ID

See section 2.2 for comments regarding this particular nonattainment area.

3.45. Pittsburgh-Beaver Valley, PA

Comment:

Five commenters (0059, 0095) express disagreement with EPA's previous designation of the Liberty-Clairton nonattainment area as separate from the Pittsburgh-Beaver Valley nonattainment area for the 1997 $PM_{2.5}$ standard. The commenters state that the entire metropolitan area is cohesively defined for transportation and regional planning purposes as well as economic development, and should be so for air pollution control measures as well.

EPA Response:

For the designations for the 1997 $PM_{2.5}$ NAAQS, the Pennsylvania Department of Environmental Protection (PADEP) provided extensive documentation to support a recommendation that a separate, nonattainment area be designated within the Pittsburgh nonattainment area. PADEP resubmitted this material in its October 20, 2008 letter to EPA regarding boundary recommendations for the 2006 $PM_{2.5}$ NAAQS. This document can also be found on the following website, listed as Appendix 1 of Pennsylvania's Remarks to EPA's Response: http://www.epa.gov/pmdesignations/1997standards/rec/region3.htm.

EPA determined that the material provided by Pennsylvania justify the designation of Liberty-Clairton as a separate, distinctively local-source impacted nonattainment area that is designated within the Pittsburgh-Beaver Valley nonattainment area. Because of a localized source of emissions and topography which contains these emissions in the area, EPA determined that it was appropriate to establish Liberty-Clairton as a separate nonattainment area from the Pittsburgh nonattainment area for the 1997 $PM_{2.5}$ NAAQS designations. The recommended Liberty-Clairton area was specified as the area in the vicinity of the Clairton Coke Works, which was previously designated nonattainment for the PM_{10} NAAQS as the "Clairton & 4 Boroughs area."

Comment:

Four commenters (0095) comment that higher monitor readings in one part of the nonattainment area indicates the presence of a major source of pollution in the vicinity. The commenters states that a large single source should argue for a larger nonattainment area, since the emissions from that large source are likely blown throughout the entire Pittsburgh metropolitan region, into multiple States as well as across the international border. The commenters assert that previous studies[2] demonstrate the widespread impact of the emissions from such large sources, and therefore the nonattainment designation should reflect the entire Pittsburgh-New Castle, PA CSA, including all of Allegheny County, as one area.

EPA Response:

EPA agrees that, in the case of the Liberty-Clairton area, higher monitor readings at one monitor in Allegheny County indicate the presence of a major source of pollution in the vicinity. This major source is the Clairton Coke works.

[2] e.g., *The Particulate-Related Health Benefits of Reducing Power Plant Emissions* by Abt Associates for the Clean Air Task Force, October 2000; and *Introduction to Visibility* by W.C. Malm, National Park Service Visibility Program, Colorado State University, 1999.

However, as described in EPA's August 18, 2008 Technical Analysis for Liberty-Clairton Area, emissions from the Clairton Coke Works do not contribute to PM levels in the Pittsburgh-Beaver Valley area or other points downwind. The Clairton Coke Works is a large and complex facility that emits a combination of particulates, SO_2, ammonia, and hundreds of volatile organic chemicals. Although the coke plant has numerous existing emission controls, the combination of a large amount of low-level emissions in a narrow river valley creates a local air quality problem which is uniquely different from the remainder of the area.

There are eight air quality monitors in Allegheny County. $PM_{2.5}$ design values at seven of the eight monitors correlate well. However, the $PM_{2.5}$ design value at Liberty Borough is considerably higher. The 2005 - 2007 design value at the Liberty Borough monitor is 60.9 $\mu g/m^3$, while the design values at the other seven monitors in Allegheny County are between 34 and 40 $\mu g/m^3$. The large local sources plus this topographical feature results in higher $PM_{2.5}$ monitored values at the Liberty Borough monitor than the other monitors in Allegheny County.

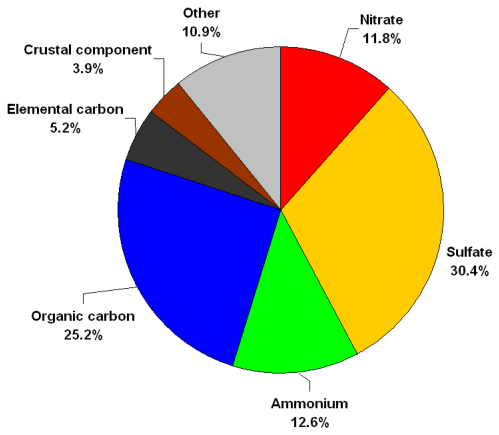
The commenters referenced a report entitled *The Particulate-Related Health Benefits of Reducing Power Plant Emissions* in order to compare Clairton Coke Works emissions to that of other large sources of particulates, such as power plants. However, the emissions from the Clairton Coke Works are much less than those from a power plant. In 2004, Clairton Coke Works had SO_2 emissions of 1,654 tons and NO_X emissions of 4,368 tons. By contrast, the Cheswick and Bruce Mansfield power plants in the Pittsburgh-Beaver Valley area emitted substantially more SO_2 and NO_X in the same year. Cheswick in Allegheny County emitted over 40,900 tons of SO_2 and 4,900 tons of NO_X; and Bruce Mansfield Beaver County emitted over 37,900 tons on SO_2 and 24,000 tons of NOx in 2004. Carbon emissions are also higher at the power plants. However, a direct comparison cannot be made. CO emissions are reported for Clairton Coke works, 3,894 tons in 2004. CO_2 emissions are reported for the power plants; in 2004 emissions were nearly 3,198,900 tons from Cheswick and over 17,654,000 tons from Bruce Mansfield.

Furthermore, in its October 20, 2008 letter to EPA regarding boundary recommendations for the 2006 $PM_{2.5}$ NAAQS, PADEP stated that the Clairton Coke Works facility has stack heights that are lower than normal power plant stacks. This would mean that the effects of a source like the Coke Works would impact the ground at a much closer location locally than a power plant. The highest fine particulate concentrations occur at the Liberty Borough monitor when we see the south-southwesterly winds along with a morning inversion. A morning inversion occurs when the ground is cooler than the air above it; normally at night, the area is under the control of high pressure and clear skies. With the warmer air being above the cooler air, vertical mixing is at a minimum. Therefore, anything exhausted in the boundary layer with an inversion in place will remain trapped in that layer. For example, as the Coke Works' low level sources emit emissions, the plume of emissions will only rise to the top of the

inversion layer. At that point, the pollution is spread out horizontally. These inversions usually set up only a few hundred feet above the surface. Therefore, fine particulate levels can become very high near the surface. In this case, the plume impacts the hillside across the river as well; the plume is actually not traveling large distances. This is evident from the speciation data from two sites, Liberty and Lawrenceville. The Lawrenceville monitor is actually downwind from the Pittsburgh metro area (the monitor sits atop the Allegheny County Health Department building in Lawrenceville, which is to the west of the Allegheny River).

The figures below display the results of the 2003-05 speciated components of the fine particulates at these two monitors.

Lawrenceville



Liberty Borough

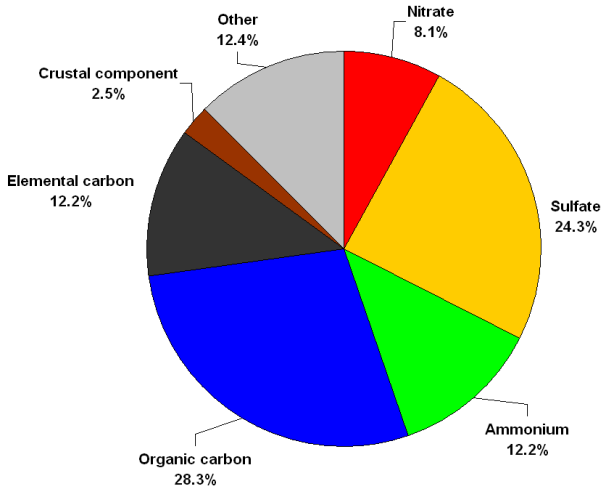


Figure 1. 2003-2005 Speciated components at the Lawrenceville and Liberty Borough Monitors.

The following figure looks at the difference between the Lawrenceville and Liberty monitors, also know as the Liberty Excess.

Liberty Excess

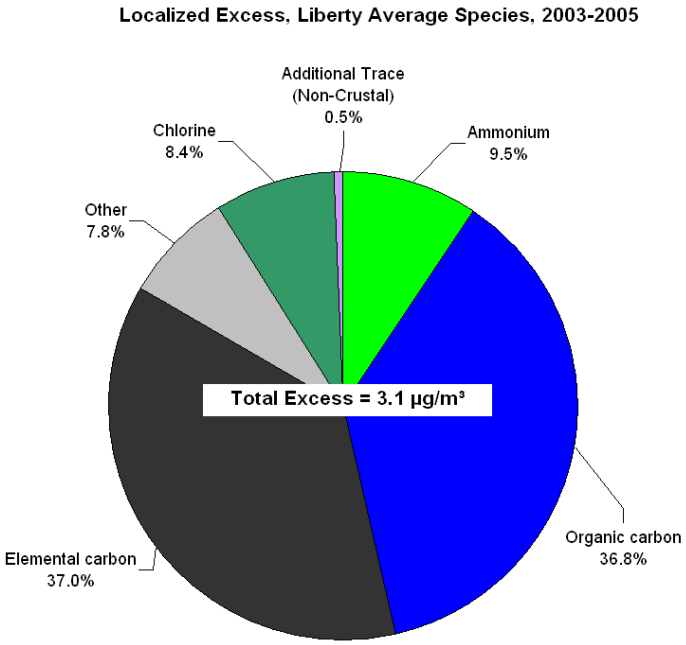


Figure 2. Difference between 2003-2005 speciated components at the Liberty and Lawrenceville monitors.

Regional pollutants, such as sulfates and nitrates, are not showing up in the Liberty Excess. In this case, carbon (elemental and organic) is playing a big role in the actual $PM_{2.5}$ measurements at Liberty. The Clairton Coke Works facility is a large contributor to elemental and organic carbon.

Comment:

One commenter (0059) stated it found no support for the assumption that the emissions from the major source at Liberty-Clairton are isolated from the air quality in the surrounding Pittsburgh metropolitan area, including air quality in Allegheny County and Westmoreland County, both of which are in the Pittsburgh-Beaver Valley area.

EPA Response:

As explained in EPA's August 18, 2008 Technical Analysis for Liberty-Clairton Area, speciation data further illuminates Liberty-Clairton area's unique local problem. The Allegheny County Health Department (ACHD) conducted an 18-month study which compared $PM_{2.5}$ speciation data at the Liberty Borough monitor to another monitor in Allegheny County, the Lawrenceville monitor. (See, "$PM_{2.5}$ Chemical Speciation and Related Comparisons at Lawrenceville and Liberty: 18-Month Results," dated June 7, 2005, prepared by Jason Maranche, Allegheny County Health Department, and available at http://www.achd.net/airqual/pubs/pdf/speciation_report.pdf.) The Lawrenceville monitor, # 42-003-008, is located in Pittsburgh, downwind from the central business district. The Liberty Borough monitor site is located in the Monongahela Valley, which contains a mix of urban residential, heavy industrial and rural areas.

The ACHD study showed that the Lawrenceville monitor is impacted by sulfates during warmer weather and nitrates when it is cold. The Liberty Borough monitor showed similar levels of nitrates and sulfates, depending on the season. However, the main species detected year-round at Liberty Borough were organic and elemental carbon.

Thus, the high concentrations of carbon at the Liberty Borough monitor indicate a unique local problem in the area. The additional carbon is, on average, approximately equal to the difference between the Liberty Borough design concentration and the concentration for the remainder of the surrounding Pittsburgh area.

3.46. Provo, UT

Comment:

37 commenters (0032, 0036, 0037, 0038, 0049, 0051, 0054, 0056, 0065, 0069, 0071, 0072/0156, 0073, 0076, 0077, 0074/0078, 0081, 0087, 0090, 0105, 0112, 0115, 0117, 0126, 0141, 0143, 0145, 0147, 0153, 0154, 0156, 0157, 0159, 0160, 0168, 0169, 0174) request that EPA designate the Salt Lake and Provo in Utah as two separate nonattainment areas instead of one. The commenters are concerned about the possible conformity lapse with two Metropolitan Planning Organization areas. The commenters support the recommendations from Utah State Division of Air Quality (DAQ) and the technical information submitted by the State. One of the commenters (0049) claim that they hold the utmost importance, to develop and produce viable and sustainable long term transportation plans. The commenter provides historical information and additional monitor data. Another commenter (0153) strongly urges EPA to separate the Utah County portion of the nonattainment area along the Wasatch Front from Salt Lake, Davis and Weber Counties (as is the PM_{10} designations), citing studies that show little mixing of air under the influence of strong temperature inversions episodes. The commenter is concerned that the pollution rose developed by EPA's wind model is not consistent with the data submitted by the Utah State DAQ and recommended that the local data should be followed.

EPA Response:

EPA has amended our August 18, 2008 proposal, relative to separating or combining Utah County and Salt Lake County. EPA has given further consideration to the State recommendation to separate the two counties and agrees to Utah County (partial) as being a separate nonattainment area. This decision is based on a broader evaluation of jurisdictional issues that the State claims will facilitate SIP planning. Regardless of whether they are a single or separate nonattainment area, both Utah County and Salt Lake County are violating the 2006 24-hour $PM_{2.5}$ standards and have similar design values. EPA anticipates that the State of Utah will have to insure that these two areas work closely together to develop a consistent strategy for attaining the NAAQS, including a combined modeling demonstration and consistent control measures. However, EPA's analysis of speciated data, pollution roses, and other analytical tools

indicates that these two areas are interconnected and thus we expect that SIPs for both areas will fully account for this influence.

Comment:
One commenter (0112) requests EPA to extend the public comment deadline for an additional 60 days, to follow State's recommendation to designate the Salt Lake City and Provo areas as two separate nonattainment areas instead of one.

EPA Response:
See 1.0 above for comments regarding the extension of the public comment period.

3.47. Reading, PA
See section 2.2 for general comments relevant to this particular nonattainment area.

3.48. Sacramento, CA
Comment:
One commenter (0055) disagrees with the technical analysis for including portions of Placer County in the Sacramento, CA nonattainment area. The commenter believes that the technical analysis is inaccurate and is based on erroneous data that does not support the nonattainment designation. The commenter requests an unclassifiable designation for the counties of Placer, El Dorado, Yolo and Solano. The commenter specified the following areas of concern regarding technical analysis:

- Factor 1 – The commenter believes that the data in Tables 1, 2 and 3 and the chemical makeup in the TSD show that residential wood burning and mobile source emissions are the most important sources of $PM_{2.5}$. The commenter believes that $PM_{2.5}$ exceedences are a result of local residential emissions in Sacramento County rather than surrounding counties. The commenter believes that the CES does not represent Placer County. The commenter claims the CES ignores the special topography of Placer and El Dorado Counties. The commenter believes that more research is necessary to control the ammonium nitrate formation in the winter.

EPA Response:
While EPA used county-wide statistics, we also scrutinized population, traffic, and stationary sources of emissions data at a smaller scale, using spatial analysis and geographic information systems (GIS). We used publicly available data sources including the U.S. Census for population, the Federal Highway Administration's Freight Analysis Framework, and the National Emissions Inventory. In all of the areas where EPA's boundary recommendations were larger than California's recommendations, EPA believes that it has included the violating counties plus portions of counties with contributing emissions. EPA agrees with the commenter that wood smoke and mobile source emissions are the most important sources of $PM_{2.5}$. EPA has identified these sources in all the counties included in the nonattainment area. The majority of the county's

population, traffic, and stationary sources were included in the boundary EPA recommended.

Because a substantial proportion of measured $PM_{2.5}$ is in the form of ammonium nitrate for the central California areas, EPA believes that NOx emissions from mobile sources contribute to NAAQS violations, and must be included in the nonattainment areas. In addition, there is likely some interchange of polluted air between the relatively urbanized portions of neighboring counties EPA therefore included locations with substantial traffic and mobile emissions, and residential wood burning that were adjacent to counties with violating monitors. For the Sacramento area, this included portions of Placer, El Dorado, Yolo, and Solano counties.

EPA did exclude locations that are beyond topographic barriers. Because the Sacramento area has Sierra Nevada foothills to the east, which are a topographic feature higher than the typical daytime height of the inversion layer that occurs during NAAQS violations, EPA considered the inversion height to estimate the size of the area likely to have similar pollution conditions and to contribute to NAAQS violations, in determining an appropriate eastern boundary. (The western boundaries did not have topographic limits.)

At the time the CES was calculated for all areas across the country, only monthly, county level emissions were available for use. Because of this limitation and as noted in the CES TSD, careful interpretation for some areas especially in the western United States where counties are large with varying topography would be required as well as additional information from the technical analysis and the State or Local air agency to provide determinative conclusions as to the what the nonattainment area boundary would encompass.

Comment:

- Factor 2 – The commenter (0055) provided additional information to support their belief that the nonattainment designation should only be Sacramento County;
- Factor 4 – The commenter believes that $PM_{2.5}$ exceedences are more related to trips occurring in Sacramento County;
- Factor 5 – The commenter believes that the high percentages of Sacramento County for growth rate and VMT relative to the surrounding counties supports their belief that the nonattainment designation should only be Sacramento County;

EPA Response:

EPA views mobile source emissions as a significant component of regional $PM_{2.5}$ levels in the Sacramento Valley, and it appears that the combination of this regional pollution and local wood smoke emissions in the Sacramento area lead to violations of the $PM_{2.5}$ standard, particularly during stagnant conditions. Considering this, EPA looked at the location of the violating monitors and the sources of both wood smoke and nitrates to determine the appropriate

nonattainment boundary. This includes Sacramento and the surrounding urban areas where there could be significant emissions from residential wood burning. It also includes the major transportation and commuting corridors associated with Sacramento and the surrounding urban areas which can be a significant source of the nitrate component. While the relative significance of future and projected mobile source emissions per county were considered, current traffic volumes associated with the Sacramento urban area were also considered to be important given the potential contribution to $PM_{2.5}$ levels at the violating monitors. Placer County has the second highest level of emissions (11,000 tpy NOx, 10,000 tpy VOC and 2,300 tpy $PM_{2.5}$) of counties in the area.

- Factor 6 – The commenter (0055) believes that the CES is low for the county. The commenter believes that further explanation is necessary for EPA's conclusion that El Dorado contributes when evaluating the prevailing wind direction on the highest $PM_{2.5}$ concentration days;
- Factor 7 – The commenter is concern that indentifying the potential contribution is based on back trajectories in calm-to-light wind conditions. The commenter believes that the inversion layer impact is not a significant factor influencing the high $PM_{2.5}$ measurements in Sacramento County. The commenter provides additional information concerning the wind;
- Factor 8 – The commenter asserts that violations in the designated area are caused by mobile and local area sources outside of its county, and thus its inclusion in the nonattainment area will not facilitate attainment. The county is in another air district; and
- Factor 9 – The commenter believes that residential wood burning is a significant source of wintertime $PM_{2.5}$ emissions. The commenter notes a rule adopted last December for woodstoves and a program for upgrading wood burning appliances.

***EPA Response**:*

EPA does not agree that Placer, El Dorado, Yolo and Solano counties should be designated as unclassifiable for $PM_{2.5}$. EPA is designating all of Sacramento County and parts of Yolo, Solano, Placer, and El Dorado counties as nonattainment. A designation as unclassifiable is not warranted because EPA has available information to support the designation. EPA's boundary designation for the Sacramento $PM_{2.5}$ nonattainment area includes all of Sacramento County and parts of Yolo, Solano, Placer, and El Dorado Counties. This area includes a majority of the population, and all major point sources and highways in this area. Locations west of this area contain small, dispersed populations and do not include major travel corridors, so they were not included in the nonattainment area.

EPA's boundary for Sacramento $PM_{2.5}$ nonattainment area includes the areas with violating monitors, and the nearby contributing areas. When EPA proposed nonattainment boundaries in August 2008, the 2004-2006 and 2005-2007 design values for Placer County, based on air quality data in EPA's Air Quality System (AQS) database, were 38 $\mu g/m^3$ and 30 $\mu g/m^3$, respectively. Since then, data from

July 9, 2005, which affected the 2004-2006 design value, were removed from AQS by ARB based on lab error and thereby reducing the 2004-2006 design value to 31 $\mu g/m^3$. Consistent with comments provided CARB, these design values do not represent a violation of the $PM_{2.5}$ standard. However, the revised design values do not affect EPA's premise for including the western portion of Placer County, or the other surrounding counties, in the Sacramento nonattainment area.

Based on speciation data provided by CARB, organic carbon and nitrates were identified as the major components of $PM_{2.5}$ where violations occurred, which were attributed to residential woodburning and mobile sources, respectively. As both sources are associated with urban areas, the Sacramento nonattainment areas is intended to capture the full extent of the urban areas associated with the City of Sacramento so that sources potentially contributing to the violating monitors are included. Even though violations are not recorded in the surrounding counties, such as Placer County, the Sacramento urban area clearly extends into the surrounding counties.

With respect to the most recent residential wood burning emissions data for El Dorado County provided in CARB's October 15 letter, EPA agrees that this data suggests significantly less emissions than given in ARB's Almanac (updated August 8, 2007). EPA relied on data from CARB, and some of that information is in dispute or is incorrect, but it doesn't change EPA's final determination which was based on including contributing emissions from population centers and the transportation network.

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Finally, while EPA agrees that wood smoke emissions are more localized, we do not agree that the contribution of mobile sources can be discounted. EPA views mobile source emissions as a significant component of regional $PM_{2.5}$ levels in the Sacramento Valley, and it appears that the combination of this regional pollution and local wood smoke emissions in the Sacramento area lead to violations of the $PM_{2.5}$ standard, particularly during stagnant conditions. Considering this, EPA looked at the location of the violating monitors and the sources of both wood smoke and nitrates to determine the appropriate nonattainment boundary. This includes Sacramento and the surrounding urban areas where there could be significant emissions from residential wood burning. It also includes the major transportation and commuting corridors associated with Sacramento and the surrounding urban areas which can be a significant source of the nitrate component.

Comment:

Two commenters (0052, 0062) disagree with the technical analysis for the Mountain Counties Air Basin portions in the Sacramento, CA nonattainment area. The commenters believe that the technical analysis is inaccurate, and based on erroneous data that does not

support the nonattainment designation. The commenters specify the following areas of concern regarding technical analysis:

- Factor 1 – Erroneous data was found in Table 1 and Table 2 of the TSD. The commenters believe that the CES does not represent El Dorado County. The commenters question the Process Rates estimates.

***EPA Response*:**

While EPA used county-wide statistics, the Agency also scrutinized population, traffic, and stationary sources of emissions data at a smaller scale, using spatial analysis and geographic information systems (GIS). EPA used publicly available data sources including the U.S. Census for population, the Federal Highway Administration's Freight Analysis Framework, and the National Emissions Inventory. In all of the areas where EPA's boundary recommendations were larger than California's recommendations, the majority of the county's population, traffic, and stationary sources were included in the boundary EPA recommended. Furthermore, in many cases we used township and range boundaries, rather than county boundaries, as a more appropriate means to define nonattainment area boundaries in Yolo, Placer and El Dorado Counties.

EPA relied on data from CARB, and some of that information is in dispute or is incorrect, but it doesn't change EPA's final determination which was based on including contributing emissions from population centers and the transportation network.

Comment:

- Factor 2 – The commenters (0052, 0062) state there is no $PM_{2.5}$ monitoring data was available for the county;
- Factor 3 – Population numbers for the county were incorrect;

EPA Response:

With regard to the commenters' statement that counties should not be designated nonattainment because a county does not have a violating monitor, EPA notes that the Clean Air Act requires that EPA consider areas that contribute to violations in addition to areas that have violating monitors. EPA determined that the emissions from other counties and other factors were contributing to the violations in Sacramento County.

The population for El Dorado County in our spreadsheet (176,319) for the year 2005, is very close to the "2006 estimate" on the US Census Bureau website (178,066), so the number in the spreadsheet is correct given the difference between 2005 and 2006. The U.S. Census Bureau is the preferred source of population data.

Comment:

The commenters (0052, 0062) also state the following:

- Factor 4 – County transportation figures have insignificant impact on the designated area, and thus the county should not be included in the nonattainment designation;
- Factor 5 – The use of percentages to represent population growth and VMT changes (Table 7 in the comment letter) is misleading because of the difference between baseline population and VMT values between Sacramento and El Dorado Counties;
- Factor 6 – The commenters believe that the CES is low for the county. The commenters believe that further explanation is necessary for EPA's conclusion that El Dorado contributes when evaluating the prevailing wind direction on the highest $PM_{2.5}$ concentration days;
- Factor 8 – The county is in another air district; and
- Factor 9 – The commenters assert that violations in the designated area are caused by mobile and local area sources outside of its county, and thus its inclusion in the nonattainment area will not assist in reaching attainment. The commenters assert that existing control technologies were not taken into consideration in EPA's technical analysis.

EPA Response:

With regard to the commenters' statement that the analysis for Sacramento was done selectively, EPA did not use the existing ozone and PM_{10} boundaries when setting the final $PM_{2.5}$ boundaries for Yolo, Solano, Placer and El Dorado Counties. EPA looked at the violating monitors and sources potentially contributing to the violations. Based on speciation data provided by CARB, organic carbon and nitrates were identified as the major components of $PM_{2.5}$ where violations occurred, which were attributed to residential wood burning and mobile sources, respectively. Since the truck traffic goes through EDC, those emissions are included. The point of origin does not matter. As both sources are associated with urban areas, the Sacramento nonattainment areas is intended to capture the full extent of the urban areas associated with the City of Sacramento so that sources potentially contributing to the violating monitors are included. Even though violations are not recorded in the surrounding counties, such as El Dorado County, the Sacramento urban area clearly extends into the surrounding counties.

Comment:

One commenter (0121) requests EPA exclude Solano and Yolo counties in California in the nonattainment area designation. The commenter believes that EPA's technical analysis does not justify the contribution of the Yolo-Solano district. The commenter points out, what the commenter believes, are three major flaws with the method in which analysis was conducted:

- EPA conducted its analysis under the assumption that all of Solano County impacts Sacramento County, which overstates its impact;
- EPA's CES analysis was performed selectively, instead of assessing surrounding counties' influence on Sacramento County; and

- EPA's analysis penalizes Yolo County for historically implementing growth policies that are beneficial to air quality. The commenter suggests that EPA compare growth in each county to overall growth in the region.

The commenter provides additional detailed support for their request that they be excluded from the Sacramento nonattainment area.

- Factor 1 – Erroneous data was found in Table 1 and Table 2 of the TSD. The commenter believes that the CES does not represent Solano County. The comment believes the CES for Yolo is low. The commenter would like to provide the EPA with information to revise the CES. The commenter believes that EPA's speciation data from Sacramento which is dominated by organic carbon and ammonium nitrate does not link Yolo County because the EPA states that the most significant sources are construction/demolition and farming;

EPA Response:

EPA recognizes that more resolved emissions data would have been useful in calculating the CES. However, only county level emissions were available at the time the CES was developed. In lieu of more resolved emissions data, information from the other factors were utilized to determine the extent of possible contribution

Solano County is divided into two parts. The western part, which has the violating monitor is under the jurisdiction of the Bay Area Air Quality Management District and is one of the counties included in the San Francisco nonattainment Area. The eastern part of Solano County is under the jurisdiction of the Yolo Solano Air Quality Management District, and, as part of a county with a violating monitor, has been designated as nonattainment for the 2006 24-hour $PM_{2.5}$ standard.

With regard to Yolo County, that portion of the county that has been designated nonattainment has over 97 percent of the total county population, and 99 percent of the traffic of the entire county, so contributing emissions have been captured in the partial county area designated as nonattainment.

EPA's original recommendation, the weight that the CES played in determining the boundaries of any violating area varied from area to area depending on how well the CES methodology took into account characteristics of an area that impact transport and dispersion of $PM_{2.5}$. With respect to the California designations, the CES was not strongly considered. Rather, as described above, EPA depended on actual air quality data, emissions data, topography and meteorology in determining nonattainment boundaries.

Comment:

- Factor 2 – The commenter (0121) believes the study cited by the EPA does not support nonattainment area that includes Yolo or Solano Counties;
- Factor 3 – The commenter believes that population numbers for the counties are misleading, especially when only a portion of Solano is being proposed;

- Factor 4 – The commenter believes that EPA did not analyze if the truck traffic originates from the district;
- Factor 5 – The commenter believes that population growth and VMT changes are misleading;
- Factor 6 – Further explanation is needed for EPA's conclusion that the effect of strength of winds and not wind direction does not indicate adjacent areas do not contribute to high concentrations, and further consideration needs to be taken regarding the geographic location of the county and the county's CES;
- Factor 8 – The commenter asserts that violations in the designated area are caused by mobile and local area sources outside of its county, and thus its inclusion in the nonattainment area will not facilitate attainment. The county is in another air district; and
- Factor 9 – The commenter asserts that existing control technologies were not taken into consideration in EPA's analysis.

EPA Response:

EPA is designating all of Sacramento County and portions of Yolo, Solano, Placer, and El Dorado counties as nonattainment. Excluding portions of Yolo and Solano is not warranted because EPA has available information to support the designation. EPA's boundary designation for the Sacramento $PM_{2.5}$ nonattainment area includes all of Sacramento County and parts of Yolo, Solano, Placer, and El Dorado Counties. This area includes a majority of the population, and all major point sources and highways in this area. Locations west of this area contain small, dispersed populations and do not include major travel corridors, so they were not included in the nonattainment area. EPA's boundary for Sacramento $PM_{2.5}$ nonattainment area includes the areas with violating monitors, and the nearby contributing areas.

Based on speciation data provided by CARB, organic carbon and nitrates were identified as the major components of $PM_{2.5}$ where violations occurred, which were attributed to residential woodburning and mobile sources, respectively. As both sources are associated with urban areas, the Sacramento nonattainment areas is intended to capture the full extent of the urban areas associated with the City of Sacramento so that sources potentially contributing to the violating monitors are included. Even though violations are not recorded in the surrounding counties, such as Placer County, the Sacramento urban area clearly extends into the surrounding counties.

With respect to the most recent residential wood burning emissions data for El Dorado County provided in CARB's October 15 letter, EPA agrees that this data suggests significantly less emissions than given in ARB's Almanac (updated August 8, 2007). EPA relied on data from CARB, and some of that information is in dispute or is incorrect, but the new information doesn't change EPA's final determination which was based on including contributing emissions from population centers and the transportation network .

Finally, while EPA agrees that wood smoke emissions are more localized, the Agency does not agree that the contribution of mobile sources can be discounted. EPA views mobile source emissions as a significant component of regional $PM_{2.5}$ levels in the Sacramento Valley, and it appears that the combination of this regional pollution and local wood smoke emissions in the Sacramento area lead to violations of the $PM_{2.5}$ standard, particularly during stagnant conditions. Considering this, EPA looked at the location of the violating monitors and the sources of both wood smoke and nitrates to determine the appropriate nonattainment boundary. This includes Sacramento and the surrounding urban areas where there could be significant emissions from residential wood burning. It also includes the major transportation and commuting corridors associated with Sacramento and the surrounding urban areas which can be a significant source of the nitrate component.

3.49. Salt Lake City, UT

Comment:

One commenter (0117) requests EPA to extend the public comment deadline for Box Elder County, UT. The commenter requests that EPA allow additional time to possibly eliminate data uncertainties for this county.

EPA Response:

See section 1.0 for comments regarding the extension of the public comment period.

Comment:

37 commenters (0032, 0036, 0037, 0038, 0049, 0051, 0054, 0056, 0065, 0069, 0071, 0072/0156, 0073, 0076, 0077, 0074/0078, 0081, 0087, 0090, 0105, 0112, 0115, 0117, 0126, 0141, 0143, 0145, 0147, 0153, 0154, 0156, 0157, 0159, 0160, 0168, 0169, 0174) request that EPA designate the Salt Lake and Provo in Utah as two separate nonattainment areas instead of one. The commenters are concerned about the possible conformity lapse with two MPO areas. The commenters support the recommendations from Utah State Division of Air Quality and the technical information submitted by the State. One of the commenters (0062) claim that they hold the utmost importance, to develop and produce viable and sustainable long term transportation plans. The commenter provides historical information and additional monitor data. One of the commenters (0153) strongly urged EPA to separate the Utah County portion of the nonattainment area along the Wasatch Front from Salt Lake, Davis and Weber Counties (as is the PM_{10} designations), citing studies that show little mixing of air under the influence of strong temperature inversions episodes. The commenter is concerned that the pollution rose developed by EPA's wind model is not consistent with the data submitted by the Utah State DAQ and recommended that the local data should be followed.

EPA Response*:*

EPA has amended our August 18, 2008 proposal, relative to separating or combining Utah County and Salt Lake County. EPA has given further

consideration to the State recommendation to separate the two counties and agrees to Utah County (partial) as being a separate nonattainment area. This decision is based on a broader evaluation of jurisdictional issues that the State claims will facilitate SIP planning. Regardless of whether they are a single or separate nonattainment area, both Utah County and Salt Lake County are violating the 2006 24-hour $PM_{2.5}$ standards and have similar design values. EPA anticipates that the State of Utah will have to insure that these two areas work closely together to develop a consistent strategy for attaining the NAAQS, including a combined modeling demonstration and consistent control measures. However, EPA's analysis of speciated data, pollution roses, and other analytical tools indicates that these two areas are interconnected and thus we expect that SIPs for both areas will fully account for this influence.

Comment:

16 of the commenters (0056, 0065, 0069, 0071, 0073, 0076, 0077, 0081, 0087, 0090, 0115, 0117, 0145, 0157, 0160, 0169) also disagree that Box Elder County, UT be designated as nonattainment with some of the commenters supporting the recommendations from Utah State Division of Air Quality and the technical information submitted by the State. 11 of the commenters (0056, 0069, 0071, 0076, 0077, 0105, 0115, 0117, 0145, 0160, 0174) requests that Tooele County also is not designated nonattainment, with some of the commenters supporting recommendations from Utah State Division of Air Quality and the technical information submitted by the State. The commenters (0090, 0115) believe that emissions from Box Elder County do not contribute to any exceedances in Brigham City. The commenters question the "pollution rose" rose data used by the EPA for Box Elder County and the Google maps used. The commenter (0115) endorses comments from commenter 0069. Another commenter (0174) also disagrees with EPA's proposed designation for Tooele County, UT, as nonattainment because monitoring data is below the standard. The commenter indicates that although approximately 43 percent of Tooele County commutes to the Salt Lake Area this accounts for only 1.2 percent of the half of the maximum observed design value (49 $\mu g/m^3$) or roughly a quarter to a third of 1 $\mu g/m^3$.

EPA Response:

With regard to including portions of Box Elder and Tooele Counties in the Salt Lake City nonattainment area, EPA is required under section 107(d) to designate not only violating areas, but nearby areas that contribute to those violations. Thus, a key objective of the designation process was to ascertain those nearby areas with emissions sources or emissions activities that contribute to violations. EPA based its evaluation of these two areas on the types of information recommended in EPA's guidance and additional relevant information, including traffic and commuting, growth, meteorology, topography, and emissions. Taken together, this information supports the conclusion that both Box Elder and Tooele contribute to the $PM_{2.5}$ violations in adjacent counties. The fact that neither area is currently monitoring nonattainment does not address whether they contribute to violations in nearby areas.

We note there are no topographical barriers between Brigham City and Salt Lake City; the two areas are part of a single very large air basin. Based on emission transport during long periods of stagnation under persistent temperature inversions, sufficient mixing occurs allowing both Box Elder and Tooele Valley emissions to reach the maximum concentration monitors in Salt Lake City and Ogden and contribute to NAAQS violations.

The monitor in Box Elder County has shown significant daily exceedances of the $PM_{2.5}$ standard as well as three-year design values near the level of the 2006 24-hour $PM_{2.5}$ NAAQS (and above that level for some periods historically). In Box Elder, the 2004-2006 design value was 35 $\mu g/m^3$ and the 2005-2007 design value was 29 $\mu g/m^3$; in Tooele the 2005-2007 design value was 31 $\mu g/m^3$. While not violations, these values demonstrate that these areas are subject to poor air quality at times, and it is likely that these high concentrations contribute to violations in adjacent counties on days when winds blow from this direction towards the rest of this area, and contribute to area wide ambient levels during inversions. If exceedances are caused by local emissions, it indicates emission levels high enough to leave very little margin to the NAAQS and that area emissions are high enough to contribute to the overall air quality issues of the larger basin. If exceedances are from transport from Salt Lake City then it demonstrates that Box Elder and Tooele County are in the same air shed, with sufficient mixing for the central and outlying areas to interact.

Comment:

One commenter (0090) is concerned about ATK's Promontory facility emissions. The commenter cites the following issues:

- The commenter requests that all of Box Elder County, Utah, and in particular that portion of Box Elder County, Utah upon which ATK Launch Systems operates an industrial facility, be excluded from the nonattainment area which will include Salt Lake City. The commenter believes that EPA has not provided the necessary evidence to prove that emissions from Box Elder County contribute to $PM_{2.5}$ violations occurring in other counties of Utah. The commenter refers to EPA's approach to designations for the $PM_{2.5}$ annual standard in the guidance document *Technical Support Document for State and Tribal Air Quality Fine Particle ($PM_{2.5}$) Designations* ("2004 Technical Support Document").

EPA Response:

The guidance document cited was used by EPA in a previous round of $PM_{2.5}$ designations in 2004, primarily for areas which do not attain the annual form of the $PM_{2.5}$ standard. The cited guidance was not used for the current round of designations. Instead, Guidance for the current designations was provided in the June 8, 2007 letter from Robert J. Meyers, Acting Assistant Administrator for Air and Radiation to the Regional Administrators of Regions 1 through 10 entitled *Area Designations for the Revised 24-hour Fine Particle National Ambient Air Quality Standard*; and hereafter termed the *2006 Designation Guidance*.

Comment:

- The commenter (0090) states that EPA's "urban excess methodology" and "weighted emissions scores" show that Box Elder County does not contribute significantly to Salt Lake City violations.

EPA Response:

The "urban excess methodology" and "weighted emissions scores" were methods used in the 2004 designations for the annual $PM_{2.5}$ standard (for which all of Utah was designated attainment), but were not used in this round of designations. The commenter assumed that Box Elder County is represented by the "Regional" as opposed to "local" emissions; this is a misinterpretation of the 2004 analysis. For the 2004 analysis, regional $PM_{2.5}$ was determined at remote IMPROVE $PM_{2.5}$ monitors at National Parks in southern Utah. This data is not representative of Box Elder County concentrations, within the same air basin as Salt Lake City. The assumption that Box Elder County emissions are represented by the "Regional" portion of the Salt Lake City $PM_{2.5}$ is not supported by the previous analysis methodology.

The CES was one tool used by EPA to compare relative emission, but was not meant to modify the State's proposed nonattainment area boundaries separately from the complete nine factor analysis. The CES served as an initial starting point for EPA to begin assessing what a potential nonattainment area could look like. EPA used various pieces of information to help inform its designation decisions including the nine factors and comments from the State air agencies. There was no sole factor or tool that was considered to be outcome determinative. As for the interpretation of the score itself, it is true that any score greater than zero would indicate contribution. The CES, however, is unique to each area and cannot be compared to counties with similar scores in other areas. There is also no magnitude threshold which dictates that a particular county would be considered to be in or out of a nonattainment area. The CES simply highlights nearby counties that contribute to the violation and provides information along with data and analyses from the nine factors as well as information specific to the individual area provided by the States to designate the nonattainment area boundaries.

Comment:

- The commenter (0090) believes that Box Elder County presumptively should be excluded from the nonattainment area unless data are available to demonstrate that it contributes significantly to nonattainment in Salt Lake County based on the 2004 designation guidance in EPA's 2004 Technical Support Document.

EPA Response:

The guidance document issued by EPA for the 2006 PM2.5 NAAQS states that "When determining boundaries in urban areas for the annual $PM_{2.5}$ NAAQS, EPA applied a presumption that the boundaries for urban nonattainment areas should

be based on metropolitan area boundaries as defined by the U.S. Office of Management and Budget. For the $PM_{2.5}$ 24-hour NAAQS, EPA is establishing no such presumption." Thus, EPA indicated that areas are not excluded presumptively for these designations merely because they are located outside of a metropolitan or other statistical area, and instead that such areas should be evaluated and included or excluded based on whether the areas contribute to nearby violations, as determined through the evaluation of the recommended 9 factors and other relevant information or analytical tools, based on the facts and circumstances specific to a particular nonattainment area. In this instance, for example, Box Elder is located immediately adjacent to, within the distance that PM2.5 and PM2.5 precursors can transport, and within the same airshed as the remainder of the designated Salt Lake City area. Under the facts and circumstances of this area, any such presumption would easily have been overcome.

Comment:

The commenter (0090) provides the following issues with the technical analysis:

- Factor 1 – The commenter believes that the emissions do not support inclusion of Box Elder County in the Salt Lake nonattainment area. The commenter questions whether the transports of emissions have been modeled by EPA.

EPA Response:

Box Elder County is adjacent to Weber County, a county with a violating $PM_{2.5}$ monitor and emissions similar to Box Elder County. The urbanized area of Box Elder County, where emissions are concentrated, is only 16 miles from a violating Weber County monitor, with no intervening topographic barrier. Box Elder County emissions are therefore relevant to nearby exceedances. In addition, the secondary aerosol of the Wasatch Front is dominated by ammonium nitrate; Box Elder County has ammonia emissions constituting 33 percent of the total ammonia emissions in the Northern Wasatch Front area. Neither EPA nor the state provided a modeling analysis to support either including or excluding Box Elder County.

Comment:

- Factor 2 – The commenter (0090) believes that the air quality data do not support inclusion of Box Elder County in the Salt Lake nonattainment area.

EPA Response:

The Act requires that "for each monitor or group of monitors that indicate violations of a standard, EPA will establish nonattainment boundaries that cover a sufficiently large area to include both the area that violates the standard and the areas that contribute to the violations." While the Brigham City monitor in Box Elder County does not have NAAQS violations for 2005-2007 data, this does not exclude it from a nonattainment designation if it is contributing to violations in nearby counties.

EPA considered the individual facts and circumstances of each area in determining whether to include a county or part of a county as contributing to a particular nonattainment problem. Neither the CAA nor EPA's designations guidance establishes thresholds for determining the designation status of an area. For example, the guidance does not identify a set amount of a pollutant, or a specific level of commuting between counties, that would automatically require a county or part of a county to be included in a nonattainment area. Nor does the CAA or EPA's guidance provide a bright line for what constitutes a nearby area which contributes to a violation. In order to assess what areas are contributing, for purposes of designations, requires an evaluation of the facts and circumstances of each area. EPA considered the geography of each area, meteorological data, speciated data, and other information in light of the distances across which $PM_{2.5}$ and $PM_{2.5}$ precursors can be transported.

Comment:

- Factor 3 – The commenter (0090) believes that population density and degree of urbanization does not support inclusion of Box Elder County in the Salt Lake nonattainment area.

EPA Response:

While Box Elder County is more rural than its nearby neighboring counties (Weber and Davis), its population is approaching 50,000 people. Its county-wide emissions, concentrated in the eastern 1/3 of the county, are comparable to its more urban neighbors with larger populations. The population density and degree of urbanization in the eastern 1/3 of the county justify a partial county designation of nonattainment. The rural, unpopulated western parts of the county have been excluded from the nonattainment area.

With regard to decisions on nonattainment boundaries in other parts of the country, either for the prior round of designations or the current, EPA's designations guidance for the 2006 24-hour $PM_{2.5}$ standard states that the criteria for determining appropriate boundaries is to be made on a case-by-case basis considering the recommended nine factors. Not every factor was relevant in each area (e.g., in many eastern locations topography is not an issue), nor was every factor equally important to each area. Due to the complex and variable nature of $PM_{2.5}$, the important factors varied from one area to another based on local circumstances. Moreover, EPA consciously did not impose any mandatory "bright line" tests for any of the recommended nine factors.

Comment:

- Factor 4 – The commenter (0090) believes that traffic and commuting patterns do not support inclusion of Box Elder County in the Salt Lake nonattainment area Public Comment:

EPA Response:

No new data on traffic and commuting was included by the commenter. Box Elder County is included as part of the Salt Lake City Combined Statistical Area by the Office of Management and Budget due to consideration of the degree of employee interchange between Box Elder County and the counties to the south. A county with numerous commuters is generally an integral part of an urban area and is likely contributing to fine particle concentrations in the area. In Box Elder County 24.1 percent of commuters are traveling to the counties of Weber, Davis and Salt Lake which shows that emissions related to traffic and commuting are contributing to violations of the 24-hour $PM_{2.5}$ standard. EPA's analysis of this factor, in combination with the other nine factors leads to a conclusion that traffic and commuting patterns support a designation of nonattainment for Box Elder County.

Comment:

- Factor 5 – The commenter (0090) believes that growth rates and patterns do not support inclusion of Box Elder County in the Salt Lake nonattainment area. The commenter believes that the projections are overstated.

EPA Response:

By 2015 Box Elder County is predicted to have a 22.3 percent change in population growth and a 45.3 percent change in Vehicle Miles Travel (VMT). EPA used growth rate data and projections provided by the State of Utah's 9 factor analysis (12/18/07 Governor's recommendation letter to EPA) and VMT growth was provided by the Governor's Office of Planning and Budget. These growth projections currently reflect the best available information.

Comment:

Factor 6 – The commenter (0090) believes that meteorology (weather/ transport patterns) do not support inclusion of Box Elder County in the Salt Lake nonattainment area. The commenter includes additional information on wind patterns during the periods of elevated concentrations.

EPA Response:

The meteorological conditions leading to $PM_{2.5}$ nonattainment along the Wasatch front of Utah are persistent strong temperature inversions throughout the area, which can last from several days to as long as 3 weeks. During these periods, light and variable winds can lead to mixing throughout the large basin area represented by the Great Salt Lake and its surrounding communities. During long periods of inversion there is some degree of diurnal uniformity of flow over the basin with light oscillatory behavior, contributing to mixing of emissions across the Wasatch front. The persistence of the inversion periods combined with the lack of topographic barriers between Box Elder County and the violating monitors in Weber, Davis and Salt Lake means that Box Elder emissions will migrate to violating monitors over time.

Additional wind data provided by the commenter is different from the wind rose data EPA used from the Salt Lake International airport. The difference between

these two wind roses is not unexpected given the influence of local topography. The Salt Lake International wind rose used by EPA is likely more representative of large scale wind patterns in the basin, given the relative distance of the airport from topographic features.

Comment:

- Factor 7 – The commenter (0090) believes that geography/topography do not support inclusion of Box Elder County in the Salt Lake nonattainment area.

EPA Response:

The persistent, multi-day nature of the temperature inversions leading to $PM_{2.5}$ violations allow for low velocity mixing of pollutants across the Wasatch Front. There is no apparent physical barrier that impedes the influence and contribution of emissions from Brigham City and eastern Box Elder County to the Wasatch Front area. The migration of pollutants south can contribute to the nearest violating monitor in Weber County located 4 miles southeast of the Box Elder County line.

EPA identified a western topographic airshed barrier for eastern Box Elder County which is the Promontory Mountains and North Promontory Mountains. The Promontory Mountains are located approximately 24 miles west of both Brigham City and Ogden and show approximate altitudes of 5,600 ft. mean sea level (MSL) in the south (extending into the Great Salt Lake), areas of over 6,000 ft. MSL in the middle, and 5,000 ft. to the North where they meet the southern end of the North Promontory Mountains. The southern end of the North Promontory Mountains are approximately 5,000 ft. MSL and are also approximately 5,000 ft. MSL to the north (northwest of Howell, UT).

The topography of the area acts as a barrier to air movement during the conditions which lead to elevated concentrations of fine particulate; it also acts as the primary factor in determining where the population is located. Basically, the low lying valleys which trap air during winter-time temperature inversions are also the regions within which people chose to live producing the emissions which lead to fine particulate formation.

Comment:

- Factor 8 – The commenter (0090) believes that jurisdictional boundaries do not support inclusion of Box Elder County in the Salt Lake nonattainment area.

EPA Response:

The analysis of jurisdictional boundaries considered the planning and organization of the Salt Lake City-Ogden-Clearfield CSA, which includes Box Elder County, to determine if the implementation of controls can be carried out in a cohesive manner. EPA is satisfied that the UDAQ in conjunction with the Utah Air Quality Board has State-wide overall planning and SIP development authority.

Comment:

- Factor 9 – The commenter (0090) believes that the level of control does not support inclusion of Box Elder County (and specifically the ATK Promontory Facility) in the Salt Lake nonattainment area.

EPA Response:

The technical analysis established that Box Elder emissions were contributing to violations in nearby counties, and a boundary was established which utilized natural topographic barriers. Under factor 1 of the TSD, EPA evaluated emissions based upon the 2005 National Emission Inventory which includes any control strategies in place at that time.

Comment:

One commenter (0115) requests EPA to extend the public comment deadline for an additional 60 days, to follow State's recommendation to designate the Salt Lake City and Provo areas as two separate nonattainment areas instead of one, and to designate Box Elder, UT as attainment. The commenter endorses comments from another commenter (0069). The commenter (0069) believes a source or a transportation project in sparsely populated Box Elder County would be affected or constrained by a source or a transportation project in Utah County.

EPA Response:

Nationwide, there are several areas that are multi-state and multi-jurisdictional that have been designated as one nonattainment area and are able to coordinate together to address common air pollution issues. The transportation conformity analysis has a collaborative process formally outlined in Section XII "Transportation Conformity Consultation" of Utah's SIP and addresses issues such as; transportation conformity consultation, specific roles and responsibilities, interagency collaboration and consultation process, and the dispute resolution process.

There are options available to administer the transportation conformity requirements in the entire boundary area for the Salt Lake City CSA which includes Box Elder County (or any other geographic area). To address these transportation conformity issues, and many other situations, EPA's Office of Transportation and Air Quality (OTAQ) has produced two documents; "Companion Guidance for the July 1, 2004, Final Transportation Conformity Rule; Conformity Implementation in Multi-Jurisdictional Nonattainment and Maintenance Areas for Existing and New Air Quality Standards" (EPA420-B-04-012, July, 2004) and "Interim Guidance for Implementing the Transportation Conformity Provisions in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)" (EPA420-B-06-90, February, 2006.)

The "Companion Guidance" document (EPA420-B-04-012) outlines options for establishing the $PM_{2.5}$ motor vehicle emissions budgets (MVEB) on a nonattainment area-wide basis or subarea basis. In addition, the MPO/States may

revert from using nonattainment area-wide budgets to demonstrate conformity by meeting selected respective subarea emission budgets if the MPO/States make concurrent conformity determinations that demonstrate consistency of their respective plans and programs with their individual subarea budgets. Likewise, at any time in the future, the MPO/States may switch from using subarea budgets to using nonattainment area-wide budgets. This is allowed as long as they once again perform a joint conformity determination and the sum of their subarea motor vehicle emissions are equal to or less than the established nonattainment area-wide $PM_{2.5}$ MVEBs. This process is allowed provided that it is established in the respective SIPs. The guidance provides great flexibility for the MPO/States to jointly meet the necessary SIP budget(s) and represents a unified process for addressing transportation conformity. See 1.0 above for comments regarding the extension of the public comment period. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

Comment:

Two commenters (0129) support EPA recommendations to create a single nonattainment area respective to the Wasatch Front, and is particularly adamant about including the eastern portions of Tooele and Box Elder counties. The commenters agree that there is a substantial amount of mixing between Tooele County and the Wasatch Front.

EPA Response:

EPA has amended our August 18, 2008 proposal, relative to separating or combining Utah County and Salt Lake County. EPA has given further consideration to the State recommendation to separate the two counties and agrees to Utah County (partial) as being a separate nonattainment area. This decision is based on a broader evaluation of jurisdictional issues that the State claims will facilitate SIP planning. Regardless of whether they are a single or separate nonattainment area, both Utah County and Salt Lake County are violating the 2006 24-hour $PM_{2.5}$ standards and have similar design values. EPA anticipates that the State of Utah will have to insure that these two areas work closely together to develop a consistent strategy for attaining the NAAQS, including a combined modeling demonstration and consistent control measures. However, EPA's analysis of speciated data, pollution roses, and other analytical tools indicates that these two areas are interconnected and thus we expect that SIPs for both areas will fully account for this influence.

3.50. St. Louis, MO-IL

Comment:

One commenter (0100) supports EPA's recommendation and requests that EPA designate Madison, Monroe, St. Clair, and Randolph (partial) counties in Illinois as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this supporting comment and has made a determination based on the technical analysis and information provided to designate Madison, Monroe, St. Clair, and Randolph (partial) counties in Illinois as nonattainment as part of the St. Louis nonattainment area.

Comment:

One commenter (0108) asserts that no area in Missouri should be designated as nonattainment. The states the following:

- There is no violating monitor of the 2006 24-hour $PM_{2.5}$ standard in Missouri;
- The one violating monitor in the Bi-State area is located in Madison County, IL; and
- The violating monitor is heavily influenced by a local point sources located in close proximity to the violating monitor.

EPA Response:

Pursuant to section 107(d) of the CAA, EPA must designate as nonattainment those areas that violate the NAAQS and those nearby areas that contribute to violations. EPA's review of the nine factors for the four counties and the City of St. Louis (including five counties in Illinois) shows that the Missouri portion of the bi-State area contributes to **both** (Granite City and Alton) violating monitors. A detailed description of this analysis is outlined in EPA's TSD for Missouri and outlined again in EPA's response to the State of Missouri's comments.

There is evidence to support the claim that there is a local contribution to the Granite City violating monitors from a limited number of local sources in Granite City. However, Missouri also indicates in its comment, that there are likely monitored episodes which are Regional in nature. Missouri has not provided information that confirms that that the preponderance of the mass captured on the $PM_{2.5}$ filter (at the violating monitors) for all exceedance days is from local sources; nor has Missouri provided conclusive evidence that nearby Missouri counties are not contributing to these violations. In addition, Missouri's submittal does not address the 2005-2007 violations at the Alton monitor, which is located approximately 20 miles away. Therefore, the analysis is not only inconclusive, but is also incomplete, and does not provide a basis for concluding that emissions from the Missouri portion of the metropolitan area do not contribute to the violations. In contrast, EPA's full analysis as explained in the TSD supports the conclusion that sources in Missouri do contribute to the violating monitor.

Comment:

The commenter (0108) asserts that based on a pollution rose shown in EPA's August 18, 2008, 120-day letter to the State, "most of the exceeding 24-hour $PM_{2.5}$ concentrations occur with a wind from the south-southeast. That is, when an exceedance is recorded at the Madison County, IL monitor it is downwind of the large industrial facility."

EPA Response:

EPA's 120-day letter states that the pollution rose shows an average prevailing surface wind direction for high $PM_{2.5}$ days in Madison County, IL from the southeast, southwest. EPA asserts that winds coming from the south or southwest would be coming from the direction of the Missouri portion of the Bi-State area toward the county with the violating monitors (Madison County, IA.)

Comment:

The commenter (0108) notes that EPA did not mention an estimate of "total urban contribution" in regards to NO_X emissions and gives an estimate that the SO_2 component of the total urban contribution during cooler months is less than 10 percent. The commenter cites these reasons as indicative of low Missouri culpability in regards to SO_2 and NO_X emissions toward the violating monitor.

EPA Response:

EPA has included five Missouri counties located in the St. Louis metropolitan area (St. Louis, St. Louis City, St. Charles, Jefferson, and Franklin) as part of the $PM_{2.5}$ nonattainment area for St. Louis because they have significant emissions and other factors which contribute to exceedances of the 24-hour $PM_{2.5}$ NAAQS. In the St. Louis area, about 65 percent of the high $PM_{2.5}$ days occur in the warm season, and 35 percent occur in the cool season. On the high days in the warm season, the fine particle composition in the area is 76 percent sulfate, 22 percent carbon, 3 percent crustal, and 0 percent nitrate. On the high days in the cool season, the fine particle composition is 40 percent nitrate, 36 percent sulfate, 21 percent carbon, and 3 percent crustal. These data indicate that sources of SO_2, NO_x, and direct $PM_{2.5}$ carbon emissions are the main contributors to exceedances of the 24-hour standard in St. Louis. On an annual average basis, the fine particle composition is 47 percent sulfate, 37 percent carbon, 11 percent nitrate, and 5 percent crustal. The annual emissions from the five Missouri counties together are significant, amounting to 199,000 tons SO_2, 135,000 tons NO_x, and 15,000 tons $PM_{2.5}$. Along with supporting meteorological information, EPA finds that these nearby counties within the metro area contribute to the violating monitors in St. Louis.

In addition, these five counties also were included in the boundary for the 1997 $PM_{2.5}$ nonattainment area as well. The St. Louis area, with an annual design value of 16.5 ug/m^3 for 2005-2007, still has not attained the annual standard. The five counties were designated as part of the original nonattainment area on the basis of their contribution to annual average fine particle concentrations in St. Louis. The major components of fine particle mass on an annual average basis and on the highest days are sulfate, nitrate, and carbonaceous $PM_{2.5}$. EPA finds it is reasonable to conclude that the same sources which were found to contribute to a violation of the annual standard also contribute to the high $PM_{2.5}$ days. For the reasons above and based on additional analysis described in the area-specific TSD for the St. Louis area, EPA finds that it is reasonable and consistent to include the

five Missouri counties as part of the St. Louis nonattainment area for the 24-hour $PM_{2.5}$ NAAQS.

Comment:

- The commenter asserts that the generation of sulfates and nitrates from SO_2 and NO_X do not occur immediately after emission of SO_2 and NO_X; their formation requires reaction time. The commenter finds the relevancy of locally emitted SO_2 and NO_X total $PM_{2.5}$ concentrations suspect.

EPA Response:

Missouri indicates in its comments that there are likely monitored episodes which are Regional in nature. Missouri has not provided information that confirms that the preponderance of the mass captured on the $PM_{2.5}$ filter (at the violating monitors) for all exceedance days is from local sources; nor has Missouri provided conclusive evidence that nearby Missouri counties are not contributing to these violations.

The State utilized Community Multi-scale Air Quality modeling (CMAQ) to estimate the effectiveness of control strategies on future $PM_{2.5}$ concentrations in the area of the violating monitors using strategies being considered for the 2012 annual $PM_{2.5}$ attainment demonstrations. Four monitored $PM_{2.5}$ exceedance days (at one of the Granite City sites) during 2002 were selected for evaluation. In addition, three future (2012) emission scenarios were evaluated: a baseline scenario (NO_X and SO_2 reductions at several area facilities); a scenario that included a 90 percent reduction in SO_2 emissions at Herculaneum (a lead smelter in the area); and a scenario that included both of the SO_2 reductions previously described plus a 16 percent reduction in primary $PM_{2.5}$ emissions for US Steel Granite City. The results are described in Table 1.

Table 1. From the MDNR 10-18-08 response.

Table 2. $PM_{2.5}$ Modeling Results

Date, 2002	Monitored $PM_{2.5}$ Concentration ($\mu g/m^3$)	Modeled 2012 $PM_{2.5}$ Conc. ($\mu g/m^3$), Future Baseline Case	Modeled 2012 $PM_{2.5}$ Conc. ($\mu g/m^3$), 90% SO_2 Reduction at Herculaneum	Modeled 2012 $PM_{2.5}$ Conc. ($\mu g/m^3$), 90% SO_2 Reduction at Herculaneum Plus 16% $PM_{2.5}$ Reduction at Granite City Works
January 5	30.2	31.2	31.2	30.5
June 22	42.9	34.4	34.4	33.0
July 16	44.8	33.86	33.86	33.9
November 27	30.5	29.3	27.7	26.7

The State modeling study relies on Missouri emission reductions of $PM_{2.5}$ precursors that are not yet federally enforceable and for the most part, not yet State enforceable. It is therefore, not appropriate to rely on these reductions to eliminate sources or areas from consideration in establishing nonattainment boundaries. EPA must make designations based on current conditions and cannot consider additional controls that are not already in place and federally enforceable. However, if one could assume that these reductions were permanent, enforceable and quantifiable, the modeling indicates that SO_2 and NO_X reductions (including reductions from sources on the Missouri side of the metropolitan area) in combination with reductions of direct $PM_{2.5}$ emissions from local sources in Granite City could result in a reduction of on average of 1 $\mu g/m^3$ at the violating Granite City monitors.

Consequently, the model confirms that both localized emissions reductions and regional emissions reductions (some of which may originate from the Missouri side of the metropolitan area) could be effective in addressing $PM_{2.5}$ violations for the 24-hour standard. The analysis therefore provides further support for inclusion of the Missouri portion of the area in the nonattainment area.

Comment:
One commenter (0091) agrees that Madison, Monroe, and St. Clair and Randolph (partial) counties in Illinois, and the City of St. Louis, and Franklin, Jefferson, St. Charles and St. Louis counties in Missouri contribute to the violations of the 2006 24-hour $PM_{2.5}$ NAAQS in Illinois. The commenter supports EPA recommendations that counties in Illinois and Missouri be designated as nonattainment in the St. Louis, MO-IL area.

EPA Response:
EPA acknowledges this supporting comment and has made a determination based on the technical analysis and information provided to designate all the identified counties as part if the St. Louis nonattainment area.

Comment:
Three commenters (0107, 0091, 0100) disagree with EPA's recommended designations. The commenters recommend that EPA designate Washington County, IL and Ste. Genevieve County, MO as nonattainment due to large emission sources under construction. The commenters state that Washington County is adjacent to the proposed nonattainment area. The commenters state the Prairies State Generating coal-fired 1600 megawatt power plant (Washington County) is scheduled to go online in 2011. The commenters state that Ste. Genevieve is adjacent to Jefferson County and sits immediately across the Mississippi River from Monroe and Randolph counties in Illinois. The commenters state that both counties are upwind the proposed nonattainment area. The commenters believes that the coal-fired Holcim cement kiln (Ste. Genevieve) will emit significant amounts of direct and precursor $PM_{2.5}$ pollutants to the proposed nonattainment area and is scheduled to be operational within only a few months. The commenters state additional facilities that are being built in Madison County and St. Clair County, including the expansion of the ConocoPhillips refinery in Wood River to process

tar sands, a new coke plant in Granite City, and several ethanol plants, will add significantly to the amount of direct and precursor $PM_{2.5}$ pollutants in the proposed nonattainment area. The commenters cite lung health risks to residents in the States, as well as the fact that there is no evidence of a safe level of $PM_{2.5}$.

EPA Response:

EPA excluded Washington County, Illinois from the St. Louis nonattainment area. EPA designated it as attainment based on the current information, as EPA is required to do by the Act. EPA found that Washington County has limited current emissions: 801 tpy of $PM_{2.5}$ emissions, 118 tpy of SO_2, and 1,750 tpy of NO_X. The county has 14,946 residents and 361 million VMT per year. Both of these figures rate low in the St. Louis area. The data also shows that just 1,630 workers commute into the St. Louis metropolitan area which includes St. Clair County. There is no air quality monitoring data for Washington County. EPA concluded that Washington County does not currently contribute to the violations in the St. Louis. Therefore, EPA designated Washington County as attainment as required by the Act. The construction of a power plant in a county adjacent to the St. Louis nonattainment area does have the potential to greatly increase Washington County emissions. From meteorological data for the St. Louis area, EPA concluded that the wind can carry emissions from all directions toward the violating monitors. Illinois and Missouri will need to consider the potential emissions from the Washington County power plant when they develop plans to bring the St. Louis area into attainment of the fine particulate standards. However, EPA can not designate the county nonattainment now as it does not have evidence that the county currently contributes to the violations.

Ste. Genevieve County is adjacent to the C/MSA but the county has comparatively low population estimates (18,138), low population density (36 people per square mile), and low annual VMT (355 M). Based on the 2002 NEI Ste. Genevieve County has $PM_{2.5}$ emissions of 548 tpy, SO_2 emissions of 6,080 tpy and NO_X emissions of 4479 tpy. This amounts to 5 percent of the total $PM_{2.5}$ emissions, 3 percent of the total SO_2 emissions, and 5 percent of the total NO_X emissions within the area made up of the C/MSA and adjacent counties. A $PM_{2.5}$ monitoring station is located in the county with a design value of 32 $\mu g/m^3$ calculated for 2005-2007, which is below the NAAQS of 35 $\mu g/m^3$ for the 2006 24-hour $PM_{2.5}$ standard. Based upon information provided by Missouri and analyzed by EPA, EPA has determined that the amount of current emissions and stringency of controls on newly permitted sources in the count do not support designating Ste. Genevieve County as nonattainment either based on violations or contribution.

Additionally, as required by CAA the State's new source permitting process includes the assessment of new source impacts on air quality in both attainment and nonattainment areas.

3.51. San Francisco Bay Area, CA

See section 2.2 for general comments relating to this particular nonattainment area.

3.52. San Joaquin Valley, CA

See section 2.2 for general comments relating to this particular nonattainment area.

3.53. Steubenville-Weirton, OH-WV

Comment:

One commenter (0118) supports EPA recommendations for the State of Ohio. The commenter requests that EPA designate Jefferson County as nonattainment. This is the same county that EPA has proposed as a candidate for a designation of nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of the recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.54. Tacoma, WA

See section 2.2 for general comments relating to this particular nonattainment area.

3.55. Vincennes, IN

Comment:

One commenter (0106) supports EPA's recommendation and requests that EPA designate Knox County, IN, as nonattainment. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA made the final designations for the 2006 24-hour $PM_{2.5}$ NAAQS using an evaluation of recommended nine factors described in the June 2007 guidance as well as other relevant information in determining appropriate nonattainment area boundaries and has designated Knox county as nonattainment. Please refer to the TSD and the State and Tribal RTC document which explains EPA's decisions.

3.56. York, PA

See section 2.2 for general comments relevant to this particular nonattainment area.

3.57. Youngstown, OH

Comment:

23 commenters (0033, 0031, 0030, 0021, 0028, 0067, 0014, 0146, 0027, 0046, 0023, 0025, 0118, 0017, 0020, 0048, 0015, 0047, 0016, 0026, 022, 0029, 0140) believe that if the most recent data from 2008 is used, the Youngstown, OH area is likely to be able to be in compliance. The commenters also requested additional time for the Ohio EPA to provide the most up-to-date information possible and delay the decision until after that material has been reviewed. The commenters indicate an economic hardship in the area.

EPA Response:

EPA recognizes that many areas in the country are making improvements in their air quality, and believes that it is important to recognize such improvements. In making decisions about whether an area is meeting the 24-hour $PM_{2.5}$ NAAQS, EPA also believes that it is important to use the most recent air quality data. EPA will be unable to use 2008 data air quality data for the designation decisions that will be made in December 2008. However, all States will still have the opportunity to benefit from their efforts to improve air quality by using 2008 air quality data to demonstrate attainment of the 24-hour $PM_{2.5}$ NAAQS.

Prior to the effective date of final 24-hour $PM_{2.5}$ designations, States will have the opportunity to provide more recent data showing that an area is attaining the 24-hour $PM_{2.5}$ NAAQS. To do so, a State must submit its complete, quality assured, certified 2008 air quality data to EPA earlier than the usual June 30 deadline. This early submittal deadline will be approximately 45 days prior to the 90-day effective date of publication of the final 24-hour $PM_{2.5}$ designations. If EPA agrees that a change of designation status is appropriate based on 2006-2008 air quality data, EPA would withdraw the nonattainment designation prior to the 90-day effective date of final 24-hour $PM_{2.5}$ designations and the area would be designated as in attainment. Please see section 2.3 above for EPA's response regarding the submission of 2008 data.

Comment:

One commenter (0118) supports EPA recommendations for Mahoning and Trumbull counties in Ohio. The commenter cites negative health impacts from $PM_{2.5}$ and its contribution to regional haze.

EPA Response:

EPA acknowledges this comment and has made the final determination that Mahoning and Trumbull counties in Ohio should be included in the boundary for the Youngstown, OH nonattainment area. Please refer to the TSD which explains EPA's decisions.

3.58. Yuba City-Marysville, CA

See section 2.2 for comments regarding this particular nonattainment area.

4.0. Comments Specific To Region

4.1. Region IV

4.1.1. Georgia

Comment:

One commenter (0101) disagrees with EPA's recommended designation for Georgia. The commenter recommends that EPA adopted the original recommendation dated December 18, 2007, from the Georgia Environmental Protection Division. The commenter believes that all of the Atlanta area counties and partial counties stated in the December 18, 2007, letter should be designated nonattainment for the 2006 24-hour NAAQS. The commenter believes that's emissions from Georgia Power Plant Scherer in Monroe County should be reanalyzed in the Atlanta area. The commenter disagrees with EPA's review of exceptional events for several areas in Georgia and feels that Atlanta and partial counties stated by Georgia Environmental Protection Division on the December 18, 2007, letter should be designated as nonattainment.

- The commenter believes that there was no quantification of contribution and states although there was a forest fire it does not eliminate the possibility of an excession due to local emissions that was inflated by the forest fire contribution. The commenter believes that the most accurate way of assigning the quantification of concentrations is through modeling. The commenter recommends that the SE U.S. be modeled during this May 2007 period using VISTAS emission inventory with the forest fire emissions and CMAQ/WRF modeling system to apportion these concentrations. The commenter also thinks the modeling protocol for this project should be open for public comment. The commenter states that the 2005-2007 design values (DV) be used only to expand the areas of nonattainment based on the original 2004-2006 DV submittal and not to expand the areas of attainment because the commenter does not know the true quantity of the excession.
- The commenter believes that because the exceptional events were eliminated the 2005-2007 design values show attainment. The commenter states that the previous 5 design values show the Atlanta Area as nonattainment. The commenter believes that it is illogical that Atlanta be nonattainment for the annual standard and attainment for the 24-hr standard when the short term standard is harder to meet.
- The commenter also does not believe that Georgia Environmental Protection Division and EPA adequately analyzed the $PM_{2.5}$ data for low concentration exceptional events. The commenter uses an example stating on 5/4/2007 Alabama submitted an exceptional event exclusion for their Phenix City monitor because of the Georgia forest fires that they thought were regional in scope. Yet on that date the South DeKalb monitor recorded a $PM_{2.5}$ concentration of 8.2 $\mu g/m^3$, which was 3 and 4 times less than all the other monitors operating on that date.

EPA Response:

Attached to the August 19th letter from EPA to Governor Perdue (http://www.epa.gov/pmdesignations/2006standards/rec/letters/04_GA_EPAMOD.pdf) is a very detailed analysis of the 112.7 μg/m^3 reading at the Albany site. (See pages 19-21). Included in this analysis is an assessment of the estimated concentration that would have occurred "but-for" the impact of the fire as required by EPA's Exceptional Events rule. This analysis utilized several sources of information including modeled trajectories, $PM_{2.5}$ concentrations at nearby locations and historical $PM_{2.5}$ values. EPA determined that these sources of information were sufficient to judge the event to be exceptional and additional modeling such as the one suggested by the commenter was not required. This investigation concluded that that the 24-hour average $PM_{2.5}$ concentration observed on May 27 (112.7 μg/m^3) was 87.7 μg/m^3 greater than the 95th percentile concentration observed at the site during the month of May in 2004-2006. This indicates that $PM_{2.5}$ concentrations in the Albany area far exceeded the normally expected range of concentrations.

While the accuracy and validity of individual 24-hour concentrations are important for the computation of the annual average, they are not necessarily relevant for the computation of the annual 98th percentile and the 24-hour design value. If the 8.2 μg/m^3 value was eliminated, it would not have any effect on the computation of the design value for the South DeKalb monitor. Only the highest 2 percent of measured concentrations contribute to the 24-hour design value. While EPA agrees that the value appears to be unusually low, it occurred during a time of the year when the highest concentrations do not typically occur. Furthermore, for the investigation of nonattainment with the 24-hour $PM_{2.5}$ NAAQS, the 2005-2007 data was used for the computed design value.

The designations promulgated today are for the 2006 24-hour $PM_{2.5.}$ NAAQS. Although designations for the 1997 annual $PM_{2.5}$ (70 FR 944) under 107(d) of the CAA are currently in Georgia, today's rule is only for the 2006 24-hour $PM_{2.5}$ NAAQS.

EPA believes that nonattainment designations should be based on the most recent air quality monitoring data available. EPA identifies violations of the 2006 24-hour $PM_{2.5}$ NAAQS on the basis of three years of complete, quality-assured ambient air quality monitoring data from an eligible air quality monitor. At the time of Georgia's initial recommendation in December 2007, the state based its recommendation on monitoring data from 2004-2006. For 2004-2006, there was a violation of the 24-hour $PM_{2.5}$ NAAQS. However in 2008, EPA based designations, on 2005-2007 which is the most recent quality-assured ambient air quality monitoring data. For 2005-2007, monitoring data showed no violations of the standard in the Georgia. Further, in establishing nonattainment area boundaries, the agency is required to identify the area that does not meet the 2006 24-hour $PM_{2.5}$ NAAQS and any nearby area that is contributing to the area that does not meet that standard. Based on 2005-2007 monitoring data, all areas in

Georgia meet the 24-hour $PM_{2.5}$ NAAQS. EPA is not required under CAA section 107(d) to seek public comment during the designation process. EPA conducted a thorough analysis of exceptional events requests submitted by Georgia. More detail on EPA's analysis for exceptional events for Georgia can be found at: http://www.epa.gov/pmdesignations/2006standards/rec/letters/04_GA_EPAMOD.pdf. Based on the monitoring data available to EPA and the State of Georgia, no monitors in or nearby to Georgia areas are in violation of the 24-hour $PM_{2.5}$ standard and thus no areas of Georgia are being designated nonattainment. The analysis of emission sources in Monroe County would potentially be considered as part of EPA's analysis if there are violating monitors for the 24-hour standard in or around that county but EPA's and the state's monitoring data indicates that monitors in or nearby to Monroe County are meeting the 24-hour standard.

Although not related to today's action, it is important to note that Georgia Power Plant Scherer in Monroe County is included in the Macon $PM_{2.5}$ nonattainment and 8-hour ozone maintenance areas for the 1997 standards so the State of Georgia through the SIP process is already considering emissions from this plant and other sources in Monroe County for air quality planning related to particulate matter and 8-hour ozone.

4.1.2. Kentucky

Comment:

One commenter (0114) requests that EPA deny the request for concurrence of exceptional event flags from Kentucky Division of Air Quality on $PM_{2.5}$ data, citing negative health impacts from $PM_{2.5}$. The commenter requests that EPA designate Bell, Fayette, Hardin and the other counties that exceed or contribute to violations of the NAAQS as nonattainment.

Draft EPA Response:

Attached to the August 19th letter from EPA to Governor Beshear (http://www.epa.gov/pmdesignations/2006standards/rec/letters/04_KY_EPAMOD.pdf) is a very detailed analysis of all the Kentucky requests for EPA to approve flagged data as exceptional events. These assessments are provided in enclosure 3, for claimed event days for the Louisville and Paducah areas. All of the included analyses were performed in accordance with the requirements of EPA's exceptional events rule. EPA did not concur on the claim that the Louisville area was impacted by smoke from Kansas/Northwestern wildfires , Arkansas, Mississippi and Texas wildfires, Kansas wildfires, Kentucky and surrounding States' wildfires, Southeast Georgia and Northeast Florida wildfires, Canadian and Northwestern wildfires or Idaho, Montana and Central U.S. wildfires. Similarly, for the Paducah area monitoring sites, EPA did not concur with the claims about western Kentucky fires, Arkansas/Mississippi wildfires or Arkansas/Mississippi wildfires. However, EPA did concur with the claimed impact on May 24, 2007 from the extreme Southeast Georgia/Florida wildfires.

Comment:
One commenter (0137) requests that EPA expand the nonattainment area designations. The commenter requests that EPA designate the Lexington-Fayette MSA and a portion of Mercer County (which contains E.W. Brown Generating Station) as nonattainment. The Lexington-Fayette MSA includes Bourbon, Clark, Fayette, Jessamine, Scott and Woodford counties. The commenter believes that the KY Cabinet is trying to avoid a nonattainment designation by requesting exceptional events for the monitor in Fayette which the commenter believes the 2005-2007 design value is 35.7 $\mu g/m^3$. The commenter believes that the surrounding counties are contributing and/or in the MSA with Fayette

Draft EPA Response:

The computed 2005-07 design value for Fayette County is 33 $\mu g/m^3$. See http://www.epa.gov/air/airtrends/values.html Kentucky requested concurrence for exclusion of data influenced by the Southeast Wildfires that burned in Georgia and Florida in 2007. These wildfires had widespread impact throughout the Southeast. Multiple requests were submitted from States thought-out the region for exclusion of data impacted on June 2, 2007 by these Georgia/Florida "Roundabout" wildfires. EPA granted concurrence for several flagged values that met the requirements as found in §50.14(c)(3)(iii) of which the Lexington Primary (AQS # 21-067-0012) and U.K Lexington (AQS # 21-067-0014) were included. Nevertheless, exclusion of the June 2 exceptional event only changed the Lexington Primary design value from 34 $\mu g/m^3$ to 33 $\mu g/m^3$. Bell, Fayette and Hardin counties in Kentucky are not being designated nonattainment for the 2006 $PM_{2.5}$ standard because neither of these counties has a violating monitor or has been found to contribute to an area with a violating monitor

4.2. Region VIII

4.2.1. Montana

Comment:
One commenter (0123) believes that the EPA proposal to designate Missoula, MT as attainment rejects the State recommendation. The commenter believes the use of exceptional events for 2005-2007 design value is arbitrary. The commenter states that the county had 24-hour design values of 39 $\mu g/m^3$ and 41 $\mu g/m^3$ in 2003-2005 and 2004-2006, respectively, well over the NAAQS. The commenter states that there are significant sources in the county.

EPA Response:

The most recent 3 years of complete, certified, quality assured data are used in designations in order to make designations reflective of current air quality conditions. The data for Missoula, Montana for 2007 were certified complete and accurate in June, 2008, so the 2005-2007 data set are the most recent data available at the time of the designations for 2008. The data shows attainment for

the area. Since this data was not available for the State to use in its recommendation, EPA's final designation is different from the State's recommendation.

Regarding exceptional event flags on wildfire influence on $PM_{2.5}$ data from 2007 in Missoula, 40 CFR Section 50.14(b)(1) states that "EPA shall exclude data from use in determinations of exceedances and NAAQS violations where a State demonstrates to EPA's satisfaction that an exceptional event caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section." This is in accordance with Appendix N to 40 CFR 50. The State of Montana submitted a demonstration that $PM_{2.5}$ exceedances from the summer of 2007 met the definition of an exceptional event and the other requirements of 40 CFR Section 50.14, and EPA concurred that these data were exceptional events. In accordance with the CFR, EPA has excluded those impacted data from a determination of violation in Missoula.

In conclusion, EPA concurred with the State's claim that Missoula was impacted by a forest fire and that it qualified as an exceptional event. For details regarding this assessment, see Aug 18, 2007 letter to Gov. Schweitzer http://www.epa.gov/pmdesignations/2006standards/rec/letters/08_MT_EPAMOD.pdf.
Because the computed design value (35 $\mu g/m^3$) was not greater than the level of the 24-hour NAAQS, the Missoula area is not judged to be in violation with the standard.

For additional information on the exceptional events please see, "Letter dated December 14, 2007 to Callie Videtich, Director Air and Radiation Program EPA Region VIII, from Charles Homer, Air Resources Management Bureau of the Montana Department of Environmental Quality, providing exceptional events data and demonstrations impacting Montana's air monitoring data for designating areas attaining and not attaining the 2006 24-hour $PM_{2.5}$ NAAQS" submitted to the docket (EPA-HQ-OAR-2007-0562: available online at www.regulations.gov).

4.2.2. Utah

Comment::
Two commenters (0129) request that EPA expand the nonattainment area designations. The commenter believes that EPA should designate Uintah and Duchesne counties in Utah as nonattainment. The commenters state the Vernal monitor was offline for two years and believes that available data indicates that monitors in both counties are exceeding or contributing to exceedences of NAAQS for $PM_{2.5}$. The commenters believe that failing to designate these counties as nonattainment would reward Utah for not monitoring in areas where monitoring is most essential.

EPA Response:

The Utah DAQ has not provided EPA with the information necessary to allow EPA to assess the siting and operation of the Vernal $PM_{2.5}$ monitor in Uintah County. EPA knows of no $PM_{2.5}$ monitoring data from Duchesne County. EPA's understanding is that the monitor in Vernal was a $PM_{2.5}$ Federal Reference Method monitor. Utah DAQ has not submitted the raw data and associated QA data from the Vernal monitor to the EPA AQS database, and has not provided siting and other information to EPA to allow EPA to assess whether the operation of the monitor met all necessary 40 CFR Part 58 requirements to allow comparison to the NAAQS.

Base on the data at http://www.airmonitoring.utah.gov/dataarchive/archpm25.htm, the Vernal $PM_{2.5}$ monitor operated from December 10, 2006 to December 14, 2007. The 2006 monitoring rule, effective December 18, 2006, provided the following provision for monitors designated by states as Special Purpose Monitors (SPM) and which subsequently receive approval from EPA Regional Administrators as monitors of that monitoring type:

> § 58.20 Special purpose monitors (SPM).
>
> (c) All data from an SPM using an FRM, FEM, or ARM which has operated for more than 24 months is eligible for comparison to the relevant NAAQS, subject to the conditions of §58.30, unless the air monitoring agency demonstrates that the data came from a particular period during which the requirements of appendix A, appendix C, or appendix E to this part were not met in practice.
>
> (d) If an SPM using an FRM, FEM, or ARM is discontinued within 24 months of start-up, the Administrator will not base a NAAQS violation determination for the $PM_{2.5}$ or ozone NAAQS solely on data from the SPM.

Had the Utah DAQ requested that the Vernal monitor be designated an SPM and received approval as such, EPA would not be able to use data collected at the site for designations during the first 24 months of operation under current regulations. Since the DAQ did not request that EPA approve the monitor as an SPM, the above restriction on the use of the first 24 months of data from the monitor does not apply.

However, the Vernal monitor did record significant exceedances of the $PM_{2.5}$ NAAQS. The Vernal monitor apparently recorded a 98^{th} percentile concentration of $PM_{2.5}$ of 28.5 $\mu g/m^3$ in 2006 (the 1^{st} maximum, recorded December 22, 2006), and a 98^{th} percentile value of 51.8 $\mu g/m^3$ in 2007 (the 3^{rd} maximum value recorded on February 8, 2007). 40 CFR Part 50, Appendix N, section 4.2(a) provides the data requirements in order to show a violation of the 24-hour $PM_{2.5}$ NAAQS:

40 CFR Part 50, Appendix N, Section 4.2 24-Hour $PM_{2.5}$ NAAQS (emphasis added).

(a) The 24-hour $PM_{2.5}$ NAAQS is met when the 24-hour standard design value at each monitoring site is less than or equal to 35 $\mu g/m^3$. This comparison shall be based on 3 consecutive, complete years of air quality data. A year meets data completeness requirements when at least 75 percent of the scheduled sampling days for each quarter have valid data. However, years shall be considered valid, notwithstanding quarters with less than complete data (even quarters with less than 11 samples), if the resulting annual 98th percentile value or resulting 24-hour standard design value (rounded according to the conventions of section 4.3 of this appendix) is greater than the level of the standard.

Thus the fact that the Utah DAQ collected monitoring data in Vernal only in calendar years 2006 and 2007 effectively prevents EPA from using the data to establish the existence of a violation of the $PM_{2.5}$ NAAQS, even though the State did not opt to ask EPA to approve the Vernal monitor as an SPM and receive the data use protections provide through 40 CFR Section 58.20.

Comment:

One commenter (0011) believes that Washington and Uintah Counties in Utah should also be designated as nonattainment. The commenter claims data that shows trends and sometimes exceedences of the $PM_{2.5}$ in these counties. The commenter suggested that the monitoring stations at Saint George and Vernal be restored, that all valid monitoring data be placed on the State's and EPA's national databases, and that EPA use the Air Monitoring Section for data collection if monitoring stations are not available or do not provide accurate/adequate data.

EPA Response*:*

Utah DAQ did operate a $PM_{2.5}$ Federal Reference Method monitor in Saint George, Washington County, Utah from July 2, 2004 through Dec. 14, 2007, and a monitor in Vernal, Uintah County, Utah from December 10, 2006 through December 14, 2007. The Vernal monitor is addressed in the response to the preceding comment. The Utah DAQ has not provided EPA with the information necessary to allow EPA to assess the siting and operation of the Saint George $PM_{2.5}$ monitor. Utah DAQ has not provided either the raw data collected or the quality assurance data that would be necessary to assess the quality of the collected data to the EPA Air Quality System (AQS) database. EPA has requested that Utah DAQ provide this data through AQS; Utah DAQ's position is that monitors were not required by Federal regulations contained in 40 CFR Part 58 in Saint George or in Vernal, and that Utah did not use Federal Funds in monitoring in Saint George or Vernal. Utah DAQ concludes that they are not bound by the data reporting requirements contained in 40 CFR Section 58.16 with respect to the Saint George or Vernal $PM_{2.5}$ monitors:

40 CFR § 58.16 Data submittal and archiving requirements.
(a) The State, or where appropriate, local agency, shall report to the Administrator, via AQS all ambient air quality data and associated quality assurance data for SO_2; CO; O_3; NO_2; NO; NO_Y; NO_X; Pb; PM_{10} mass concentration; $PM_{2.5}$ mass concentration; for filter-based $PM_{2.5}$ FRM/FEM the field blank mass, sampler-generated average daily temperature, and sampler-generated average daily pressure; chemically speciated $PM_{2.5}$ mass concentration data; $PM_{10-2.5}$ mass concentration; chemically speciated $PM_{10-2.5}$ mass concentration data; meteorological data from NCore and PAMS sites; and metadata records and information specified by the AQS Data Coding Manual (http://www.epa.gov/ttn/airs/airsaqs/manuals/manuals.htm). Such air quality data and information must be submitted directly to the AQS via electronic transmission on the specified quarterly schedule described in paragraph (b) of this section.

While Utah DAQ has not formally transmitted the Saint George data to EPA, what data are available on the Utah DAQ website do not support the commenter with respect to the presence of $PM_{2.5}$ violations in Saint George. Based on a review of the Saint George data at: http://www.airmonitoring.utah.gov/dataarchive/archpm25.htm on November 5, 2008 (as well as on previous occasions), the highest $PM_{2.5}$ sample collected in Saint George was a value of 26.8 $\mu g/m^3$, collected on July 1, 2006. Thus, had Utah submitted the data to EPA along with appropriate quality assurance data, and assuming the siting and other operational requirements of 40 CFR Part 58 were met, the available data collected between July 2, 2004 and December 14, 2007 would appear to show a site which attains the $PM_{2.5}$ NAAQS. Because the appropriate data were not submitted to EPA, EPA cannot make a positive statement that in fact Saint George attains the NAAQS, so instead a designation of unclassifiable/attainment is appropriate for Washington County, Utah.

Regarding the comment that EPA should rely on the Air Monitoring Section of the Utah DAQ for data collection and information, EPA works closely with all sections of the Utah DAQ, including the Air Monitoring Section, but respects and supports the management structure implemented by the State, and will rely upon the management of the DAQ for all formal information submittals.

4.3. Region X

4.3.1. Idaho

Comment:

One commenter (0123) believes that EPA's proposal to designate Lemhi County, ID as unclassifiable is unlawful. The commenter believes that the most recent complete data (2003-2005) shows a violation. The commenter believes that EPA is avoiding a nonattainment designation in the proposal by stating that the data is incomplete (monitor

malfunctions). The commenter states the data that is available shows a 98th percentile value of 65.5 μg/m^3.

EPA Response:

EPA agrees that 2007 air quality data for Lemhi, ID (from the FRM at monitoring site# 160590004) show a 98th percentile value of 65.5 ug/m3.

However, EPA identifies violations of the 2006 24-hour $PM_{2.5}$ NAAQS on the basis of three years of complete, quality-assured ambient air quality monitoring data. Air quality data for Lemhi, ID (from the FRM at monitoring site# 160590004) do not meet completeness criteria for 2005-2007 or for 2004-2006. For 2003-2005, data are complete and the design value for this monitor is 37 μg/m^3. However, EPA based designations for the 2006 24-hour $PM_{2.5}$ NAAQS on data for 2005-2007. In instances where 2005-2007 data were incomplete, EPA evaluated 2004-2006 data and 2003-2005 data.

Due to the nature of the 24-hour $PM_{2.5}$ NAAQS, areas may move into and out of attainment depending on meteorology and other factors in a given year. EPA believes that using data prior to the 2004-2006 data years would be inappropriate, as earlier years of data would not necessarily accurately reflect an area's current air quality. Section 107(d)(1)(A)(iii) requires that EPA designate as "unclassifiable" any area that cannot be classified on the basis of available information as meeting or not meeting" the NAAQS.