ORAL ARGUMENT SCHEDULED JANUARY 24, 2012

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Consolidated Case Nos. 10-1004, 10-1005, 10-1006, 11-1252, 11-1253, 11-1254

ATK LAUNCH SYSTEMS, INC., et al.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

ON PETITION FOR REVIEW OF FINAL ACTION BY THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

RESPONDENT'S FINAL RESPONSE BRIEF

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Dated: November 1, 2011

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), Respondent United States Environmental Protection Agency ("EPA") states as follows:

A. Parties, Intervenors, and Amici

All parties and intervenors are identified in petitioners' briefs.

B. Rulings Under Review

Petitioners seek review of EPA's final rule, "Air Quality Designations for the 2006 24-Hour Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standards," 74 Fed. Reg. 58,688 (Nov. 13, 2009).

C. Related Cases

This case was not previously before this Court. Case nos. 11-1252, 11-1253, and 11-1254 were before the United States Court of Appeals for the Tenth Circuit and transferred to this Court by order of the Tenth Circuit, dated July 6, 2011.

Respectfully submitted,

/s/ *Jessica O'Donnell*
Jessica O'Donnell
United States Department of Justice
Environmental Defense Section
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Dated: November 1, 2011

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RULES

REGULATIONS

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GLOSSARY

APA	Administrative Procedure Act
ATK Comment Letter	Comment submitted by David P. Gosen, P.E., Director, Environmental Services, Alliant Techsystems, Inc., ATK Launch Systems, Oct. 2, 2008, Index 164-165
CAA	Clean Air Act or Act
CBSA	Core-Based Statistical Area
CES	Contributing Emissions Score
CSA	Combined Statistical Area
Designations Rule	Air Quality Designations for the 2006 24-Hour Fine Particles ($PM_{2.5}$) National Ambient Air Quality Standards, 74 Fed. Reg. 58,688 (Nov. 13, 2009)
EPA	Environmental Protection Agency
EPA Modification Letter to Utah	Letter to Hon. J. Huntsman, Governor, from C. Rushin, Acting Regional Administrator, Providing the Environmental Protection Agency's Response to Utah's Dec. 18, 2007 Recommendations for the Boundaries of Areas Attaining and Not Attaining the 2006 24-Hour National Ambient Air Quality Standards, Aug. 18, 2008, Index 524
Guidance	EPA memorandum on Area Designations for the Revised 24-Hour Fine Particle NAAQS, June 8, 2007, Index 479
JA	Joint Appendix
NAAQS	National Ambient Air Quality Standard or Standards
NH_3	Ammonia

NO_3	Nitrate
NO_x	Nitrogen Oxides
$PM_{2.5}$	Fine Particles
$PM_{2.5}$ Design Values 1999-2001 to 2006-2008	Spreadsheet Presenting $PM_{2.5}$ Design Values Determined for the 3-year Periods from 1999-2001 to 2006-2008, Aug. 31, 2009, Index 704
Public Comment Doc.	Public Comment Summary and Response Document on EPA's Recommended Area Designations for the 2006 24-Hour $PM_{2.5}$ Designation Recommendations, Dec. 22, 2008, Index 671
Sept. 9, 2009 Mem.	Mem. From C. Roberts to 24-Hour $PM_{2.5}$ Designations Dkt., Sept. 9, 2009, Index 703
SIP	State Implementation Plan
SO_x	Sulfur oxides
State Comment Doc.	State and Tribal Comment Summary and Response Document on EPA's Recommended Area Designations for the 2006 24-Hour $PM_{2.5}$ Designation Recommendations, Dec. 22, 2008, Index 670
Supplemental TSD	September 2009 Supplemental Technical Support Document, Ch. 2, (2006-2008 Design Values), Index 675
TPY	Tons Per Year
TSD	Technical Support Document for 2006 24-Hour $PM_{2.5}$ NAAQS Designations, December 2008, Index 583-669
$\mu g/m^3$	Micrograms Per Cubic Meter
Utah DAQ	Utah Division of Air Quality

Utah Recommendation Letter	Letter from J. Huntsman, Jr., Governor, to R. Roberts, USEPA Region VIII Administrator Submitting Utah's Recommendations for the Boundaries of Areas that are Attaining and Not Attaining the 2006 Revised 24-Hour $PM_{2.5}$ NAAQS, Dec. 18, 2007, Index 463
VOCs	Volatile Organic Compounds
VMT	Vehicle Miles Traveled

JURISDICTION

Petitioners challenge the Environmental Protection Agency's ("EPA's") final rule, "Air Quality Designations for the 2006 24-Hour Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standards," 74 Fed. Reg. 58,688 (Nov. 13, 2009). Because the final rule is a nationally applicable regulation and one of "nationwide scope or effect," this Court has jurisdiction to review the rule pursuant to the Clean Air Act ("CAA" or the "Act"), 42 U.S.C. § 7607(b)(1). Case nos. 10-1004, 10-1005, and 10-1006 were timely filed in this Court; case nos. 11-1252, 11-1253, and 11-1254 were timely filed in the Tenth Circuit and transferred to this Court by order of the Tenth Circuit, dated July 6, 2011.

STATEMENT OF ISSUES

1. Whether EPA reasonably and consistently applied its nine-factor analysis to determine that eastern Box Elder and Tooele Counties contribute to nonattainment in nearby areas.

2. Whether EPA correctly analyzed wind data and other factors to conclude that eastern Box Elder contributes to nonattainment in nearby areas, and reasonably selected the Promontory Mountains as the nonattainment area boundary.

STATEMENT OF THE CASE AND FACTS

This case involves a fundamental aspect of EPA's statutory mission to protect the public from dangerous and unhealthy air. The CAA directs EPA to establish National Ambient Air Quality Standards ("NAAQS" or "standards") for criteria pollutants that are harmful to public health and the environment, 42 U.S.C. §§ 7408-7409, and then to designate areas as in "attainment" or "nonattainment" with the NAAQS, id. § 7407(d)(1). A "nonattainment" designation triggers subsequent actions that States, EPA, and others must take to achieve the NAAQS "as expeditiously as practicable." Id. § 7502(a)(2)(A). The statute requires that nonattainment areas include both areas that violate the NAAQS and areas that contribute to nearby NAAQS violations, so that emissions within those areas will be addressed and the NAAQS will be achieved. Id. § 7407(d)(1).

In 2009, EPA promulgated a nationwide "Designations Rule," designating 31 nonattainment areas for the 2006 24-Hour NAAQS for fine particulate matter or "$PM_{2.5}$." 74 Fed. Reg. 58,688. Studies have shown significant impacts from $PM_{2.5}$ exposure, including premature death from heart and lung disease and other serious adverse health effects. Id.

Petitioners – a local emissions source and several local governments – challenge inclusion of the eastern portions of Tooele and Box Elder Counties within the Salt Lake City nonattainment area. The record demonstrates that EPA

reasonably concluded that eastern Box Elder and Tooele contribute to nonattainment in the Salt Lake City area and properly designated these areas nonattainment. Therefore, the Court should deny the petitions.

I. STATUTORY BACKGROUND

The CAA, 42 U.S.C. §§ 7401-7671q, establishes a joint state and federal program to address air pollution. Pursuant to Title I, EPA identifies pollutants that may reasonably be anticipated to endanger public health and welfare, and formulates NAAQS that specify the maximum permissible concentrations of those pollutants in the ambient air. Id. §§ 7408-7409. EPA has promulgated NAAQS for several pollutants, including $PM_{2.5}$. 40 C.F.R. pt. 50.

Once it promulgates a new or revised NAAQS, section 107(d)(1) requires that EPA designate areas as "attainment," "nonattainment," or "unclassifiable" for the NAAQS. 42 U.S.C. § 7407(d)(1). "Nonattainment" areas violate the NAAQS or contribute to NAAQS violations in a nearby area; "attainment" areas meet the NAAQS; and "unclassifiable" areas are those for which EPA lacks sufficient information to determine whether the NAAQS are met. Id. § 7407(d)(1)(A)(i)-(iii).

Section 107(d)(1) prescribes the designation process. States first must submit to EPA their recommended "initial designations" for all areas within their borders. Id. § 7407(d)(1)(A). EPA, in turn, must notify States of its proposed

modifications, if any, and then promulgate the final designations with any modifications "the Administrator deems necessary." Id. § 7407(d)(1)(B)(ii). EPA is not required to undertake notice-and-comment for the designations process, although EPA may elect to do so. See id. §§ 7407(d)(2)(b), 7607(d).

Once EPA makes designations, states must adopt and implement state implementation plans ("SIPs") to attain, maintain, and enforce the NAAQS, through, *inter alia*, enforceable emissions limitations and other control measures applicable to pollutant sources. Id. § 7410. For nonattainment areas, SIPs must include measures to provide for attainment of the NAAQS "as expeditiously as practicable," including measures to reduce emissions of relevant pollutants. Id. § 7502(a)(2); 40 C.F.R. §§ 51.1000-.1012. SIPs for attainment or unclassifiable areas must include measures to "prevent significant deterioration of air quality," among other things. 42 U.S.C. § 7471.

II. REGULATORY BACKGROUND

A. $PM_{2.5}$ NAAQS and Prior $PM_{2.5}$ Designations

In 1997, EPA introduced both "annual" and "24-hour" NAAQS for $PM_{2.5}$ — i.e., particles with an aerodynamic diameter no greater than 2.5 microns. 62 Fed. Reg. 38,652 (July 18, 1997). EPA designated areas under the 1997 $PM_{2.5}$ NAAQS on January 5, 2005. 70 Fed. Reg. 944 (Jan. 5, 2005).

Multiple petitioners challenged EPA's designations for the 1997 annual $PM_{2.5}$ NAAQS, attacking EPA's statutory interpretation, analytical approach, and technical judgments. This court generally upheld the rule, finding that "EPA both complied with the statute and, for all but one of the 225 counties or partial counties it designated as nonattainment, satisfied – indeed, quite often surpassed – its basic obligation of reasoned decisionmaking." Catawba County, N.C. v. EPA, 571 F.3d 20, 25 (D.C. Cir. 2009).

On October 17, 2006, EPA promulgated a revised 24-hour $PM_{2.5}$ NAAQS, strengthening the standard from 65 micrograms per cubic meter ($\mu g/m^3$) to 35 $\mu g/m^3$. 71 Fed. Reg. 61,144 (Oct. 17, 2006).[1] The revised NAAQS triggered the section 107(d) designations process relevant here.

B. Designations for the 2006 24-Hour $PM_{2.5}$ NAAQS

On June 8, 2007, EPA initiated the designations process for the 2006 24-hour $PM_{2.5}$ NAAQS by issuing guidance regarding the timeline and process for the designations. EPA Memorandum on Area Designations for the Revised 24-Hour Fine Particle NAAQS ("Guidance"), Index 479, Joint Appendix ("JA") 197-201. The Guidance also announced EPA's intention to evaluate nonattainment boundaries using a similar analytical approach to that used for the 1997 $PM_{2.5}$ NAAQS designations and upheld by this court in Catawba, 571 F.3d at 20.

[1] The annual $PM_{2.5}$ NAAQS are not relevant here.

The Guidance explained that nonattainment areas should cover a sufficiently large area to include both areas that violate the NAAQS and areas that contribute to these violations. Guidance, JA198. To identify violating areas, EPA recommended considering the three most recent calendar years of air quality monitoring data. Id. To determine what areas "contribute" to violations in "nearby" areas, EPA indicated that it planned to undertake a case-by-case analysis of each area with violations, considering information related to nine factors identified in the guidance and any other relevant information. Id. JA201.

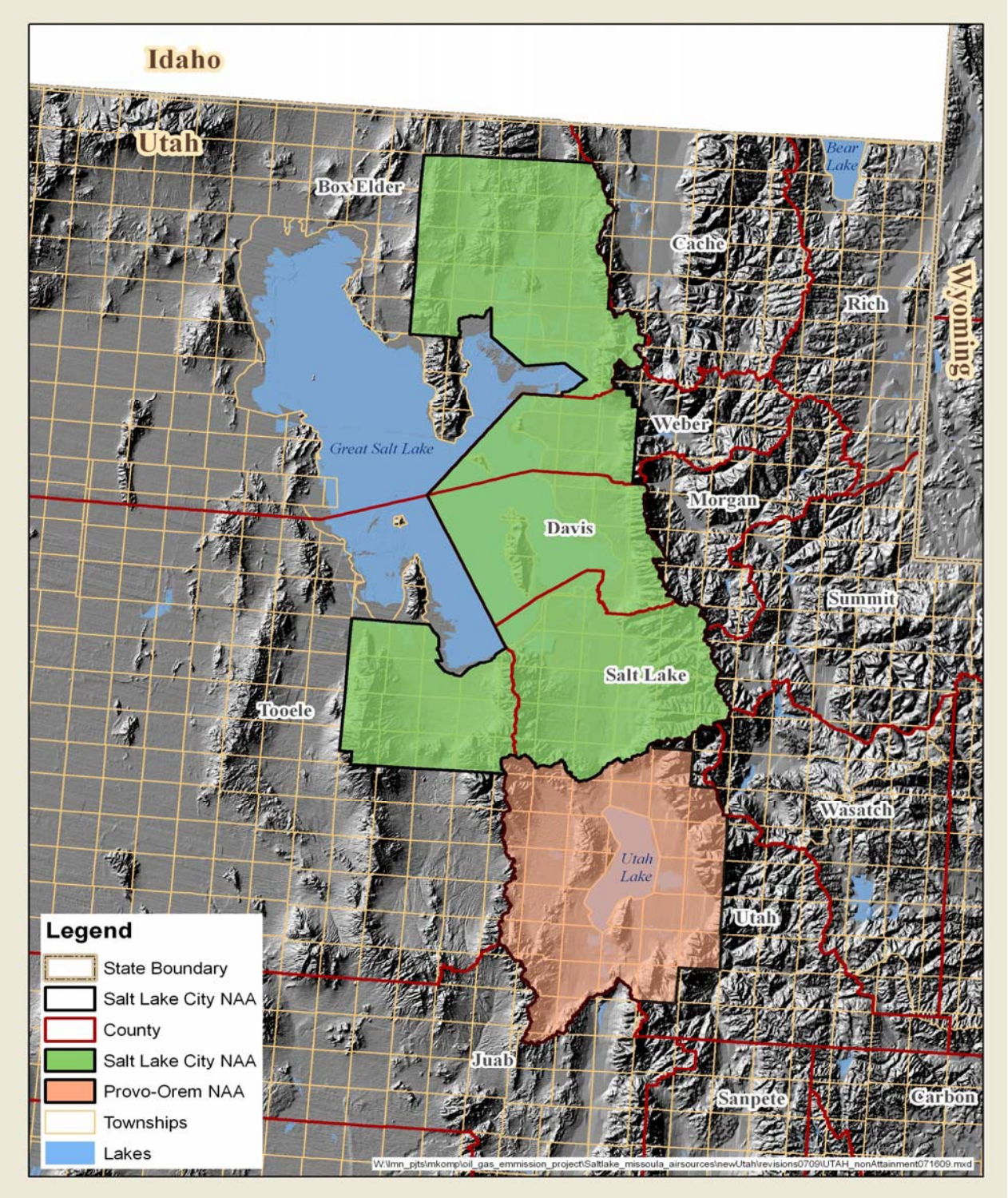
Unlike the 1997 $PM_{2.5}$ designations, however, EPA did not establish a presumption that the metropolitan area boundaries established by the Office of Management and Budget ("OMB") would serve as nonattainment area boundaries. Id.; see also 74 Fed. Reg. at 58,694. As a starting point for its technical analysis of data and information, EPA considered all counties within, and one to two adjacent rings beyond, the metropolitan area, as defined by OMB.[2] Id.; Technical Support Document for 2006 24-Hour $PM_{2.5}$ Designations ("TSD") 3.1.4, Index 585, at 3-6, JA320.

[2] More specifically, OMB defines core-based statistical areas ("CBSAs") for collection of statistical data on recognized population centers and adjacent communities. 65 Fed. Reg. 82,228 (Dec. 27, 2000). Combined statistical areas ("CSAs") include one or more CBSAs.

Most states submitted recommended designations on December 18, 2007. On August 19, 2008, EPA notified states of proposed modifications to the states' recommended designations. See, e.g., EPA Modification Letter to Utah, Index 524, JA202-292. Subsequently, EPA invited public comment on the designations. 73 Fed. Reg. 51,259 (Sept. 2, 2008).

EPA promulgated final nationwide designations on November 13, 2009. 74 Fed. Reg. 58,688; 40 C.F.R. pt. 81. Relevant here, EPA designated a Salt Lake City nonattainment area consisting of Davis, Salt Lake, and portions of Weber, Box Elder and Tooele Counties. TSD 4.8.2, Index 612, at 24-25, JA452-53. Of the 31 nonattainment areas designated nationwide, the Box Elder and Tooele designations are the only designations that any party has challenged judicially.

The Salt Lake City nonattainment area appears below:



Supplemental TSD, Ch. 9, Index 727, JA1005.

III. KEY ASPECTS OF THE DESIGNATIONS

A. The Nature of $PM_{2.5}$

$PM_{2.5}$ consists of airborne particles roughly one-thirtieth the thickness of a human hair. 74 Fed. Reg. at 58,690. $PM_{2.5}$ can penetrate deeply into the lungs, where it can accumulate, react, or be absorbed into the body. Id. Exposure to $PM_{2.5}$ may cause serious human health effects, aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma, heart attacks, and premature death. Id. Older adults, people with heart and lung disease, and children are particularly sensitive to $PM_{2.5}$. Id.

$PM_{2.5}$ is a complex mixture of liquid and solid particles such as ammonium sulfate, ammonium nitrate, carbonaceous PM (including organic carbon and elemental carbon), and crustal material. Id. "Primary" particles (such as carbonaceous soot from diesel emissions) are released directly into the air; "secondary" particles arise from complex chemical reactions of chemical precursors that sources emit, including sulfur dioxide, nitrogen oxides, volatile organic compounds, and ammonia. Id.

Multiple sources emit $PM_{2.5}$ and its precursors, including power plants and other industrial sources, animal feeding operations and fertilizer production, re-entrained road dust, agriculture, mining, diesel and gasoline powered engines in mobile sources and heavy equipment, wildfires, and waste burning. Id. Direct and

secondary $PM_{2.5}$ can be transported many miles from the source, depending on meteorological conditions and winds. Id. Wind direction, speed, and strength all vary over the course of a single day, by season, and over the entire year. Id. Consequently, the proportion of primary versus secondary particles and of different species of particles found in any geographic area can vary widely, depending upon factors including the mix of sources, the mix of $PM_{2.5}$ precursors, and meteorology. Id. Additionally, depending on the area, $PM_{2.5}$ may include primary and secondary $PM_{2.5}$ emissions from sources in that area, nearby areas, or areas farther away. Id.

B. EPA's Nine-Factor Analysis

Confronted with the complex nature of $PM_{2.5}$, its serious adverse health impacts, multiple precursors, numerous sources, meteorological considerations, and the need to distinguish between local and non-local sources at any monitor, EPA concluded that a bright-line or numeric standard would be inappropriate for identifying areas that "contribute" to nonattainment in nearby areas. 74 Fed. Reg. at 58,693-94. Instead, EPA developed a case-by-case approach that considers the circumstances of each area. Id.

EPA's case-by-case approach involved an analysis of nine factors:

(1) emissions data;

(2) air quality data;

(3) population density and degree of urbanization;

(4) traffic and commuting patterns;

(5) expected growth, including extent, pattern, and rate of growth;

(6) meteorology (weather and transport patterns);

(7) geography and topography (e.g., mountain ranges or other air basin boundaries);

(8) jurisdictional boundaries (e.g., counties, air districts); and

(9) level of existing controls on emission sources.

Id. at 58,694; see generally TSD 3.0, Index 585, JA315-27.

The nine factors were neither mandatory nor exhaustive, but rather, were intended as guidance regarding the types of information that might be appropriate for consideration in a given area. 74 Fed. Reg. at 58,694-95. The factors were intentionally general and open-ended to facilitate an analysis of the facts of each area. Id. at 58,695. EPA considered information related to these factors and any other relevant information states submitted in determining nonattainment area boundaries. Id.

C. Data and Analytical Tools

EPA's nine-factor analysis incorporated specialized data and analytical tools, described below.

1. Monitoring Data

To identify areas violating the 24-hour $PM_{2.5}$ NAAQS, EPA considered air quality monitoring data for 2006-2008. Id. The 24-hour $PM_{2.5}$ standards are met when the average of a monitor's 98^{th} percentile values for three consecutive years is 35 $\mu g/m^3$ or less. TSD 3.0, at 3-2, JA316. This means that for each monitor, the 98th percentile value for each of three consecutive years is averaged to arrive at a three-year "design value" that is compared against the standard. A "violation" occurs when the three-year design value exceeds the standard.

Where available, EPA also examined data from $PM_{2.5}$ speciation monitors. 74 Fed. Reg. at 58,695; TSD 3.0, at 3-3—3-4, JA317-18. The speciated data indicates the relative proportions of the component materials of $PM_{2.5}$ (e.g., sulfates, nitrates, carbonaceous or crustal particles) at a monitor. These data provide insights as to likely emissions sources contributing to $PM_{2.5}$ concentrations at a violating monitor, allowing EPA to better evaluate which nearby areas have emissions that are contributing to the violations.

2. Contributing Emissions Score

The contributing emissions score ("CES") is a metric that considers emissions data, meteorological data, and air quality monitoring information to provide a *relative* ranking (within a particular area) of the potential contribution from counties near a specific county with a violating monitor. See generally TSD

Appx. H, Index 663, JA519-60. The CES is one tool that EPA used for considering data relevant to the nine factors; however, it was not intended as the deciding factor for determining designations. 74 Fed. Reg. 58,695 n.16. Further, because one county's CES is relative to other counties in that particular metropolitan area, any comparison to CES scores for an entirely separate metropolitan area is meaningless. Id. at 58,695.

EPA determined that in areas in the western United States, including Utah, the CES metric has some limitations affecting its usefulness. TSD Appx. H at 9-10, JA527-28. The assumption that emissions are distributed uniformly throughout the county could be inaccurate in counties with isolated, densely populated areas or with large rural areas. Id. Additionally, the CES cannot adequately account for the effects of mountainous terrain that could split a county into different parts, each having potentially different effects on the violating county. Id. As discussed *infra*, EPA took such limitations into account in making the Salt Lake City designations.

3. Pollution Roses and Back Trajectories

EPA's "pollution roses" combine data from air quality monitoring sites in or near potential nonattainment areas with available nearby same-day meteorological wind speed and wind direction. See generally TSD 3.0, at 3-7—3-10, JA321-24. Each rose provides a visual indication of the predominant wind direction and speed on each $PM_{2.5}$ sample day. The center of each rose represents the monitor location.

Colored symbols (triangles and dots) depicting the 24-hour reported average $PM_{2.5}$ concentrations are plotted around the monitor with their relative position denoting the 24-hour average resultant wind speed and direction, i.e. the direction from which the wind emanated and the likelihood of impact as reflected by the wind speed.

EPA also used wind trajectories as a more refined consideration of the transport of $PM_{2.5}$ and $PM_{2.5}$ precursor emissions to violating monitors. See generally id. at 3-6—3-7, JA320-21. Using the National Oceanic and Atmospheric Administration's HYSPLIT trajectory model, EPA calculated wind trajectories backward in time from a violating monitor. The resulting "back trajectories" show the path air masses took on their way to a violating monitor.

IV. TECHNICAL BASIS FOR THE SALT LAKE CITY AREA'S NONATTAINMENT DESIGNATION

Petitioners challenge the inclusion of portions of Box Elder and Tooele Counties within the Salt Lake City-Ogden-Clearfield CSA ("Salt Lake City") nonattainment area. Within this area, EPA designated Davis and Salt Lake Counties and a portion of Weber County nonattainment because they violate the 24-hour $PM_{2.5}$ NAAQS. EPA evaluated Box Elder, Tooele, and other counties in the CSA, to determine which counties contribute to violations in Davis, Salt Lake, and Weber. Based on its analysis, EPA concluded that emissions from sources in

the eastern portions of Box Elder and Tooele contribute to the Salt Lake City area's nonattainment.

Salt Lake City's unique topography and meteorology – factors 6 and 7 in EPA's nine-factor analysis – were especially important factors for this area. High concentrations of $PM_{2.5}$ and $PM_{2.5}$ precursors occur during winter temperature inversions, which create a vertical barrier that traps $PM_{2.5}$ in the area. TSD 4.8.2 at 40, JA468.[3] At the same time, winter weather conditions produce ideal conditions for the formation of secondary $PM_{2.5}$. Id.

The topography essentially defines the area affected by high $PM_{2.5}$ concentrations during the inversions. Id. at 47, JA475. The Wasatch Mountains mark the eastern boundary; the Great Salt Lake and the Oquirrh Mountains mark the western boundaries. Id. at 48, JA476. The Promontory and North Promontory Mountains serve as a western airshed barrier in Box Elder, as do the Stansbury Mountains in Tooele. Id. The mountain ranges trap air and emissions within the low-lying areas (i.e., the Lake and surrounding urbanized areas) and allow $PM_{2.5}$ and $PM_{2.5}$ precursors to build up during inversions. See id. at 47-48, JA475-76. The topography also has concentrated people and emissions sources in these same low-lying areas. Id. at 48, JA476.

[3] Under normal conditions, air temperature becomes cooler with altitude. Temperature inversions occur when areas of high pressure in the atmosphere create a warm layer that traps cooler air near the earth's surface.

EPA's wind analysis showed that the "highest concentrations [of $PM_{2.5}$] were with light winds from the NW and SE directions and … showed the highest monitored values with light wind speeds typically four miles per hour or less." Id. at 39, JA467. EPA concluded that "with very light wind speeds with both a northern and southern component, the [direct and secondary] emissions [of] $PM_{2.5}$ [], oscillate along the entire Wasatch front region and are influenced by both the diurnal effects of the Great Salt Lake[4] and extended periods of light to stagnant wind conditions." See id. at 39, JA467. In other words, during inversions, the stagnant air mass and light winds cause emissions to slosh back-and-forth within the closed airshed, in a northwesterly-southeasterly direction.

EPA concluded that the extreme topography and meteorology allow emissions from eastern Box Elder to mix with emissions oscillating along the Wasatch Front region and contribute to the Salt Lake City area's nonattainment. Id. at 39-41, 53, JA467-69, JA481; see also Memo from C. Roberts to 24-Hour $PM_{2.5}$ Designations Docket, Sept. 9, 2009 ("Sept. 9, 2009 Mem."), Index 703, at 5-6, JA987-88. EPA found "there is no physical impediment to the back and forth movement of air masses in this area as the area is essentially flat and also borders

[4] This refers to the daily flow of cold air that moves down toward the low point, the Great Salt Lake, from surrounding valleys at night, and flows up from this low point into surrounding valleys and urbanized areas as sunlight heats the ground during the day.

on the northern section of the Great Salt Lake." TSD 4.8.2 at 41, JA469; see also id. at 48, JA476. EPA found that eastern Tooele's emissions move out over the Lake and are "transported eastward . . ., with a NW wind component, to the Wasatch Front area and contribute to elevated concentrations of $PM_{2.5}$." Id. at 41, JA469; see also id. at 48, JA476. EPA confirmed its analysis using back trajectories, which showed some degree of transport from Box Elder and Tooele into the Salt Lake City and Ogden areas on days where the NAAQS were exceeded (id. at 41-47 (Fig. A.3-5—A.3-10), JA469-75), and with analyses of the winds recorded at twenty one meteorology stations operated by Utah Division of Air Quality in and near the Utah nonattainment areas (State Comment Doc. at 14, JA580).

EPA's analysis of the first and second factors – emissions and air quality monitoring data – supported the conclusion that eastern Box Elder and Tooele contribute emissions to high $PM_{2.5}$ concentrations in nearby areas. Total emissions for Box Elder and Tooele are similar to nonattaining Weber County, and much higher than attainment counties Morgan, Summit, and Wasatch:

Counties	Weber	Tooele	Box Elder	Summit	Morgan	Wasatch
Total Emissions tons per year (tpy)[5]	18,294	15,135	15,516	7,192	5,629	2,907

[5] The calculation of total emissions includes direct $PM_{2.5}$ ("$PM_{2.5}$ total") and precursor emissions (SO_x, NO_x, VOCs, and NH_3).

Id. at 32 (Table A.3-2), JA460.

Further, both Box Elder and Tooele generate emissions of direct $PM_{2.5}$ and precursors that were particular problems for the Salt Lake City nonattainment area including NOx, ammonia, and direct carbon. See id.; Sept. 9, 2009 Mem. at 2-3, JA984-85. In response to Utah's comments, EPA also considered seasonally adjusted emissions data, which showed Box Elder and Tooele emit 8.3% and 8.8%, respectively, of the total 5-county NOx emissions and 6.4% and 5.3%, respectively, of the total 5-county carbon emissions. Sept. 9, 2009 Mem. at 3 (Table 3), JA984.

Box Elder and Tooele's emissions sources were concentrated in the eastern third of these counties, while the western portions were "sparsely-inhabited desert areas." TSD 4.8.2 at 32, JA460. The eastern and western portions of these counties also are separated by the mountain ranges that define the Salt Lake City nonattainment area. As a result, EPA considered only the eastern third of these counties as candidates for contribution and EPA revised their contributing emissions scores accordingly, resulting in a CES of 7 for Box Elder and 2 for Tooele. Id. (Table A.3-2, n.1), JA460.[6] In any event, the CES score was not a

[6] The CES calculation included a distance weighting, which accounts for decreasing emissions concentrations that occur as emissions move downwind and

major consideration in this particular nonattainment area because of the limitations of that analytical tool.

Air quality data showed that although Box Elder and Tooele were not then currently violating the 24-hour NAAQS, the areas were close to the 35 $\mu g/m^3$ standard. Specifically, Box Elder's design values were 35 $\mu g/m^3$ in 2004-2006 and 2006-2008; Tooele's design value was 31 $\mu g/m^3$ in 2005-2007. Id. at 53, JA481; Supplemental TSD (Oct. 8, 2009), Index 675, at 2-12, JA973. Additionally, Box Elder showed significant daily exceedances of the 24-hour NAAQS and historically, Box Elder's design value exceeded 35 $\mu g/m^3$.[7] TSD 4.8.2 at 53, JA481; $PM_{2.5}$ Design Values 1999-2001 to 2006-2008, Index 704, at 20, 35, 110, 185, 247, 331, 412, 497, 581, JA995-1003. Thus, EPA reasonably concluded that "these areas are subject to poor air quality at times, and it is likely that these high concentrations [of $PM_{2.5}$] 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." TSD 4.8.2 at 53, JA481.

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disperse. Id. Appx. H at 41, JA559. EPA adjusted the distance inputs for Box Elder and Tooele to account for the smaller size of these partial counties by considering only the portions of the Counties east of 112 degrees 50 minutes west longitude.

[7] Because a "violation" of the 24-hour $PM_{2.5}$ NAAQS is measured based on a three-year average of a monitor's 98^{th} percentile values, an area may have some daily exceedances without actually violating the standard.

The population, traffic, and growth factors confirmed eastern Box Elder and Tooele's contribution to nonattainment. The eastern portions of these counties had relatively high population densities, high percentages of commuters traveling to Salt Lake, Davis, and Weber, high projected population growth and growth in vehicle miles traveled ("VMT"). Id. at 34-39, JA462-67. Box Elder and Tooele were predicted to have growth increases of 22.3% and 61.4%, respectively, and accompanying sizeable increases in VMT. Id. at 37-38 (Tables A.3-6, A.3-7), JA465-66. These data demonstrate Box Elder and Tooele's emissions-generating potential as well as an integral connection to the urban area, both of which indicate contribution. See id.

Regarding jurisdictional boundaries (factor 8), the Salt Lake City area had no existing $PM_{2.5}$ nonattainment areas. However, EPA concluded that the Utah Division of Air Quality ("Utah DAQ") and Utah Air Quality Board have state-wide SIP planning authority to develop and implement control measures to address $PM_{2.5}$ nonattainment issues throughout the Salt Lake City area. Id. at 52, JA480. EPA's analysis of the level of control of emissions sources (factor 9) was based on reductions already incorporated into the emissions data. Utah provided no information regarding additional substantial emissions reductions relevant to the area. Id.

Based on its nine-factor evaluation and other information, EPA included eastern Box Elder and Tooele within the Salt Lake City nonattainment area.

STANDARD OF REVIEW

In reviewing these designations, the Court applies "the same standard of review under the Clean Air Act as [applied] under the Administrative Procedure Act (APA), 5 U.S.C. § 706(2)(A)," Allied Local & Reg'l Mfrs. Caucus v. EPA, 215 F.3d 61, 68 (D.C. Cir. 2000), and may set the designations aside only if they are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," § 7607(d)(9)(A). The Court must affirm as long as EPA considered all relevant factors and articulated a "rational connection between the facts found and the choice made." Burlington Truck Lines, Inc. v. United States, 371 U.S. 156, 168 (1962).

Thus, the "ultimate standard of review is a narrow one. The court is not empowered to substitute its judgment for that of the agency." Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971). Of particular note in this case, courts give an "extreme degree of deference to [EPA] when it is evaluating scientific data within its technical expertise." City of Waukesha v. EPA, 320 F.3d 228, 247 (D.C. Cir. 2003) (internal quotation marks and citation omitted). Such deference is especially appropriate when EPA acts "under unwieldy and science-

driven statutory schemes like the Clean Air Act." Bluewater Network v. EPA, 372 F.3d 404, 410 (D.C. Cir. 2004) (internal quotation and citation omitted).

Questions of statutory interpretation are governed by the two-step test set forth in Chevron, U.S.A., Inc. v. NRDC, Inc., 467 U.S. 837, 842-45 (1984). If the court determines "the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." Id. at 842-43. If, however, the statute is silent or ambiguous, the court must defer to the agency's reasonable interpretation of the statute. Id. at 844.

ARGUMENT SUMMARY

The Designations Rule represents EPA's coordinated rulemaking under CAA section 107(d)(1), 42 U.S.C. § 7407(d)(1), to designate areas nationwide for the 2006 24-Hour $PM_{2.5}$ NAAQS. The designations are based on EPA's reasonable interpretation of the CAA and thorough and methodical analysis of information regarding each area. The Court should reject Petitioners' challenge to EPA's designation of eastern Box Elder and Tooele within the Salt Lake City nonattainment area.

Petitioners fail to show that EPA's determinations regarding the designations for eastern Box Elder and Tooele are unreasonable or unsupported by the record. Under the APA review standard, Petitioners have a high burden to demonstrate that

EPA was arbitrary or failed to consider relevant facts. Because Petitioners challenge technical and scientific judgments within EPA's expertise, their burden is especially high.

Petitioners' first argument relies on an inappropriate comparison of Box Elder and Tooele with two east coast counties – Hartford, Connecticut and Warren, New Jersey. Petitioners fail to demonstrate how Box Elder and Tooele are similarly situated to Hartford and Warren. Most notably, Box Elder and Tooele are affected by mountainous topography in combination with prolonged wintertime temperature inversions absent from Hartford or Warren. The topography and meteorology define the area subject to high $PM_{2.5}$ concentrations in the Salt Lake City area, including eastern Tooele and Box Elder, and support EPA's determination that these counties contribute to nearby $PM_{2.5}$ violations. EPA applied its nine-factor contribution analysis and other analytical factors consistently and Petitioners' criticisms rely on a selective and inaccurate reading of the record.

Petitioners' second and third arguments simply reflect their disagreements with EPA's technical and scientific judgments regarding meteorological and topographical data. Petitioners' arguments fail because EPA thoroughly analyzed the relevant wind data, topography, and other information relevant to Box Elder's contribution to nearby nonattainment areas and reasonably concluded that eastern

Box Elder is subject to wind flow that would transport emissions of $PM_{2.5}$ and $PM_{2.5}$ precursors to violating monitors to the south-southeast of Box Elder. Further, the data support EPA's judgment that the Promontory Mountains form a topographic airshed barrier and thus are an appropriate western boundary for the portion of Box Elder County that contributes to the nonattainment area. Petitioners' mere disagreement with judgments within EPA's expertise is insufficient to invalidate EPA's reasoned conclusions.

ARGUMENT

I. EPA APPLIED ITS WEIGHT-OF-THE-EVIDENCE APPROACH NATIONWIDE AND PETITIONERS' SELECTIVE COMPARISON OF DISSIMILAR COUNTIES DOES NOT ESTABLISH ANY INCONSISTENCY.

Petitioners' first argument is that EPA's treatment of Box Elder and Tooele Counties is inconsistent with EPA's treatment of Hartford and Warren Counties, because EPA allegedly applied different standards to Box Elder and Tooele. Petitioners take this line of attack from the previous $PM_{2.5}$ designations litigation, Catawba, 571 F.3d at 46. This argument was largely unsuccessful in Catawba, and Petitioners here fare no better.

In Catawba, 571 F.3d at 46, this Court generally upheld EPA designations under the 1997 $PM_{2.5}$ NAAQS, finding that regarding EPA's approach as a whole and all individual counties challenged save one, EPA consistently applied its nine-

factor analysis and adequately explained its decisions based on record evidence. The court remanded EPA's determination with regard to Rockland County, New York, because the court found that EPA treated it differently than other counties in the same metropolitan area. Id. at 51.

The record here shows that EPA faithfully and consistently applied its nine-factor analysis to Box Elder and Tooele Counties and that this case simply does not fit the anomalous circumstances pertaining to Rockland County in Catawba. Unlike Rockland County as compared to other counties in the NY metropolitan area, this case does not involve allegations of inconsistent treatment of counties within the same nonattainment area. Instead, Petitioners inappropriately seek to mix and match dissimilar counties from different metropolitan areas. Box Elder and Tooele are not at all similarly situated to Warren and Hartford Counties: they are not in the same metropolitan area or even in the same geographic region of the country, and the specific factors bearing on the contribution analysis are very different for the mountainous western versus the eastern counties. Moreover, Petitioners fail to show that EPA applied different standards to Box Elder and Tooele than it did to other counties in the Salt Lake City area or Hartford and Warren Counties in the east.

A. EPA Used a Weight-of-the-Evidence Approach that Applied the Same Factors Nationwide and Did Not Rely on Any Bright-Line Tests or Numerical Standards.

Petitioners fundamentally misunderstand and mischaracterize EPA's approach to determining what areas "contribute" to nonattainment in nearby areas under section 107(d)(1). EPA did not interpret "contribute" to require a bright-line test or threshold for any factor or analytical tool, such as the contributing emissions score. 74 Fed. Reg. at 58,693. Nor did EPA interpret "contribute" to mean "cause," because doing so would "require a degree of certainty and precision that is inherently unreasonable for evaluating violations that result from the impact of emissions from many different sources of $PM_{2.5}$ and $PM_{2.5}$ precursors" and would undermine the purpose of designations. Id. at 58,694. Similarly, EPA did not interpret "contribute" to mean "significantly contribute" or otherwise attempt to quantify the level of contribution necessary for "nonattainment." Id. Rather, EPA concluded that an "assessment of the 'causation' and 'materiality' of contribution … is best accomplished through a more careful evaluation of the relevant information on an area-by-area basis." Id.

EPA found a case-by-case approach especially appropriate for $PM_{2.5}$ in light of the multiple precursors, numerous sources, meteorological considerations, and need to distinguish between impacts of local and non-local sources at any given violating monitor. Id. at 58,693. Accordingly, EPA applied a "weight-of-the-

evidence" approach to all areas, considering information related to nine factors and any other relevant information. See, e.g., TSD 4.8.2 at 23, JA451; TSD 4.2.1, Index 587, at 2, JA364; TSD 4.1.1, Index 586, at 1-2, JA328-29. The factors are open-ended, recognizing that the data for each area of the country could vary and not all factors would be equally relevant in each area. 74 Fed. Reg. at 58,695.

This Circuit upheld EPA's interpretation of "contribute" in Catawba, noting that an "agency is free to adopt a totality-of-the-circumstances test to implement a statute that … lacks a definite 'threshold' or 'clear line of demarcation to define an open-ended term.'" 571 F.3d at 38-39 (citation omitted). The court further found that EPA reasonably interpreted "contribute" to mean "sufficiently contribute" as determined by EPA's nine-factor analysis. Id.

EPA expressly adopted the same approach approved in Catawba for the 2006 24-hour $PM_{2.5}$ designations. 74 Fed. Reg. at 58,691 n.4. EPA did not reopen these issues in the Designations Rule at issue here, and thus Petitioners are left with challenging EPA's contribution analysis as applied. Petitioners fail to show that EPA inconsistently applied its approach or any one factor to Box Elder and Tooele as compared to other areas.

B. Box Elder and Tooele Are Not Similar to Hartford and Warren, and EPA's Differing Conclusions Regarding Box Elder and Tooele Are Rational in Light of the Record Evidence.

Petitioners' contention that EPA inconsistently applied its nine-factor analysis to Box Elder and Tooele as compared to Hartford and Warren fails at the outset because Hartford and Warren *are not remotely similar* to Box Elder and Tooele. "It is incumbent on a party complaining of inconsistency in administrative action 'to bring before the reviewing court sufficient particulars of how the [petitioner] was situated.'" South Shore Hosp., Inc. v. Thompson, 308 F.3d 91, 102-03 (1st Cir. 2002) (citation omitted). Petitioners fail to show that Box Elder and Tooele are similarly situated to Hartford and Warren; indeed, they ignore important differences in the record evidence.

Box Elder and Tooele's nonattainment designations are based on their contribution to nonattainment in the basin surrounding the Salt Lake City area. Salt Lake's $PM_{2.5}$ problem is largely attributable to the area's extreme topography and meteorology. The area experiences prolonged winter temperature inversions that prevent emissions from escaping vertically into the atmosphere. TSD 4.8.2 at 40, JA468. Additionally, large mountain ranges surrounding the area prevent emissions from dispersing horizontally. Id. at 40-41, 47-48, JA468-69, 475-76. Thus, during wintertime inversions, which can last up to 21 days, emissions become trapped within the basin defined by the mountains and the Great Salt Lake,

allowing $PM_{2.5}$ concentrations to build. Id. During inversions, emissions from eastern Box Elder and Tooele mix with high $PM_{2.5}$ concentrations in the area and contribute to $PM_{2.5}$ violations. Id. at 41, 48, JA469, JA476.

Hartford and Warren are not subject to the same topographical or meteorological conditions that influence $PM_{2.5}$ in the Salt Lake City area. Hartford is near the New York nonattainment area and Warren is near the New York and Allentown, Pennsylvania nonattainment areas. Both the New York and Allentown metropolitan areas are low-lying areas, with ***no*** topographical barriers relevant to the build-up or transport of $PM_{2.5}$ concentrations. TSD 4.1.1 at 19, JA346, & 4.2.1 at 18, JA380. Neither Hartford nor Warren is located in a metropolitan area with severe and prolonged winter temperature inversions that trap emissions in a closed airshed; rather, these areas have exceedances throughout the year. The nature of the $PM_{2.5}$ problem in the relevant New York and Allentown areas is influenced more by high population and population density, mobile source emissions, and the impact of large power plants and other point sources of $PM_{2.5}$ and $PM_{2.5}$ precursors (primarily sulfates and nitrates).[8] Additionally, areas in the eastern United States

[8] Warren also is distinguishable from Box Elder and Tooele because New Jersey recommended that part of Warren be designated nonattainment not because of Warren's contributions to violations elsewhere, but due to air quality impacts Warren experiences as a result of emissions transported from the west. TSD 4.2.1 at 3-4, JA365-66.

generally experience more cumulative impacts from regional $PM_{2.5}$ pollution, unlike the virtual island of $PM_{2.5}$ pollution in the Salt Lake City area.

Petitioners erroneously "seize upon discrete data points and ignore the very nature of the nine-factor test, which is designed to analyze a wide variety of data on a 'case-by-case basis.'" Catawba, 571 F.3d at 46. "EPA's holistic assessment of numerous factors … drives the process--no single factor determines a particular designation." Id. at 46. EPA concluded that eastern Box Elder and Tooele are contributing areas based on all of the relevant information, including "traffic and commuting, growth, meteorology, topography, and emissions." TSD 4.8.2 at 53, JA481. Viewed in context, under the weight-of-the evidence approach EPA applied, Box Elder and Tooele's nonattainment designations are reasonable, supported by the record, and do not reflect any inconsistencies with how EPA applied the nine factors elsewhere.

1. Geography/Topography

Topography was an important factor in EPA's contribution analysis for the Salt Lake City area (including Box Elder and Tooele). Winter temperature inversions trap emissions in low-lying areas and the "high terrain areas surrounding the air mass and exceeding the mixing height act to essentially define its boundaries." TSD 4.8.2 at 47, JA475. Additionally, EPA found that the Promontory Mountains and North Promontory Mountains act as a western airshed

barrier for eastern Box Elder, as do the Stansbury Mountains for eastern Tooele. Id. at 47-49, JA475-77.

Not only does the topography create barriers to movement of air and emissions, it also determines where the population is located. Id. at 48, JA476. These populations generate emissions that contribute to area-wide $PM_{2.5}$ concentrations. Id. EPA concluded that the more populated eastern portions of Box Elder and Tooele are within the airshed defined by the mountainous terrain and that there are no topographical barriers between eastern Box Elder and the rest of the Salt Lake City airshed that would prevent those emissions from transporting to violating areas. Id. EPA found that although the Oquirrh Mountains form a partial separation on the eastern side of Tooele, emissions from eastern Tooele are able to travel unimpeded over the Great Salt Lake and are carried eastward by light winds over the Lake, contributing to high $PM_{2.5}$ concentrations along the Wasatch Front. Id. Thus, the topography, along with EPA's analysis of meteorology and other factors, supports the conclusion that eastern Box Elder and Tooele emissions contribute to nonattainment in nearby areas violating the NAAQS.

Against this backdrop, Petitioners' assertion that topography is "neutral and should not play a significant role in deciding whether Box Elder or Tooele Counties contribute to violations in counties along the Wasatch Front" is absurd. See Pets. Br. 47. EPA did not conclude that eastern Box Elder and Tooele

contribute to nonattainment in the Salt Lake City area merely because they are in the same airshed as violating monitors. See id. EPA concluded that emissions from eastern Box Elder and Tooele contribute to violations in nearby counties based on, among other reasons, the unique characteristics of that airshed: namely, that the topography and meteorology trap $PM_{2.5}$ emissions within the airshed, preventing vertical or horizontal dispersion.[9]

For these same reasons, Petitioners' comparison of Box Elder and Tooele's topography to Hartford and Warren's topography is illogical. Hartford and Warren have no "geographical or topographical barriers significantly limiting air pollution transport within [their respective] airshed[s]." TSD 4.1.1 at 19, JA346, and 4.2.1 at 18, JA380. In contrast, the eastern portions of Box Elder and Tooele are located within an airshed that is surrounded by mountain ranges that trap emissions within the airshed. In the context of a closed airshed subject to prolonged winter temperature inversions, the fact that there are no topographical barriers limiting transport of emissions from Box Elder and Tooele to nearby violating areas leads to a different conclusion than the lack of topographical barriers in Hartford and

[9] Contrary to Petitioners' assertion (Pets. Br. 47), EPA also considered whether Box Elder and Tooele emissions are being transported to violating monitors along the Wasatch Front. As discussed in the next section, EPA concluded that the wind and weather patterns allow ample opportunity for Box Elder and Tooele emissions to contribute to violations in nearby areas.

Warren. On this basis alone, the Court should reject any arguments comparing Box Elder and Tooele to Hartford and Warren.

2. Meteorology (Weather/Transport Patterns)

EPA's analysis of meteorology, including wind data, was another important factor related to eastern Box Elder and Tooele's contribution to violations in nearby counties along the Wasatch Front. EPA found that the highest concentrations of $PM_{2.5}$ were with light winds from the NW and SE directions with wind speeds of four miles per hour or less. TSD 4.8.2 at 39, JA467. EPA concluded that emissions oscillate along the entire Wasatch Front region and are influenced by the diurnal wind pattern, see supra n.4, to and from the Great Salt Lake and extended periods of light-to-stagnant wind conditions. Id. Thus, EPA concluded that the wind data related to violating monitors in Weber, Davis, and Salt Lake showed that a component of the high $PM_{2.5}$ values in the Salt Lake City area originates from emissions in eastern Box Elder and Tooele. TSD 4.8.2 at 39, JA467; see also id. at 41, JA469.

Petitioners' reliance on the Box Elder (Brigham City) pollution rose (Pets. Br. 43) is misplaced because it does not tell the whole story. The Box Elder rose shows that on five days when the Brigham City monitor measured exceedances of

the NAAQS, the wind at Hill Air Force Base near Ogden[10] was from the southeast. Id. at 82 (top), 83 (bottom), JA510-11. However, the Box Elder rose does not show where the wind was coming from on days when there were exceedances at other monitors in nearby areas, i.e., at the monitors in nearby areas that were violating the NAAQS and were thus more relevant to the analysis of Box Elder's potential contribution to those violations. The Salt Lake and Davis pollution roses, for example, show a prevailing NW and SE wind pattern on 24 days with exceedances in Salt Lake City, supporting EPA's conclusion that for some of the high pollution days a northwesterly wind transports Box Elder's $PM_{2.5}$ emissions to nearby violating areas. Id. at 39, 83 (bottom) – 86, JA467, JA511-14. As discussed in detail below, EPA's extensive analysis of wind data revealed that this oscillating northwesterly-southeasterly pattern was a consistent wind flow pattern within the air basin, allowing emissions from Box Elder to contribute to violations in nearby areas to the south and southeast. See infra 57-60.

Petitioners' criticisms of EPA's analysis for Tooele are also flawed. EPA explained that no physical barriers, including the Oquirrh Mountains, impede the flow of emissions from eastern Tooele out over the Great Salt Lake, where they are transported eastward with a NW wind to violating monitors along the Wasatch

[10] The Box Elder pollution rose uses air quality monitoring data from a monitor located in Box Elder and wind data from Hill Air Force Base, located approximately 30 miles to the south, near Ogden. Id. at 40, JA468.

Front. Id. at 41, JA469. EPA's conclusion is further supported by evaluation of wind data from Tooele City gathered by the Utah DAQ. See Roberts Sept. 9, 2009 Mem. at 6, JA988; see infra 59-60. As indicated in the following diagram, the wind data demonstrate that with the terrain-induced downslope flow, emissions from Tooele, Box Elder, Salt Lake County, Davis County, and Weber County all, at times, move out over the lake.

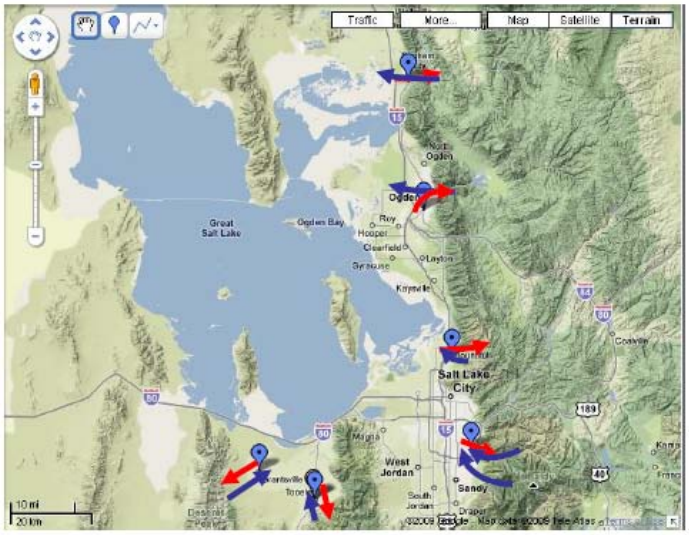

Figure provided by Utah DAQ

Red – Daytime Upslope Flow
Blue – Nighttime Downslope Flow

Id.

The potential for unimpeded dispersion to the west does not have the effect of removing these contributions from the violating monitors, as Petitioners speculate (Pets. Br. 50), or none of the monitors would exceed the standard. Indeed, the wind data show that with the upslope flow, air and emissions that have pooled and mixed over the Lake then move back toward the areas with violating

monitors. Because the inversions can last up to 21 days, even light winds can transport emissions from Box Elder and Tooele to violating monitors, which contribute to the build-up of ambient $PM_{2.5}$ that results in NAAQS violations in other nearby counties. See infra 65.[11] Thus, Petitioners' argument that EPA ignored possible dispersion of pollution to the west is spurious.

Petitioners also fail to show that EPA acted inconsistently when compared to Hartford and Warren. Regarding the Salt Lake City area, EPA found prevailing winds oscillated NW and SE in a diurnal pattern, causing emissions to oscillate along the entire region. EPA found no similar oscillating wind pattern in Hartford or Warren. To the contrary, on high $PM_{2.5}$ days in the New York City area, the prevailing wind was from the south-southwest, not from the direction of Hartford. TSD 4.1.1 at 18-19, JA345-46. Similarly, on high $PM_{2.5}$ days in Allentown, the prevailing wind was from the south-southwest and not from the direction of Warren. TSD 4.2.1 at 17-18, JA379-80.

Therefore, Petitioners' argument that EPA used an "any influence" standard to determine contribution from Box Elder and Tooele and required more than that

[11] Petitioners' attempt to discredit EPA's wind analysis based on Utah's criticisms of the back trajectory model is unavailing. Pets. Br. 49-50 n.11. While EPA recognized the model may not be useful for *some* applications, EPA concluded it was accurate enough to demonstrate gross air movement and therefore helpful in the contribution analysis. State Comment Doc. at 188, JA754. Further, EPA validated the model results using actual wind data gathered from Utah's monitoring network. Id.; see infra 56-57.

in Hartford and Warren (Pets. Br. 46) lacks merit. EPA's determination that emissions from Box Elder and Tooele contribute to violating counties was based on evidence of the prevailing wind flow in combination with the other factors and not simply "any influence."

3. Emissions Data

Nationwide, EPA's analyses relied on the same $PM_{2.5}$ and precursor emissions database, which was an annual emission inventory derived from the 2005 National Emission Inventory (NEI). The emissions data from the NEI support EPA's conclusion that eastern Box Elder and Tooele are contributing areas. Considering all of the emissions data for the relevant metropolitan area reveals that Box Elder and Tooele each have total emissions of over 15,000 tpy, which is similar to that of Weber (designated nonattainment), and two to three times higher than Summit, Morgan, and Wasatch (designated attainment). TSD 4.8.2 at 32 (Table A.3-2), JA460; supra 17. Additionally, EPA's evaluation of both annual and seasonal emissions concluded that "Box Elder and Tooele have significant amounts of the important precursor emissions to $PM_{2.5}$." Sept. 9, 2009 Mem. at 1-3, JA983-85.

The analyses of emissions data for Hartford and Warren as compared to Box Elder and Tooele show no inconsistency. Warren has low emissions relative to other counties in the Allentown metropolitan area, particularly for NO_x, SO_2, and

direct $PM_{2.5}$, which EPA identified as contributing to the $PM_{2.5}$ violations in that area. TSD 4.2.1 at 5, 7, JA367, JA369. Warren also has a CES of 12, which ranks low when compared to other counties in the same metropolitan area and is consistent with the low emissions data. Id. at 6, JA368. Further, as noted, the prevailing wind on high $PM_{2.5}$ days in the Allentown metropolitan area was in the opposite direction of Warren. Id. at 17-18, JA379-80.

EPA's contribution analysis for Hartford was influenced less by emissions data and more by Hartford's CES as compared to other counties in the same metropolitan area combined with other factors. Hartford's CES (12) was the third lowest in an area with numerous other counties, "indicat[ing] a low potential for [Hartford] to contribute significantly to $PM_{2.5}$ levels at violating monitors" compared to the contributions from those other numerous counties. TSD 4.1.1 at 5, JA332. However, EPA's statement does not indicate that EPA adopted a "significant contribution" standard for Hartford or any other area. See supra Part II.A. [12] EPA used the phrase here to describe data relative to one factor in one area. EPA did not intend the CES scores to be outcome determinative, nor did

[12] In fact, EPA distinguished the section 107(d)(1) contribution standard from the "contribute significantly" standard used in connection with 42 U.S.C. §§ 7410(a)(2)(D) and 7426, relating to regional interstate pollutant transport. See 74 Fed. Reg. 58,691-92.

EPA treat them that way in Hartford or elsewhere. 74 Fed. Reg. 58,695.[13] Other factors influenced EPA's conclusion that Hartford does not contribute to nearby areas. Violations in the New York area are influenced by a prevailing wind from the southwest, not from the direction of Hartford. TSD 4.1.1 at 18, JA345. Hartford is subject to the same prevailing wind from the southwest, indicating that Hartford's design value is influenced more by upwind sources and that its emissions do not contribute to nonattainment in upwind or downwind counties. Id.

Nor does EPA's comment response that "any [CES] score greater than zero would *indicate* contribution" mean that EPA applied different standards to the Salt Lake City area. Pets. Br. 29 (citing Public Comment Doc. at 163) (emphasis added). Petitioners' arguments to the contrary mischaracterize EPA's statement and take it out of context. The CES is just one indicator of a particular area's potential contribution. Whether Box Elder or any other county sufficiently contributes to nonattainment to be included within the nonattainment area depends on EPA's analysis of all nine factors used as contribution indicators and not just the CES score. As EPA explained in the comment response from which

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[13] Petitioners mischaracterize EPA, arguing that EPA used the CES to reflect the "relative maximum influence that emissions in that county have on a violating county." Pet. Br. 28. Read in context, the quoted statement clarifies how EPA ranked counties with multiple CES calculated for multiple violating monitors and does not imply that EPA used the CES as a bright-line test for contribution. TSD Appx. H at 42, JA560.

Petitioners selectively quote: "The CES [] 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 violations and provides information along with data and analyses from the nine factors." Public Comment Doc. at 163, JA935.

EPA ultimately did not place much weight on CES in the Salt Lake City area due to limitations the CES has in the western United States. Specifically, the CES can be inaccurate in large counties with both densely populated areas and large rural areas, like Box Elder and Tooele. TSD Appx. H at 9, JA527. The CES also cannot adequately account for the effects of mountainous terrain that might split a county in two, like the Promontory Mountains in Box Elder. Id. at 9-10, JA527-28.

Petitioners concede CES only "provide a *relative ranking of counties in and near an area*." Pets. Br. 27 (emphasis added). A variation of the "weighted emissions score" at issue in Catawba, 571 F.3d at 47, the CES model calculates the scores for all the counties analyzed, and then normalizes them by the factor necessary to have the highest contributing county's CES be 100; the normalization therefore varies, in part, with the number of counties analyzed for a given area. The normalized CES, in essence, shows the normalized ratio of the county's

contribution compared to the contribution from the highest emission county in the area.

In a metropolitan area with many urbanized counties with similar emissions, like the metropolitan areas relative to Hartford and Warren, all counties will have higher CES than most counties in an area where a single county (Salt Lake County, for example) has much higher emissions and contribution than any surrounding counties. In the Salt Lake City area, the fact that emissions and contributions from Salt Lake County are much higher than emissions from other counties in the area makes the scores in the surrounding counties lower than would be seen in an area like New York, where the disparity in emissions between counties might not be so great. Thus, the CES is only meaningful for "within area" comparisons and "does not provide a reliable means for comparison between counties in different areas." 74 Fed. Reg. 58,695 n.16; cf. Catawba, 571 F.3d at 47 (weighted emissions scores cannot be used to compare emissions levels between counties in different metropolitan areas). In short, that Hartford's numerical CES (14) is higher than Tooele's (2) and Box Elder's (7) says nothing about each area's respective contribution, because Hartford is in a different metropolitan area with different circumstances than the Salt Lake City area.[14]

[14] Petitioners mistakenly argue that EPA changed the CES inputs for Salt Lake City without providing notice. Pets. Br. 28. EPA explained in a footnote that Box

4. Air Quality Data

The air quality data support EPA's conclusion that eastern Box Elder and Tooele contribute to violations in nearby areas, even though Box Elder and Tooele did not violate the 24-hour $PM_{2.5}$ NAAQS. Both counties had design values close to the 35 µg/m³ standard. TSD 4.8.2 at 33 (Table A.3-3), JA461 (Box Elder: 35, 29; Tooele: 31). Additionally, Box Elder had many daily exceedances of the 24-hour $PM_{2.5}$ NAAQS, and, historically, for 2000-2002, 2001-2003, and 2002-2004, Box Elder had design values that would have violated the standard. TSD 4.8.2 at 53, JA481; $PM_{2.5}$ Design Values 1999-2001 to 2006-2008, at 20, 35, 110, 185, 247, 331, 412, 497, 581, JA995-1003. Further, data for 2008 showed Box Elder's design value moving upward toward a violation. $PM_{2.5}$ Design Values 1999-2001 to 2006-2008, at 20, 35, JA995-96. These data show that Box Elder and Tooele are subject to poor air quality and, with other factors, support EPA's conclusion that Box Elder and Tooele contribute to high $PM_{2.5}$ concentrations area-wide. TSD 4.8.2 at 53, JA481.

Elder and Tooele's revised CES "represent data from the eastern areas" of these counties and provided the longitude coordinate used to divide the counties for purposes of recalculating the CES. TSD 4.8.2 at 32, JA527. This same footnote appeared in the proposed changes to the Utah recommendation provided for public comment, so the fact that EPA calculated two CES first based on the full counties and then for the eastern portion of the counties was part of the public comment package. 73 Fed. Reg. 51,259. Moreover, EPA was not required to undertake notice-and-comment on the rule or such refinements in its analysis. 42 U.S.C. § 7407(d)(2)(B); Catawba, 571 F.3d at 32.

That Warren and Hartford's design values (34 and 32 respectively) are higher than Box Elder and Tooele's (29 and 31 respectively) by itself proves nothing about Box Elder and Tooele's contribution to violations in nearby counties in the Salt Lake City area. Rather, Hartford and Warren's design values illustrate that EPA did not apply any bright-line tests or consider any factor in isolation. Other New York counties with design values similar to Box Elder and Tooele (e.g., Orange (29) and Suffolk (30)) were designated nonattainment. TSD 4.1.1 at 6 (Table 2), JA333. EPA concluded that Warren and Hartford did not contribute to nearby violations, notwithstanding their design values, because, among other reasons, wind data showed that these areas were downwind from the violating monitors most of the time, which was not the case in Box Elder and Tooele where prolonged wintertime inversions, oscillating wind patterns and a closed airshed cause emissions to slosh back-and-forth within the airshed.

5. Population and Urbanization

EPA reasonably concluded that eastern Box Elder and Tooele had "relatively high population densities" based on the available data. TSD 4.8.2 at 34, JA462. Western Box Elder and Tooele are largely unpopulated, and thus the county-wide population density does not reflect the concentration and location of emissions sources, which is relevant to the contribution analysis. See id. at 34,

JA462.[15] Box Elder's "county-wide emissions, concentrated in the eastern 1/3 of the county … justify a partial county designation of nonattainment." Public Comment Doc. at 165, JA937. EPA's interpretation of the density data, given that only part of these very large counties actually contributes emissions, was not arbitrary or unreasonable. To the contrary, it would have been unreasonable for EPA to exclude an area, such as eastern Box Elder, that contributes emissions to violations in nearby counties simply because other parts of the same county are largely unpopulated and lack emissions sources. Cf. Catawba, 571 F.3d at 42 (upholding EPA's decision to designate partial counties).

Petitioners' comparison of Box Elder and Tooele to Hartford and Warren merely shows that Hartford and Warren are more densely populated throughout than Box Elder and Tooele. This is not surprising given that Box Elder (6,729 sq. mi.) and Tooele (7,287 sq. mi.) are many times larger than any eastern county and even some states (e.g., Connecticut (5,543 sq. mi.)). Moreover, the New York metropolitan area is much more densely populated than the Salt Lake City area. Compare TSD 4.1.1 at 9-10 (Table 3), JA336-37, with id. 4.8.2 at 34 (Table A.3-4), JA462. Nonetheless, Salt Lake City's design values (49, 55) are much higher

[15] "For example, approximately 51% of Box Elder County's population is located in two cities: Brigham City (17,411) and Tremonton (5,592). Similarly, approximately 43% of Tooele County's population lives in Tooele City (22,502)." These cities are located in the eastern portions of Box Elder and Tooele counties. Id., JA462.

than New York's (39). TSD 4.8.2 at 33 (Table A.3-3), JA461; id. 4.1.1 at 6 (Table 2), JA333. Thus, population density is relative and there is no threshold population or population density that conclusively demonstrates contribution.

6. Traffic and Commuting Patterns

The traffic and commuting data, when viewed in combination with other factors, supports EPA's finding that eastern Box Elder and Tooele contribute to nonattainment in nearby counties. Petitioners do not dispute that Box Elder and Tooele have high percentages of commuters. TSD 4.8.2 at 36-37, JA464-65. EPA considered the commuting data in combination with data from factor 5, showing "significant predicted growth in both population and *VMT* for Box Elder and Tooele." State Comment Doc., Index 670, at 190, JA756. EPA noted that commuting vehicle miles traveled (VMT) contributes to violations in nearby counties because the overall VMT and associated emissions contribute to concentrations of $PM_{2.5}$ and precursors in the airshed. Id. In other words, the data reflected more than just contribution from commuters into the violating areas; the commuting and VMT data was indicative of additional emissions in Box Elder and Tooele that could be transported to violating nearby areas. See id.

Petitioners argue that Box Elder and Tooele have higher percentages of commuters than Warren (designated attainment), but lower percentages than Hartford (also designated attainment). Pets. Br. 34. This demonstrates that a

comparison of counties in different metropolitan areas, divorced from other relevant factors, is meaningless. Nor does EPA's reliance on percentages as compared to whole numbers reflect any inconsistency.[16] EPA interpreted the relevant data based on the facts, which is exactly what is contemplated by its weight-of-the evidence, nine-factor approach.

7. Population Growth and VMT

EPA reasonably concluded that population growth and VMT growth are additional factors indicating contribution from eastern Box Elder and Tooele. The data predicted that Box Elder and Tooele would have large percentage changes in population (22.3% and 61.4% from 2010 to 2015), with accompanying sizeable increases in VMT. TSD 4.8.2 at 37-38, JA465-66. Petitioners concede that rapid population and VMT growth indicate an area is integrally connected to an urban area and is likely to contribute $PM_{2.5}$ concentrations in the area. Pets. Br. 37; TSD 4.8.2 at 37, JA465. Petitioners provide no support for their opinion that the population growth projections, which were provided by Utah, were "speculative." Pets. Br. 38.

[16] Petitioners' hypothetical comparison of a county with 1 commuter versus a county with 25,000 commuters (Pets. Br. 36) is irrelevant because it is inconsistent with the facts in this case and assumes that EPA only considered commuters who travelled outside of Box Elder and Tooele.

Moreover, EPA's consideration of population and VMT growth projections for 2010 and 2015 for Box Elder and Tooele, but not for Hartford and Warren, does not show EPA was arbitrary or inconsistent. In both cases, EPA used the best data available, including data provided by the relevant states. The nine factors are intentionally open-ended so that EPA may consider all relevant data for an area.

8. Jurisdictional Boundaries

This factor considers information such as preexisting $PM_{2.5}$ nonattainment area boundaries and the extent to which such boundaries and organizations "may facilitate air quality planning and the implementation of control measures to attain the standard." TSD 4.8.2 at 52, JA480. EPA concluded that although the Salt Lake City area had no previous $PM_{2.5}$ nonattainment designations, planning and control measures can be implemented in a cohesive manner by the Utah DAQ and Utah Air Quality Board, which have *state-wide* planning and SIP development authority. Id. Petitioners fail to show how this factor does not support EPA's determination.

* * *

As demonstrated above, Petitioners fail to show EPA acted inconsistently or arbitrarily in designating eastern Box Elder and Tooele as part of the Salt Lake City nonattainment area. "In basing its designation decisions on a rigorous analysis of each county's particular attributes, EPA satisfied the requirements of

reasoned decisionmaking." Catawba, 571 F.3d at 41. Accordingly, the designations should be upheld.

II. THE RECORD SUPPORTS EPA'S DECISION TO INCLUDE EASTERN BOX ELDER WITHIN THE SALT LAKE CITY NONATTAINMENT AREA.

Petitioners' second and third arguments challenge EPA's conclusions regarding wind data, topography, and appropriate nonattainment area boundaries for Box Elder. Petitioners attack EPA's scientific and technical judgments and thus have a particularly high burden to prevail. See City of Waukesha, 320 F.3d at 247 (agency entitled to "extreme degree of deference" when evaluating technical and scientific matters within its expertise). As explained below, Petitioners fail to demonstrate that EPA was arbitrary or that EPA failed to consider important information. Petitioners simply disagree with EPA's conclusions. Under the applicable deferential review standard, the Court must defer to EPA's conclusions if they are reasonable and supported by the record, even if Petitioners or the Court would arrive at a different conclusion. NRDC, Inc. v. EPA, 902 F.2d 962, 971 (D.C. Cir. 1990), vacated in part, 921 F.2d 326 (D.C. Cir. 1991) ("It is simply not the court's role to 'second-guess the scientific judgments of the EPA.'") (citation omitted).

A. EPA Correctly Analyzed Wind Data and Other Factors to Conclude that Eastern Box Elder "Contributes" to Nonattainment in Nearby Areas.

Petitioners erroneously contend that EPA ignored data suggesting that wind direction in Box Elder is from the southeast and thus could not transport Box Elder's emissions to violating monitors in nearby counties to the south-southeast. Pets. Br. 55-64. As explained below and in the record, Petitioners rely on the wrong pollution roses. EPA's conclusion that emissions from Box Elder contribute to violations in nearby areas is supported by the wind data and other information EPA relied upon.

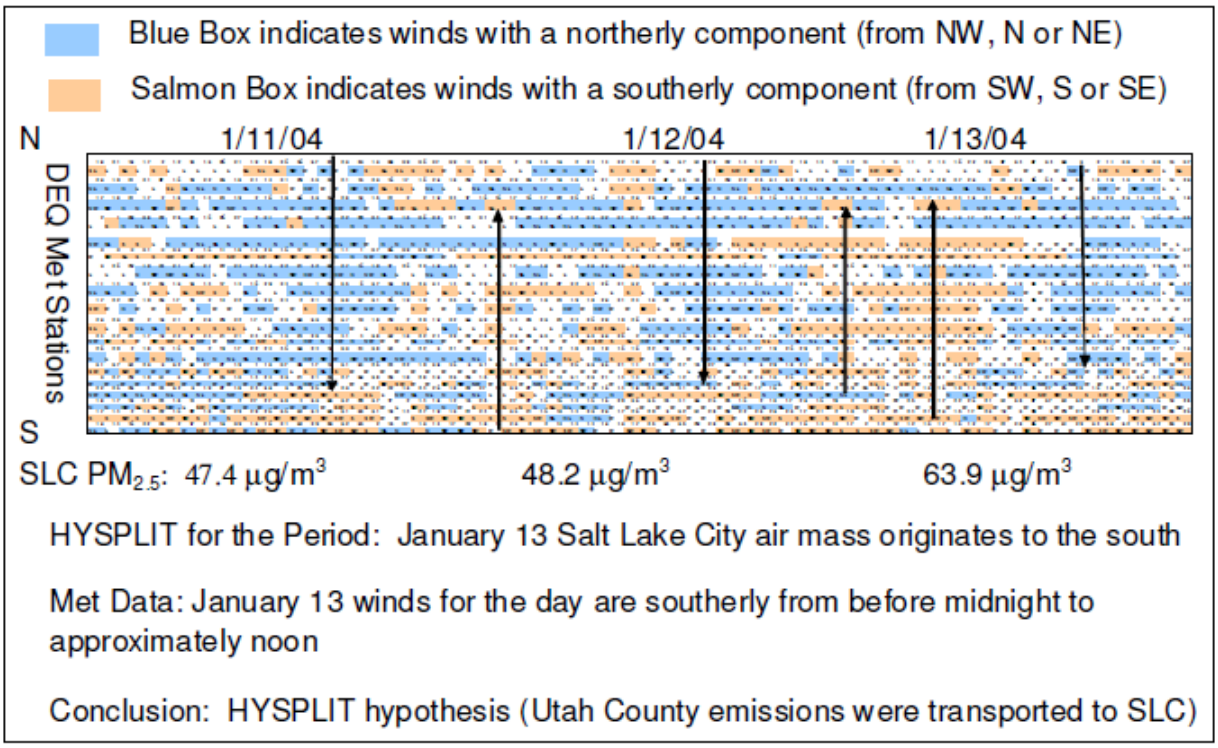
As an initial matter, Petitioners do not dispute that Box Elder generates over 15,000 tpy of $PM_{2.5}$ and $PM_{2.5}$ precursor emissions. TSD 4.8.2 at 32, JA460; see Pets. Br. 55. Based on four different analyses of wind data, EPA determined that Box Elder's emissions contribute to violations in nearby areas.

First, EPA considered National Weather Service data depicted on pollution roses that showed the direction and speed of wind on "high $PM_{2.5}$ days." TSD 4.8.2 at 39, JA467. The relevant pollution roses for the Salt Lake City area showed that "the highest concentrations were with light winds from the NW and SE directions, and … showed the highest monitored values with light wind speeds typically four miles per hour or less." Id. EPA further concluded that "the monitors located in Weber, Davis, and Salt Lake Counties appear to show that

some component of measured elevated $PM_{2.5}$ values may originate from the NW and SE." Id. Thus, EPA had ample support for its conclusion that some portion of $PM_{2.5}$ contributing to violations at these monitors originates from eastern Box Elder. Id.

Second, EPA considered back trajectories calculated for selected violating $PM_{2.5}$ monitors in the Salt Lake City area for exceedance days between 2004 and 2006 using the HYSPLIT model. See supra 15. The back trajectories revealed that "[a]ll of the model runs … show some degree of transport from one or more of the surrounding areas (Box Elder County, Tooele County, or Utah County) into the Salt Lake City and Ogden areas during exceedance events." TSD 4.8.2 at 41-48 & Fig. A.3-8, JA469-76. Thus, the initial back trajectory modeling confirmed what the pollution roses indicated with respect to contribution.

Third, in response to Utah's criticism that the HYSPLIT model failed to show the effects of local topography on wind patterns, EPA analyzed surface meteorological data collected by Utah DAQ at 21 monitoring stations. State Comment Doc. at 13-24, JA579-90. EPA plotted hourly wind speed and direction from these monitors during the periods used in the HYSPLIT trajectory analyses and then color coded hourly average wind directions. Id. In the resulting diagram, shown below, blue indicates northerly winds, salmon represents southerly winds, and east-west winds are unshaded. Id.

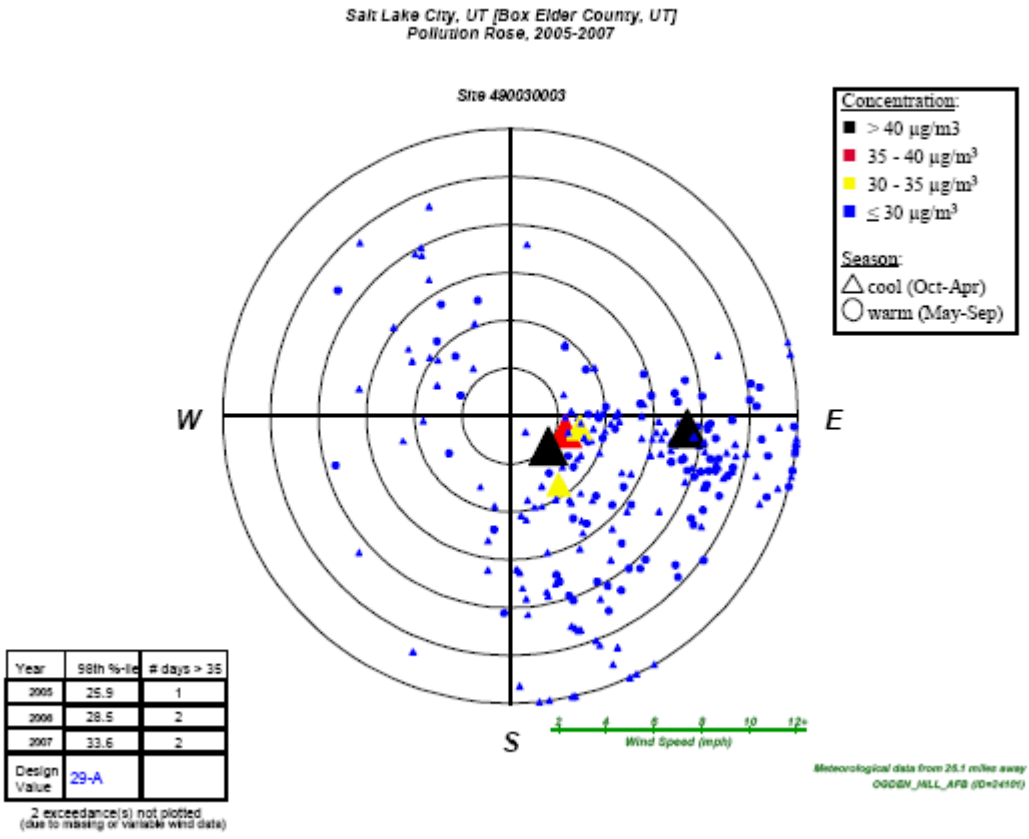


For many of the monitors, the unshaded winds from due east or due west indicate strong influence of local topography. EPA concluded that "[r]ather than showing only winds controlled by local topography during cold pool inversion periods, the resulting diagrams show basin scale uniformity in wind direction for much of the basin over much of the inversion period." Id. at 14, JA580. Further, EPA found that "for specific monitoring days targeted by the HYSPLIT back trajectories, the diagrams show wind directions over the basin consistent with the trajectories generated by HYSPLIT." Id. In short, Utah's wind data validated the back trajectories, which showed contribution from Box Elder to nearby areas to the south-southeast.

Fourth, EPA evaluated a conceptual model, provided by Utah, showing the terrain-induced diurnal flow of wind downward toward the Great Salt Lake at night and upward toward the mountain slopes during the day. Sept. 9, 2009 Mem. at 5-6, JA987-88. This conceptual model is reproduced supra at 35. As air moves from high elevations to low, it passes over emissions sources in Tooele City and Brigham City, in eastern Box Elder, down to the low point, the Lake and surrounding low-lying areas. Id. at 6, JA988. During prolonged inversion episodes, pollution gained from winds flowing from the mountains down toward the valley stay and mix with other emissions, until they are forced back up to higher elevations. Id. Thus, the model confirmed that emissions from eastern Box Elder and Tooele counties move over the Lake with downslope terrain-induced flow and then, because there are no topographical barriers within the air basin, move to violating monitors with upslope flow. Id.

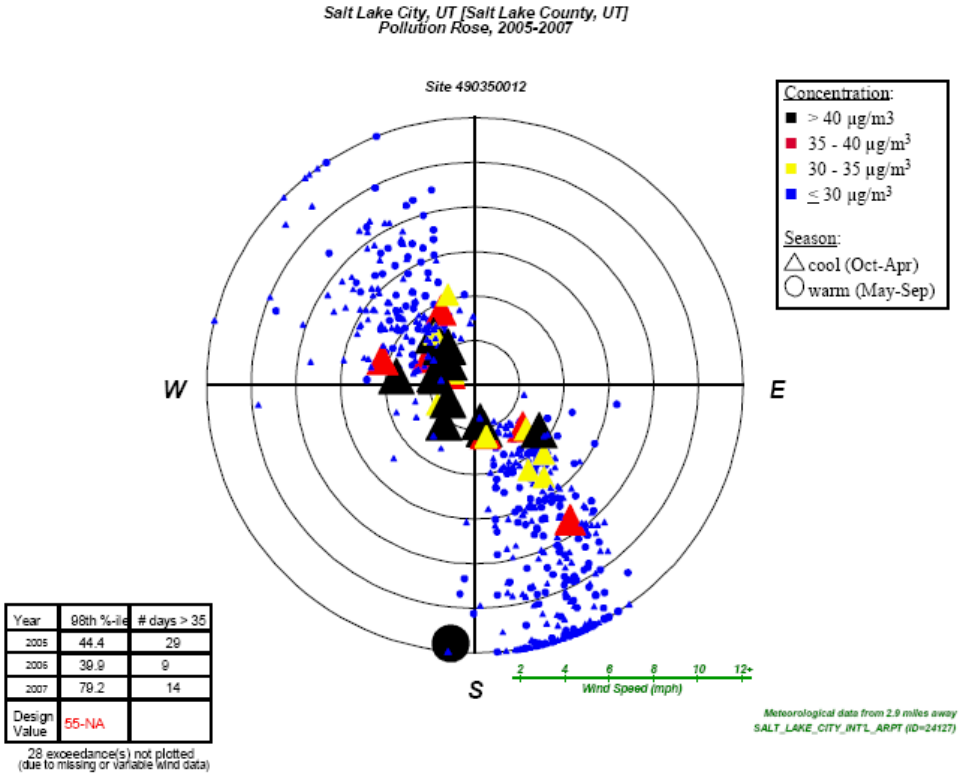
Petitioners' argument that EPA ignored data from a non-representative pollution rose fails to overcome EPA's well-reasoned and thorough analysis of all of the relevant wind data, described above. Petitioners' reliance on the Box Elder pollution rose is misplaced because it is in the wrong location to show where the wind was coming from on days when violating monitors in other nearby counties exceeded the standard. The Box Elder rose, pictured below, combines emissions data from the Brigham City monitor and wind data from Hill Air Force Base, near

Ogden, to present a visual representation of wind direction on days when the Brigham City monitor exceeded the 24-hour $PM_{2.5}$ NAAQS.



TSD 4.8.2 at 82 (bottom), JA510; see also id. 3.1.6 at 3-7—3-10, JA321-25 (explaining pollution roses). It generally shows that at Hill Air Force Base there was a predominant wind from the southeast on days when the Brigham City monitor exceeded the 24-hour $PM_{2.5}$ NAAQS. It says nothing about the wind direction in Box Elder County on days when violations occurred in other nearby counties.

By contrast, the Salt Lake City pollution rose, shown below, uses wind data from the Salt Lake City International Airport to depict wind direction on days when the Salt Lake City monitor exceeded the standard.



Id. at 84 (bottom), JA512. The Salt Lake City rose is thus more relevant to evaluating contribution to violating monitors in other counties in the Salt Lake City area than the Box Elder rose. The above Salt Lake City rose shows a prevailing NW-SE wind pattern, which means that for some of the time when there are violations at this monitor in nearby Salt Lake City the wind is blowing from the direction of Box Elder to areas to the south.

Not only is the Box Elder rose representative of the wrong location to evaluate winds on days where monitors in other locations are violating the standard, it also relies on a limited data set. It depicts wind data from only five days when the Brigham City monitor exceeded the 24-Hour $PM_{2.5}$ NAAQS, while the Salt Lake City rose shows wind direction for 24 out of 52 days with exceedances in Salt Lake during this same period. It is the 52 days when the Salt Lake City monitor exceeded the standard that matter in the contribution analysis, not the five days that the Brigham City monitor showed exceedances.

Further, because the Box Elder monitor only operates one in three days, while the Salt Lake City monitor operates every day, the Box Elder monitor and pollution rose lacks data for two out of every three days. Based on the pollution roses showing the greatest number and highest exceedances (e.g., the Salt Lake roses), in combination with the back trajectories and Utah DAQ wind data, EPA reasonably concluded that for some of the time monitors in Salt Lake City and surrounding counties were influenced by a northwesterly wind, that could transport Box Elder emissions to violating monitors. TSD 4.8.2 at 39 & 84-87, JA467, JA512-15.

EPA did not ignore the Box Elder pollution rose, as Petitioners argue. Indeed, EPA revised the Box Elder rose in response to the State and ATK's comments regarding the appropriateness of using wind data from the Salt Lake

City International Airport and Pocatello, Idaho as representative of Box Elder. State Comment Doc. at 189, JA755. EPA agreed that "local pollution roses would be more representative of local conditions," id., and thus revised the Box Elder rose to incorporate wind data from Hill Air Force Base, a closer location than Idaho. Nonetheless, EPA explained that the wind data from the Salt Lake City International Airport was "likely to be representative of much of the southern Great Salt Lake area, and of overall [wind] flow within the greater basin." Id. As consistently demonstrated by all of the wind data EPA considered, as discussed above, this overall wind flow is a "widely distributed simultaneous northerly or southerly motion," id., which supports EPA's conclusion that emissions from Box Elder could contribute to violating monitors to the south.

In sum, EPA's conclusions are supported by the record and should be upheld. Petitioners' mere disagreement with EPA's technical judgments does not overcome their high burden under the APA review standard.

B. EPA Reasonably Concluded that the Salt Lake City Nonattainment Area Boundary Should Extend to the Promontory Mountains.

Petitioners' third argument is that even if EPA correctly designated eastern Box Elder as nonattainment, EPA should have excluded the area where Petitioner ATK's facility is located. (Pets. Br. 65). EPA's decision to draw the boundary along the Promontory and North Promontory Mountains (collectively "Promontory

Mountains") is reasonable and supported by the record. As explained below, the population centers and emissions-generating sources, including ATK, are located east of the Promontory Mountains, and the meteorology and overall wind patterns within the closed airshed transport emissions from these sources to nearby violating monitors to the south. Petitioners' view that EPA should have drawn the boundary someplace else fails to show that EPA was arbitrary.

In most cases, EPA used county boundaries for nonattainment area boundaries. 74 Fed. Reg. at 58,695. However, where EPA determined that only part of a county (e.g., the part of the county that contained the sources of contributing emissions) was contributing to nearby violations, EPA reasonably designated only the area that it determined actually contributes to nonattainment. Id.; see Catawba, 571 F.3d at 42 (upholding partial county designations). To determine appropriate partial county boundaries, EPA looked to recognized governmental boundaries for smaller geographic areas encompassing the emission sources (e.g., townships), as well as topographic features (e.g., mountain ranges). 74 Fed. Reg. at 58,696. EPA identified the boundaries for the Salt Lake City area based on whole and partial counties as defined by townships and range that coincided with natural topographic barriers. TSD 4.8.2 at 26-28, JA454-56.

As discussed, EPA reasonably concluded that information relating to traffic and commuting, growth, meteorology, topography, and emissions demonstrates

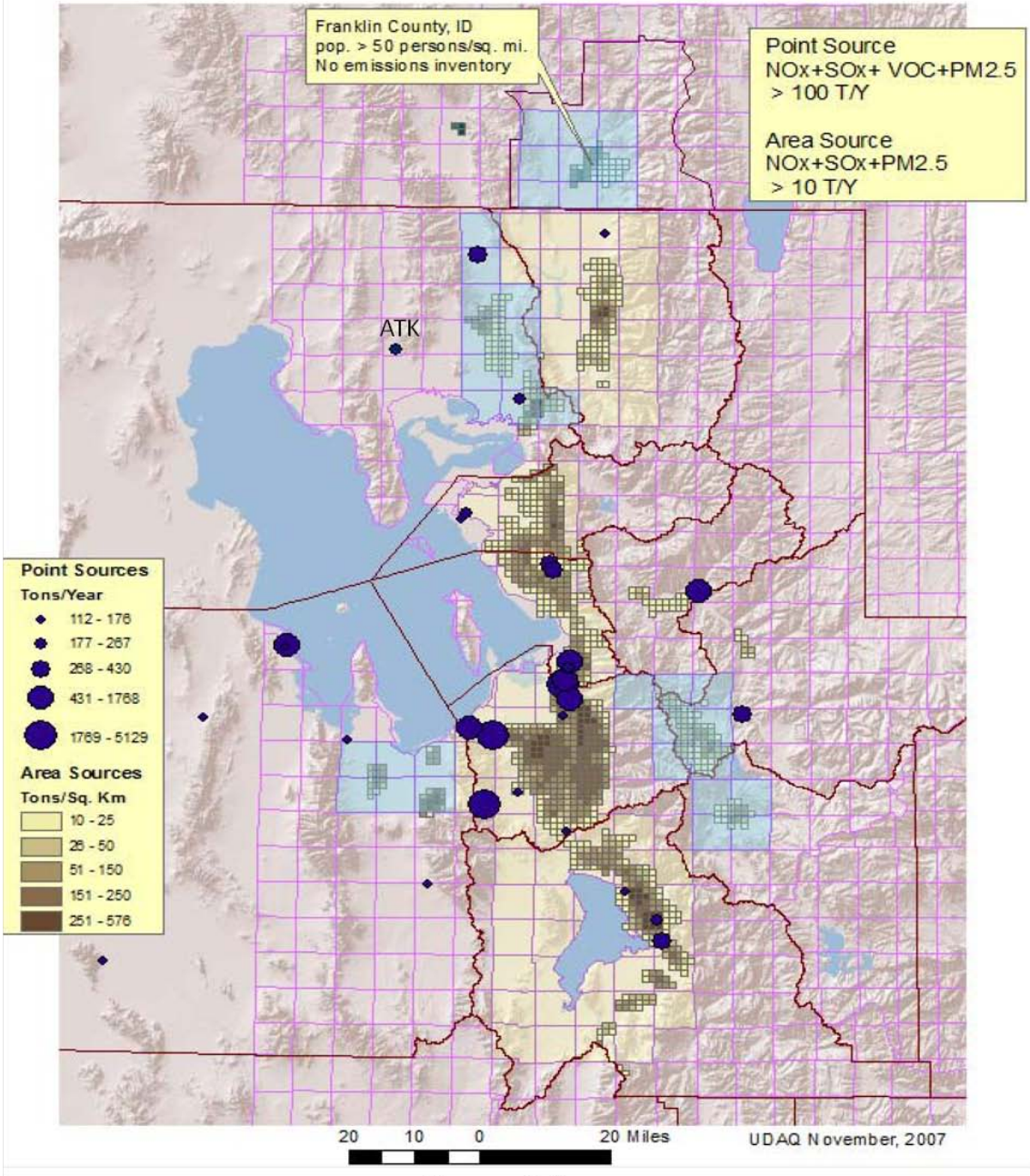
that eastern Box Elder contributes to nonattainment in the Salt Lake City area. EPA further found western Box Elder to be "sparsely-inhabited" and lacking emissions sources that would contribute to nonattainment in the Salt Lake area. Id. at 32, JA460. Having concluded that only part of Box Elder contributed to nonattainment, EPA had to determine an appropriate boundary between the contributing and non-contributing portions.

Given the influence of topography on meteorology, wind patterns, and the location of emissions-generating activities, EPA logically considered topographic barriers separating eastern and western Box Elder. Id. at 48, JA476. The Promontory Mountains are 24 miles west of Brigham City and Tremonton and create a physical barrier separating eastern and western Box Elder. Public Comment Doc. at 167, JA939. EPA concluded that the mountains are an airshed barrier during inversions leading to elevated concentrations of $PM_{2.5}$ east of the mountains. Id. Thus, the Promontory Mountains are a reasonable boundary between eastern and western Box Elder.

ATK's facility is located to the *east* of the Promontory Mountains and is one of three "major point sources" of emissions Utah identified in Box Elder. See UT Recommendation Letter, Index 463, at 24 (Fig. 9) & 31, JA165, JA172. It is only 13 miles from Tremonton, Box Elder's second largest population center, and less

than 20 miles from Box Elder's eastern border. ATK's location is shown in the following figure from Utah's recommendation. Id.

Figure 9 Emissions in Relation to the Core Nonattainment



Petitioners' contention that ATK is located in "sparsely-inhabited" western Box Elder is misleading and inconsistent with the record. See Pets. Br. 65. First, EPA reasonably defined eastern Box Elder as the part of the county located east of the Promontory Mountains, which includes ATK. See, e.g., EPA Modification Letter to Utah, Index 524, at 31, JA234; TSD 4.8.2 at 48, JA476. Box Elder County is roughly rectangular in shape, running approximately 105 miles from west to east, and 45 to 68 miles from north to south. ATK is approximately 20 miles from the eastern border of the county and approximately 80 miles from the western border. No common sense definition of "western Box Elder County" would include 80% of the area in the western half of the county, and only 20% of the area in the eastern half.

Second, approximately 96% of the Box Elder County population is in the eastern 20% of Box Elder County where ATK is located, while less than 4% of the county population resides in the western 80% of the county west of ATK. To suggest that ATK is in the uninhabited western half of the county, as Petitioners contend, when it is in fact not located there is misleading.

Petitioners' suggestion that ATK's emissions are "not relevant" also is misplaced. EPA did not select the Promontory Mountains as the nonattainment area boundary based on ATK's emissions. As EPA explained in response to ATK's comments, 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." Public Comment Doc. at 168, JA940.

Nevertheless, Petitioners cannot dispute the 277 tpy of $PM_{2.5}$ and precursor emissions the State reported for ATK's Promontory facility. UT Recommendation Letter, Appx. 2, JA195. Further, ATK's comments indicate that it has "40 boilers that emit 75 tpy of NOx," and it also emits NOx "from the static testing of solid rocket motors" and "the thermal treatment (open burning) of energetic material and waste." ATK Comment Letter at 17, Index 165, JA023. The extent to which any of these emissions may be adequately regulated because ATK operates under a "clearing index system" (Pets. Br. 65 n.13)[17] is an issue more properly addressed by the State when developing the nonattainment-area SIP, the CAA mechanism for controlling emissions in nonattainment areas to attain the NAAQS, 42 U.S.C. § 7502(c).

Also misplaced is Petitioners' red-herring contention that the Promontory Mountains are an inappropriate boundary because they do not reach above the

[17] "The Clearing Index is an Air Quality/Smoke Dispersal Index used to regulate open burning and as input for other air quality decisions throughout Utah. The Clearing Index is defined as the Mixing Depth (depth of the mixed layer in 100s of feet above ground level) multiplied by the Transport Wind (average wind in the mixed layer in knots). Clearing Index values below 500 are considered poor ventilation and open burning is restricted under these conditions. Any Clearing Index values above 1000 are considered excellent ventilation and are referred to as 1000+." Utah Department of Environmental Quality, http://www.airmonitoring.utah.gov/clearingindexarchive/index.htm.

mixing height. Petitioners do not dispute the relevant facts: (1) Box Elder and ATK's elevation is below the inversionary layer and within the mixing zone, and (2) no physical barriers lie to the south and southeast. Thus, during inversions, Box Elder's emissions (including those from ATK) are trapped within the airshed and mix with other emissions in the area and are subject to unimpeded air flow to violating areas to the south and southeast.

That some of the Promontory Mountains do not reach the maximum height of the mixing zone does not mean that Box Elder's emissions do not travel to the south-southeast when EPA found that overall air flow within the basin oscillates NW-SE. Further, Petitioners provide no evidence that emissions from Box Elder escape the basin by flowing to the west over the Great Salt Lake. While some portion of the emissions from the entire nonattainment area may escape to the west, this escape path is insufficient to allow the monitors to attain the standard. It is illogical to conclude that Box Elder emissions escape and only emissions from other counties cause the violations. To the contrary, EPA's analysis of back trajectories and wind data from Utah DAQ showed that wind patterns transport emissions from Brigham City and eastern Box Elder over the Lake and eastward toward Salt Lake County. See supra at 55; TSD 4.8.2 at 43-47 (Fig. A.3-7—A.3-9), JA471-75; Sept. 9, 2009 Mem. at 5-6, JA987-88.

Petitioners' further argument that EPA has not shown that meteorological conditions in eastern Box Elder transport emissions from ATK's facility to violating monitors in the south rehashes the argument in Part II of their brief, discussed and refuted above. The wind data and analysis in the record amply support EPA's conclusion that eastern Box Elder, which includes ATK's facility, contributes to violations in areas to the south. See supra 48-56.

ATK's assertion that EPA ignored the influence of local topography also is unsupported. As EPA explained in response to ATK's comments, "the Salt Lake International [Airport] wind rose used by EPA is more representative of large scale wind patterns in the basin, given the relative distance of the airport from topographical features." Public Comment Doc. at 167, JA939; State Comment Doc. at 189, JA755. EPA did not ignore the local influences on wind patterns. As discussed supra at 48-55, EPA exhaustively analyzed wind data from multiple sources; EPA simply came to a different conclusion about influences of local topography than ATK or the State, see supra at 51. EPA's conclusions are amply supported by the record and EPA's technical judgments are entitled to significant deference. City of Waukesha, 320 F.3d at 247.

Regarding Petitioners' contention that EPA did not demonstrate sufficient wind flow for a sufficient period of time to transport emissions from the location of ATK's facility to violating monitors (Pets. Br. 69), the CAA does not require EPA

to affirmatively prove that specific emissions from a particular source reach a particular violating monitor to determine an area "contributes" to nearby nonattainment. "[C]ontribute" does not mean "strictly cause," nor did EPA interpret it that way. Catawba, 571 F.3d at 39. EPA may conclude the "addition of $PM_{2.5}$ into the atmosphere is significant even though a nearby county's nonattainment problem would still persist in its absence." Id.[18]

Moreover, EPA reasonably concluded that eastern Box Elder's emissions can travel to violating monitors in the south, noting that during winter temperature inversions "ample time is provided for mixing along the length of the Wasatch Front given the observed non-zero wind velocities and patterns." State Comment Doc. at 189, JA755. EPA found average wind speeds up to 4 mph (from the Salt Lake City pollution roses) during inversions lasting 7 to 21 days. TSD 4.8.2 at 39, JA467. With 24 hour average winds of 4 mph from the northwest, emissions can easily move 50 miles or more. Thus, EPA had sufficient basis to conclude emissions could be transported approximately 30 to 60 miles from Box Elder to nearby violating monitors. Indeed, even if periods of consistent wind flow are less than 8 to 12 hours, movement of only 7 miles a day (i.e., winds moving at 0.3 mph average) would be sufficient to transport emissions 49 miles in a 7 day inversion.

[18] Nor does the APA review standard impose such a burden. The court must affirm as long as EPA considered the relevant factors and made a rational choice. Burlington Truck Lines, 371 U.S. at 168.

In sum, EPA's conclusion that Box Elder's emissions contribute to nonattainment in nearby areas and its selection of the Promontory Mountains as the nonattainment area boundary for eastern Box Elder are supported by the record and should be upheld.

CONCLUSION

For the foregoing reasons, the Court should deny the petitions.

Respectfully submitted,

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DATE: November 1, 2011

CERTIFICATE OF COMPLIANCE WITH RULE 32(a)

Pursuant to Fed. R. App. 32(a)(7)(C), and exclusive of the components of the brief excluded from the word limit pursuant to Fed. R. App. P. 32(a)(7)(B)(iii), the undersigned certifies that this brief contains 13,545 words, in 14-point Times New Roman typeface as counted by the word count feature of Microsoft Office Word 2007.

s/ *Jessica O'Donnell*
Jessica O'Donnell

CERTIFCATE OF SERVICE

The undersigned certifies that on the 1st day of November, 2011, the foregoing RESPONDENT'S FINAL RESPONSE BRIEF was served electronically through the court's CM/ECF system on all registered counsel.

s/ *Jessica O'Donnell*
Jessica O'Donnell

ADDENDUM

ADDENDUM

Statutes

Code of Federal Regulations

ministrative Procedure Act". That Act was repealed as part of the general revision of this title by Pub. L. 89–554 and its provisions incorporated into sections 551 to 559 of this title and this chapter.

§ 701. Application; definitions

(a) This chapter applies, according to the provisions thereof, except to the extent that—

(1) statutes preclude judicial review; or

(2) agency action is committed to agency discretion by law.

(b) For the purpose of this chapter—

(1) "agency" means each authority of the Government of the United States, whether or not it is within or subject to review by another agency, but does not include—

(A) the Congress;

(B) the courts of the United States;

(C) the governments of the territories or possessions of the United States;

(D) the government of the District of Columbia;

(E) agencies composed of representatives of the parties or of representatives of organizations of the parties to the disputes determined by them;

(F) courts martial and military commissions;

(G) military authority exercised in the field in time of war or in occupied territory; or

(H) functions conferred by sections 1738, 1739, 1743, and 1744 of title 12; chapter 2 of title 41; subchapter II of chapter 471 of title 49; or sections 1884, 1891–1902, and former section 1641(b)(2), of title 50, appendix; and

(2) "person", "rule", "order", "license", "sanction", "relief", and "agency action" have the meanings given them by section 551 of this title.

(Pub. L. 89–554, Sept. 6, 1966, 80 Stat. 392; Pub. L. 103–272, § 5(a), July 5, 1994, 108 Stat. 1373.)

HISTORICAL AND REVISION NOTES

Derivation	*U.S. Code*	*Revised Statutes and Statutes at Large*
(a)	5 U.S.C. 1009 (introductory clause).	June 11, 1946, ch. 324, §10 (introductory clause), 60 Stat. 243.

In subsection (a), the words "This chapter applies, according to the provisions thereof," are added to avoid the necessity of repeating the introductory clause of former section 1009 in sections 702–706.

Subsection (b) is added on authority of section 2 of the Act of June 11, 1946, ch. 324, 60 Stat. 237, as amended, which is carried into section 551 of this title.

In subsection (b)(1)(G), the words "or naval" are omitted as included in "military".

In subsection (b)(1)(H), the words "functions which by law expire on the termination of present hostilities, within any fixed period thereafter, or before July 1, 1947" are omitted as executed. Reference to the "Selective Training and Service Act of 1940" is omitted as that Act expired on Mar. 31, 1947. Reference to the "Sugar Control Extension Act of 1947" is omitted as that Act expired on Mar. 31, 1948. References to the "Housing and Rent Act of 1947, as amended" and the "Veterans' Emergency Housing Act of 1946" have been consolidated as they are related. The reference to former section 1641(b)(2) of title 50, appendix, is retained notwithstanding its repeal by §111(a)(1) of the Act of Sept. 21, 1961, Pub. L. 87–256, 75 Stat. 538, since §111(c) of the Act provides that a reference in other Acts to a provision of law repealed by §111(a) shall be considered to be a reference to the appropriate provisions of Pub. L. 87–256.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface to the report.

REFERENCES IN TEXT

Sections 1891–1902 of title 50, appendix, referred to in subsec. (b)(1)(H), were omitted from the Code as executed.

AMENDMENTS

1994—Subsec. (b)(1)(H). Pub. L. 103–272 substituted "subchapter II of chapter 471 of title 49; or sections" for "or sections 1622,".

§ 702. Right of review

A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States: *Provided*, That any mandatory or injunctive decree shall specify the Federal officer or officers (by name or by title), and their successors in office, personally responsible for compliance. Nothing herein (1) affects other limitations on judicial review or the power or duty of the court to dismiss any action or deny relief on any other appropriate legal or equitable ground; or (2) confers authority to grant relief if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought.

(Pub. L. 89–554, Sept. 6, 1966, 80 Stat. 392; Pub. L. 94–574, §1, Oct. 21, 1976, 90 Stat. 2721.)

HISTORICAL AND REVISION NOTES

Derivation	*U.S. Code*	*Revised Statutes and Statutes at Large*
.....	5 U.S.C. 1009(a).	June 11, 1946, ch. 324, §10(a), 60 Stat. 243.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface to the report.

AMENDMENTS

1976—Pub. L. 94–574 removed the defense of sovereign immunity as a bar to judicial review of Federal administrative action otherwise subject to judicial review.

§ 703. Form and venue of proceeding

The form of proceeding for judicial review is the special statutory review proceeding relevant to the subject matter in a court specified by statute or, in the absence or inadequacy thereof, any applicable form of legal action, including actions for declaratory judgments or writs of

prohibitory or mandatory injunction or habeas corpus, in a court of competent jurisdiction. If no special statutory review proceeding is applicable, the action for judicial review may be brought against the United States, the agency by its official title, or the appropriate officer. Except to the extent that prior, adequate, and exclusive opportunity for judicial review is provided by law, agency action is subject to judicial review in civil or criminal proceedings for judicial enforcement.

(Pub. L. 89–554, Sept. 6, 1966, 80 Stat. 392; Pub. L. 94–574, § 1, Oct. 21, 1976, 90 Stat. 2721.)

HISTORICAL AND REVISION NOTES

Derivation	*U.S. Code*	*Revised Statutes and Statutes at Large*
.....	5 U.S.C. 1009(b).	June 11, 1946, ch. 324, § 10(b), 60 Stat. 243.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface to the report.

AMENDMENTS

1976—Pub. L. 94–574 provided that if no special statutory review proceeding is applicable, the action for judicial review may be brought against the United States, the agency by its official title, or the appropriate officer as defendant.

§ 704. Actions reviewable

Agency action made reviewable by statute and final agency action for which there is no other adequate remedy in a court are subject to judicial review. A preliminary, procedural, or intermediate agency action or ruling not directly reviewable is subject to review on the review of the final agency action. Except as otherwise expressly required by statute, agency action otherwise final is final for the purposes of this section whether or not there has been presented or determined an application for a declaratory order, for any form of reconsideration, or, unless the agency otherwise requires by rule and provides that the action meanwhile is inoperative, for an appeal to superior agency authority.

(Pub. L. 89–554, Sept. 6, 1966, 80 Stat. 392.)

HISTORICAL AND REVISION NOTES

Derivation	*U.S. Code*	*Revised Statutes and Statutes at Large*
.....	5 U.S.C. 1009(c).	June 11, 1946, ch. 324, § 10(c), 60 Stat. 243.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface of this report.

§ 705. Relief pending review

When an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review. On such conditions as may be required and to the extent necessary to prevent irreparable injury, the reviewing court, including the court to which a case may be taken on appeal from or on application for certiorari or other writ to a reviewing court, may issue all necessary and appropriate process to postpone the effective date of an agency action or to preserve status or rights pending conclusion of the review proceedings.

(Pub. L. 89–554, Sept. 6, 1966, 80 Stat. 393.)

HISTORICAL AND REVISION NOTES

Derivation	*U.S. Code*	*Revised Statutes and Statutes at Large*
.....	5 U.S.C. 1009(d).	June 11, 1946, ch. 324, § 10(d), 60 Stat. 243.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface of this report.

§ 706. Scope of review

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

(Pub. L. 89–554, Sept. 6, 1966, 80 Stat. 393.)

HISTORICAL AND REVISION NOTES

Derivation	*U.S. Code*	*Revised Statutes and Statutes at Large*
.....	5 U.S.C. 1009(e).	June 11, 1946, ch. 324, § 10(e), 60 Stat. 243.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface of this report.

ABBREVIATION OF RECORD

Pub. L. 85–791, Aug. 28, 1958, 72 Stat. 941, which authorized abbreviation of record on review or enforcement of orders of administrative agencies and review on the original papers, provided, in section 35 thereof, that: "This Act [see Tables for classification] shall not be construed to repeal or modify any provision of the Administrative Procedure Act [see Short Title note set out preceding section 551 of this title]."

CHAPTER 8—CONGRESSIONAL REVIEW OF AGENCY RULEMAKING

ministrator is authorized to pay, for two years, up to 100 per centum of the air quality planning program costs of any commission established under section 7506a of this title (relating to control of interstate air pollution) or section 7511c of this title (relating to control of interstate ozone pollution) or any agency designated by the Governors of the affected States, which agency shall be capable of recommending to the Governors plans for implementation of national primary and secondary ambient air quality standards and shall include representation from the States and appropriate political subdivisions within the air quality control region. After the initial two-year period the Administrator is authorized to make grants to such agency or such commission in an amount up to three-fifths of the air quality implementation program costs of such agency or commission.

(July 14, 1955, ch. 360, title I, § 106, as added Pub. L. 90–148, § 2, Nov. 21, 1967, 81 Stat. 490; amended Pub. L. 91–604, § 3(c), Dec. 31, 1970, 84 Stat. 1677; Pub. L. 101–549, title I, § 102(f)(2), title VIII, § 802(f), Nov. 15, 1990, 104 Stat. 2420, 2688.)

CODIFICATION

Section was formerly classified to section 1857c–1 of this title.

PRIOR PROVISIONS

A prior section 106 of act July 14, 1955, was renumbered section 117 by Pub. L. 91–604 and is classified to section 7417 of this title.

AMENDMENTS

1990—Pub. L. 101–549, § 102(f)(2)(A), inserted "or of implementing section 7506a of this title (relating to control of interstate air pollution) or section 7511c of this title (relating to control of interstate ozone pollution)" after "section 7407 of this title".

Pub. L. 101–549, § 102(f)(2)(B), which directed insertion of "any commission established under section 7506a of this title (relating to control of interstate air pollution) or section 7511c of this title (relating to control of interstate ozone pollution) or" after "program costs of", was executed by making the insertion after that phrase the first place it appeared to reflect the probable intent of Congress.

Pub. L. 101–549, § 102(f)(2)(C), which directed insertion of "or such commission" after "such agency" in last sentence, was executed by making insertion after "such agency" the first place it appeared in the last sentence to reflect the probable intent of Congress.

Pub. L. 101–549, §§ 102(f)(2)(D), 802(f), substituted "three-fifths of the air quality implementation program costs of such agency or commission" for "three-fourths of the air quality planning program costs of such agency".

1970—Pub. L. 91–604 struck out designation "(a)", substituted provisions authorizing Federal grants for the purpose of developing implementation plans and provisions requiring the designated State agency to be capable of recommending plans for implementation of national primary and secondary ambient air quality standards, for provisions authorizing Federal grants for the purpose of expediting the establishment of air quality standards and provisions requiring the designated State agency to be capable of recommending standards of air quality and plans for implementation thereof, respectively, and struck out subsec. (b) which authorized establishment of air quality planning commissions.

§ 7407. Air quality control regions

(a) Responsibility of each State for air quality; submission of implementation plan

Each State shall have the primary responsibility for assuring air quality within the entire geographic area comprising such State by submitting an implementation plan for such State which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained within each air quality control region in such State.

(b) Designated regions

For purposes of developing and carrying out implementation plans under section 7410 of this title—

(1) an air quality control region designated under this section before December 31, 1970, or a region designated after such date under subsection (c) of this section, shall be an air quality control region; and

(2) the portion of such State which is not part of any such designated region shall be an air quality control region, but such portion may be subdivided by the State into two or more air quality control regions with the approval of the Administrator.

(c) Authority of Administrator to designate regions; notification of Governors of affected States

The Administrator shall, within 90 days after December 31, 1970, after consultation with appropriate State and local authorities, designate as an air quality control region any interstate area or major intrastate area which he deems necessary or appropriate for the attainment and maintenance of ambient air quality standards. The Administrator shall immediately notify the Governors of the affected States of any designation made under this subsection.

(d) Designations

(1) Designations generally

(A) Submission by Governors of initial designations following promulgation of new or revised standards

By such date as the Administrator may reasonably require, but not later than 1 year after promulgation of a new or revised national ambient air quality standard for any pollutant under section 7409 of this title, the Governor of each State shall (and at any other time the Governor of a State deems appropriate the Governor may) submit to the Administrator a list of all areas (or portions thereof) in the State, designating as—

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

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

(iii) unclassifiable, any area that cannot be classified on the basis of available information as meeting or not meeting the na-

tional primary or secondary ambient air quality standard for the pollutant.

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

(B) Promulgation by EPA of designations

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

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

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

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

(C) Designations by operation of law

(i) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(A), (B), or (C) of this subsection (as in effect immediately before November 15, 1990) is designated, by operation of law, as a nonattainment area for such pollutant within the meaning of subparagraph (A)(i).

(ii) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(E) (as in effect immediately before November 15, 1990) is designated by operation of law, as an attainment area for such pollutant within the meaning of subparagraph (A)(ii).

(iii) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(D) (as in effect immediately before November 15, 1990) is designated, by operation of law, as an unclassifiable area for such pollutant within the meaning of subparagraph (A)(iii).

(2) Publication of designations and redesignations

(A) The Administrator shall publish a notice in the Federal Register promulgating any designation under paragraph (1) or (5), or announcing any designation under paragraph (4), or promulgating any redesignation under paragraph (3).

(B) Promulgation or announcement of a designation under paragraph (1), (4) or (5) shall not be subject to the provisions of sections 553 through 557 of title 5 (relating to notice and comment), except nothing herein shall be construed as precluding such public notice and comment whenever possible.

(3) Redesignation

(A) Subject to the requirements of subparagraph (E), and on the basis of air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate, the Administrator may at any time notify the Governor of any State that available information indicates that the designation of any area or portion of an area within the State or interstate area should be revised. In issuing such notification, which shall be public, to the Governor, the Administrator shall provide such information as the Administrator may have available explaining the basis for the notice.

(B) No later than 120 days after receiving a notification under subparagraph (A), the Governor shall submit to the Administrator such redesignation, if any, of the appropriate area (or areas) or portion thereof within the State or interstate area, as the Governor considers appropriate.

(C) No later than 120 days after the date described in subparagraph (B) (or paragraph (1)(B)(iii)), the Administrator shall promulgate the redesignation, if any, of the area or portion thereof, submitted by the Governor in accordance with subparagraph (B), making such modifications as the Administrator may deem necessary, in the same manner and under the same procedure as is applicable under clause (ii) of paragraph (1)(B), except that the phrase "60 days" shall be substituted for the phrase "120 days" in that clause. If the Governor does not submit, in accordance with subparagraph (B), a redesignation for an area (or portion thereof) identified by the Administrator under subparagraph (A), the Administrator shall promulgate such redesignation, if any, that the Administrator deems appropriate.

(D) The Governor of any State may, on the Governor's own motion, submit to the Administrator a revised designation of any area or portion thereof within the State. Within 18 months of receipt of a complete State redesignation submittal, the Administrator shall approve or deny such redesignation. The submis-

from coarse particle measurements those particles that are equal to or smaller than 2.5 micrometers in diameter;

"(3) develop a method of measuring the composition of coarse particles; and

"(4) submit a report on the study and responsibilities of the Administrator under paragraphs (1) through (3) to—

"(A) the Committee on Energy and Commerce of the House of Representatives; and

"(B) the Committee on Environment and Public Works of the Senate.

"SEC. 6103. OZONE DESIGNATION REQUIREMENTS.

"(a) The Governors shall be required to submit the designations referred to in section 107(d)(1) of the Clean Air Act [42 U.S.C. 7407(d)(1)] within 2 years following the promulgation of the July 1997 ozone national ambient air quality standards.

"(b) The Administrator shall promulgate final designations no later than 1 year after the designations required under subsection (a) are required to be submitted.

"SEC. 6104. ADDITIONAL PROVISIONS.

"Nothing in sections 6101 through 6103 shall be construed by the Administrator of Environmental Protection Agency or any court, State, or person to affect any pending litigation or to be a ratification of the ozone or $PM_{2.5}$ standards."

PENDING ACTIONS AND PROCEEDINGS

Suits, actions, and other proceedings lawfully commenced by or against the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under act July 14, 1955, the Clean Air Act, as in effect immediately prior to the enactment of Pub. L. 95–95 [Aug. 7, 1977], not to abate by reason of the taking effect of Pub. L. 95–95, see section 406(a) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95–95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95–95 [this chapter], see section 406(b) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

§ 7408. Air quality criteria and control techniques

(a) Air pollutant list; publication and revision by Administrator; issuance of air quality criteria for air pollutants

(1) For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after December 31, 1970, publish, and shall from time to time thereafter revise, a list which includes each air pollutant—

(A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

(C) for which air quality criteria had not been issued before December 31, 1970 but for which he plans to issue air quality criteria under this section.

(2) The Administrator shall issue air quality criteria for an air pollutant within 12 months after he has included such pollutant in a list under paragraph (1). Air quality criteria for an air pollutant shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities. The criteria for an air pollutant, to the extent practicable, shall include information on—

(A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;

(B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and

(C) any known or anticipated adverse effects on welfare.

(b) Issuance by Administrator of information on air pollution control techniques; standing consulting committees for air pollutants; establishment; membership

(1) Simultaneously with the issuance of criteria under subsection (a) of this section, the Administrator shall, after consultation with appropriate advisory committees and Federal departments and agencies, issue to the States and appropriate air pollution control agencies information on air pollution control techniques, which information shall include data relating to the cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology. Such information shall include such data as are available on available technology and alternative methods of prevention and control of air pollution. Such information shall also include data on alternative fuels, processes, and operating methods which will result in elimination or significant reduction of emissions.

(2) In order to assist in the development of information on pollution control techniques, the Administrator may establish a standing consulting committee for each air pollutant included in a list published pursuant to subsection (a)(1) of this section, which shall be comprised of technically qualified individuals representative of State and local governments, industry, and the academic community. Each such committee shall submit, as appropriate, to the Administrator information related to that required by paragraph (1).

(c) Review, modification, and reissuance of criteria or information

The Administrator shall from time to time review, and, as appropriate, modify, and reissue any criteria or information on control techniques issued pursuant to this section. Not later than six months after August 7, 1977, the Administrator shall revise and reissue criteria relating

to concentrations of NO_2 over such period (not more than three hours) as he deems appropriate. Such criteria shall include a discussion of nitric and nitrous acids, nitrites, nitrates, nitrosamines, and other carcinogenic and potentially carcinogenic derivatives of oxides of nitrogen.

(d) Publication in Federal Register; availability of copies for general public

The issuance of air quality criteria and information on air pollution control techniques shall be announced in the Federal Register and copies shall be made available to the general public.

(e) Transportation planning and guidelines

The Administrator shall, after consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, and with State and local officials, within nine months after November 15, 1990,[1] and periodically thereafter as necessary to maintain a continuous transportation-air quality planning process, update the June 1978 Transportation-Air Quality Planning Guidelines and publish guidance on the development and implementation of transportation and other measures necessary to demonstrate and maintain attainment of national ambient air quality standards. Such guidelines shall include information on—

(1) methods to identify and evaluate alternative planning and control activities;

(2) methods of reviewing plans on a regular basis as conditions change or new information is presented;

(3) identification of funds and other resources necessary to implement the plan, including interagency agreements on providing such funds and resources;

(4) methods to assure participation by the public in all phases of the planning process; and

(5) such other methods as the Administrator determines necessary to carry out a continuous planning process.

(f) Information regarding processes, procedures, and methods to reduce or control pollutants in transportation; reduction of mobile source related pollutants; reduction of impact on public health

(1) The Administrator shall publish and make available to appropriate Federal, State, and local environmental and transportation agencies not later than one year after November 15, 1990, and from time to time thereafter—

(A) information prepared, as appropriate, in consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, regarding the formulation and emission reduction potential of transportation control measures related to criteria pollutants and their precursors, including, but not limited to—

(i) programs for improved public transit;

(ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;

(iii) employer-based transportation management plans, including incentives;

(iv) trip-reduction ordinances;

(v) traffic flow improvement programs that achieve emission reductions;

(vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;

(vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use;

(viii) programs for the provision of all forms of high-occupancy, shared-ride services;

(ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;

(x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;

(xi) programs to control extended idling of vehicles;

(xii) programs to reduce motor vehicle emissions, consistent with subchapter II of this chapter, which are caused by extreme cold start conditions;

(xiii) employer-sponsored programs to permit flexible work schedules;

(xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;

(xv) programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and

(xvi) program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.[2]

(B) information on additional methods or strategies that will contribute to the reduction of mobile source related pollutants during periods in which any primary ambient air quality standard will be exceeded and during episodes for which an air pollution alert, warning, or emergency has been declared;

(C) information on other measures which may be employed to reduce the impact on public health or protect the health of sensitive or susceptible individuals or groups; and

(D) information on the extent to which any process, procedure, or method to reduce or control such air pollutant may cause an increase in the emissions or formation of any other pollutant.

(2) In publishing such information the Administrator shall also include an assessment of—

[1] See Codification note below.

[2] So in original. The period probably should be a semicolon.

(A) the relative effectiveness of such processes, procedures, and methods;

(B) the potential effect of such processes, procedures, and methods on transportation systems and the provision of transportation services; and

(C) the environmental, energy, and economic impact of such processes, procedures, and methods.

(g) Assessment of risks to ecosystems

The Administrator may assess the risks to ecosystems from exposure to criteria air pollutants (as identified by the Administrator in the Administrator's sole discretion).

(h) RACT/BACT/LAER clearinghouse

The Administrator shall make information regarding emission control technology available to the States and to the general public through a central database. Such information shall include all control technology information received pursuant to State plan provisions requiring permits for sources, including operating permits for existing sources.

(July 14, 1955, ch. 360, title I, § 108, as added Pub. L. 91–604, § 4(a), Dec. 31, 1970, 84 Stat. 1678; amended Pub. L. 95–95, title I, §§ 104, 105, title IV, § 401(a), Aug. 7, 1977, 91 Stat. 689, 790; Pub. L. 101–549, title I, §§ 108(a)–(c), (*o*), 111, Nov. 15, 1990, 104 Stat. 2465, 2466, 2469, 2470; Pub. L. 105–362, title XV, § 1501(b), Nov. 10, 1998, 112 Stat. 3294.)

CODIFICATION

November 15, 1990, referred to in subsec. (e), was in the original "enactment of the Clean Air Act Amendments of 1989", and was translated as meaning the date of the enactment of Pub. L. 101–549, popularly known as the Clean Air Act Amendments of 1990, to reflect the probable intent of Congress.

Section was formerly classified to section 1857c–3 of this title.

PRIOR PROVISIONS

A prior section 108 of act July 14, 1955, was renumbered section 115 by Pub. L. 91–604 and is classified to section 7415 of this title.

AMENDMENTS

1998—Subsec. (f)(3), (4). Pub. L. 105–362 struck out par. (3), which required reports by the Secretary of Transportation and the Administrator to be submitted to Congress by Jan. 1, 1993, and every 3 years thereafter, reviewing and analyzing existing State and local air quality related transportation programs, evaluating achievement of goals, and recommending changes to existing programs, and par. (4), which required that in each report after the first report the Secretary of Transportation include a description of the actions taken to implement the changes recommended in the preceding report.

1990—Subsec. (e). Pub. L. 101–549, § 108(a), inserted first sentence and struck out former first sentence which read as follows: "The Administrator shall, after consultation with the Secretary of Transportation and the Secretary of Housing and Urban Development and State and local officials and within 180 days after August 7, 1977, and from time to time thereafter, publish guidelines on the basic program elements for the planning process assisted under section 7505 of this title."

Subsec. (f)(1). Pub. L. 101–549, § 108(b), in introductory provisions, substituted present provisions for provisions relating to Federal agencies, States, and air pollution control agencies within either 6 months or one year after Aug. 7, 1977.

Subsec. (f)(1)(A). Pub. L. 101–549, § 108(b), substituted present provisions for provisions relating to information prepared in cooperation with Secretary of Transportation, regarding processes, procedures, and methods to reduce certain pollutants.

Subsec. (f)(3), (4). Pub. L. 101–549, § 111, added pars. (3) and (4).

Subsec. (g). Pub. L. 101–549, § 108(*o*), added subsec. (g).

Subsec. (h). Pub. L. 101–549, § 108(c), added subsec. (h).

1977—Subsec. (a)(1)(A). Pub. L. 95–95, § 401(a), substituted "emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare" for "which in his judgment has an adverse effect on public health or welfare".

Subsec. (b)(1). Pub. L. 95–95, § 104(a), substituted "cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology" for "technology and costs of emission control".

Subsec. (c). Pub. L. 95–95, § 104(b), inserted provision directing the Administrator, not later than six months after Aug. 7, 1977, to revise and reissue criteria relating to concentrations of NO_2 over such period (not more than three hours) as he deems appropriate, with the criteria to include a discussion of nitric and nitrous acids, nitrites, nitrates, nitrosamines, and other carcinogenic and potentially carcinogenic derivatives of oxides of nitrogen.

Subsecs. (e), (f). Pub. L. 95–95, § 105, added subsecs. (e) and (f).

EFFECTIVE DATE OF 1977 AMENDMENT

Amendment by Pub. L. 95–95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95–95, set out as a note under section 7401 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95–95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95–95 [this chapter], see section 406(b) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

§ 7409. National primary and secondary ambient air quality standards

(a) Promulgation

(1) The Administrator—

(A) within 30 days after December 31, 1970, shall publish proposed regulations prescribing a national primary ambient air quality standard and a national secondary ambient air quality standard for each air pollutant for which air quality criteria have been issued prior to such date; and

(B) after a reasonable time for interested persons to submit written comments thereon (but no later than 90 days after the initial publication of such proposed standards) shall by regulation promulgate such proposed national primary and secondary ambient air quality standards with such modifications as he deems appropriate.

(2) With respect to any air pollutant for which air quality criteria are issued after December 31,

1970, the Administrator shall publish, simultaneously with the issuance of such criteria and information, proposed national primary and secondary ambient air quality standards for any such pollutant. The procedure provided for in paragraph (1)(B) of this subsection shall apply to the promulgation of such standards.

(b) Protection of public health and welfare

(1) National primary ambient air quality standards, prescribed under subsection (a) of this section shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health. Such primary standards may be revised in the same manner as promulgated.

(2) Any national secondary ambient air quality standard prescribed under subsection (a) of this section shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. Such secondary standards may be revised in the same manner as promulgated.

(c) National primary ambient air quality standard for nitrogen dioxide

The Administrator shall, not later than one year after August 7, 1977, promulgate a national primary ambient air quality standard for NO_2 concentrations over a period of not more than 3 hours unless, based on the criteria issued under section 7408(c) of this title, he finds that there is no significant evidence that such a standard for such a period is requisite to protect public health.

(d) Review and revision of criteria and standards; independent scientific review committee; appointment; advisory functions

(1) Not later than December 31, 1980, and at five-year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 7408 of this title and the national ambient air quality standards promulgated under this section and shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 7408 of this title and subsection (b) of this section. The Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.

(2)(A) The Administrator shall appoint an independent scientific review committee composed of seven members including at least one member of the National Academy of Sciences, one physician, and one person representing State air pollution control agencies.

(B) Not later than January 1, 1980, and at five-year intervals thereafter, the committee referred to in subparagraph (A) shall complete a review of the criteria published under section 7408 of this title and the national primary and secondary ambient air quality standards promulgated under this section and shall recommend to the Administrator any new national ambient air quality standards and revisions of existing criteria and standards as may be appropriate under section 7408 of this title and subsection (b) of this section.

(C) Such committee shall also (i) advise the Administrator of areas in which additional knowledge is required to appraise the adequacy and basis of existing, new, or revised national ambient air quality standards, (ii) describe the research efforts necessary to provide the required information, (iii) advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity, and (iv) advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards.

(July 14, 1955, ch. 360, title I, § 109, as added Pub. L. 91–604, § 4(a), Dec. 31, 1970, 84 Stat. 1679; amended Pub. L. 95–95, title I, § 106, Aug. 7, 1977, 91 Stat. 691.)

CODIFICATION

Section was formerly classified to section 1857c–4 of this title.

PRIOR PROVISIONS

A prior section 109 of act July 14, 1955, was renumbered section 116 by Pub. L. 91–604 and is classified to section 7416 of this title.

AMENDMENTS

1977—Subsec. (c). Pub. L. 95–95, § 106(b), added subsec. (c).

Subsec. (d). Pub. L. 95–95, § 106(a), added subsec. (d).

EFFECTIVE DATE OF 1977 AMENDMENT

Amendment by Pub. L. 95–95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95–95, set out as a note under section 7401 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95–95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95–95 [this chapter], see section 406(b) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

TERMINATION OF ADVISORY COMMITTEES

Advisory committees established after Jan. 5, 1973, to terminate not later than the expiration of the 2-year period beginning on the date of their establishment, unless, in the case of a committee established by the President or an officer of the Federal Government, such committee is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a committee established by the Congress, its duration is otherwise provided for by law. See section 14 of Pub. L. 92–463, Oct. 6, 1972, 86 Stat. 776, set out in the Appendix to Title 5, Government Organization and Employees.

ROLE OF SECONDARY STANDARDS

Pub. L. 101–549, title VIII, § 817, Nov. 15, 1990, 104 Stat. 2697, provided that:

"(a) REPORT.—The Administrator shall request the National Academy of Sciences to prepare a report to the Congress on the role of national secondary ambient air quality standards in protecting welfare and the environment. The report shall:

"(1) include information on the effects on welfare and the environment which are caused by ambient concentrations of pollutants listed pursuant to section 108 [42 U.S.C. 7408] and other pollutants which may be listed;

"(2) estimate welfare and environmental costs incurred as a result of such effects;

"(3) examine the role of secondary standards and the State implementation planning process in preventing such effects;

"(4) determine ambient concentrations of each such pollutant which would be adequate to protect welfare and the environment from such effects;

"(5) estimate the costs and other impacts of meeting secondary standards; and

"(6) consider other means consistent with the goals and objectives of the Clean Air Act [42 U.S.C. 7401 et seq.] which may be more effective than secondary standards in preventing or mitigating such effects.

"(b) SUBMISSION TO CONGRESS; COMMENTS; AUTHORIZATION.—(1) The report shall be transmitted to the Congress not later than 3 years after the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990].

"(2) At least 90 days before issuing a report the Administrator shall provide an opportunity for public comment on the proposed report. The Administrator shall include in the final report a summary of the comments received on the proposed report.

"(3) There are authorized to be appropriated such sums as are necessary to carry out this section."

§ 7410. State implementation plans for national primary and secondary ambient air quality standards

(a) Adoption of plan by State; submission to Administrator; content of plan; revision; new sources; indirect source review program; supplemental or intermittent control systems

(1) Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 7409 of this title for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State. In addition, such State shall adopt and submit to the Administrator (either as a part of a plan submitted under the preceding sentence or separately) within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national ambient air quality secondary standard (or revision thereof), a plan which provides for implementation, maintenance, and enforcement of such secondary standard in each air quality control region (or portion thereof) within such State. Unless a separate public hearing is provided, each State shall consider its plan implementing such secondary standard at the hearing required by the first sentence of this paragraph.

(2) Each implementation plan submitted by a State under this chapter shall be adopted by the State after reasonable notice and public hearing. Each such plan shall—

(A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this chapter;

(B) provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to—

(i) monitor, compile, and analyze data on ambient air quality, and

(ii) upon request, make such data available to the Administrator;

(C) include a program to provide for the enforcement of the measures described in subparagraph (A), and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D of this subchapter;

(D) contain adequate provisions—

(i) prohibiting, consistent with the provisions of this subchapter, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will—

(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard, or

(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C of this subchapter to prevent significant deterioration of air quality or to protect visibility,

(ii) insuring compliance with the applicable requirements of sections 7426 and 7415 of this title (relating to interstate and international pollution abatement);

(E) provide (i) necessary assurances that the State (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof), (ii) requirements that the State comply with the requirements respecting State boards under section 7428 of this title, and (iii) necessary assurances that, where the State has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the State has responsibility for ensuring adequate implementation of such plan provision;

(F) require, as may be prescribed by the Administrator—

(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources,

(h) "Locally or regionally available coal or coal derivatives" defined

For the purpose of this section the term "locally or regionally available coal or coal derivatives" means coal or coal derivatives which is, or can in the judgment of the State or the Administrator feasibly be, mined or produced in the local or regional area (as determined by the Administrator) in which the major fuel burning stationary source is located.

(July 14, 1955, ch. 360, title I, §125, as added Pub. L. 95–95, title I, §122, Aug. 7, 1977, 91 Stat. 722.)

EFFECTIVE DATE

Section effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

§ 7426. Interstate pollution abatement

(a) Written notice to all nearby States

Each applicable implementation plan shall—

(1) require each major proposed new (or modified) source—

(A) subject to part C of this subchapter (relating to significant deterioration of air quality) or

(B) which may significantly contribute to levels of air pollution in excess of the national ambient air quality standards in any air quality control region outside the State in which such source intends to locate (or make such modification),

to provide written notice to all nearby States the air pollution levels of which may be affected by such source at least sixty days prior to the date on which commencement of construction is to be permitted by the State providing notice, and

(2) identify all major existing stationary sources which may have the impact described in paragraph (1) with respect to new or modified sources and provide notice to all nearby States of the identity of such sources not later than three months after August 7, 1977.

(b) Petition for finding that major sources emit or would emit prohibited air pollutants

Any State or political subdivision may petition the Administrator for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of the prohibition of section 7410(a)(2)(D)(ii) of this title or this section. Within 60 days after receipt of any petition under this subsection and after public hearing, the Administrator shall make such a finding or deny the petition.

(c) Violations; allowable continued operation

Notwithstanding any permit which may have been granted by the State in which the source is located (or intends to locate), it shall be a violation of this section and the applicable implementation plan in such State—

(1) for any major proposed new (or modified) source with respect to which a finding has been made under subsection (b) of this section to be constructed or to operate in violation of the prohibition of section 7410(a)(2)(D)(ii) of this title or this section, or

(2) for any major existing source to operate more than three months after such finding has been made with respect to it.

The Administrator may permit the continued operation of a source referred to in paragraph (2) beyond the expiration of such three-month period if such source complies with such emission limitations and compliance schedules (containing increments of progress) as may be provided by the Administrator to bring about compliance with the requirements contained in section 7410(a)(2)(D)(ii) of this title or this section as expeditiously as practicable, but in no case later than three years after the date of such finding. Nothing in the preceding sentence shall be construed to preclude any such source from being eligible for an enforcement order under section 7413(d)[1] of this title after the expiration of such period during which the Administrator has permitted continuous operation.

(July 14, 1955, ch. 360, title I, §126, as added Pub. L. 95–95, title I, §123, Aug. 7, 1977, 91 Stat. 724; amended Pub. L. 95–190, §14(a)(39), Nov. 16, 1977, 91 Stat. 1401; Pub. L. 101–549, title I, §109(a), Nov. 15, 1990, 104 Stat. 2469.)

REFERENCES IN TEXT

Section 7413(d) of this title, referred to in subsec. (c), was amended generally by Pub. L. 101–549, title VII, §701, Nov. 15, 1990, 104 Stat. 2672, and, as so amended, no longer relates to final compliance orders.

AMENDMENTS

1990—Subsec. (b). Pub. L. 101–549, §109(a)(1), inserted "or group of stationary sources" after "any major source" and substituted "section 7410(a)(2)(D)(ii) of this title or this section" for "section 7410(a)(2)(E)(i) of this title".

Subsec. (c). Pub. L. 101–549, §109(a)(2)(A), which directed the insertion of "this section and" after "violation of", was executed by making the insertion after first reference to "violation of" to reflect the probable intent of Congress.

Pub. L. 101–549, §109(a)(2)(B), substituted "section 7410(a)(2)(D)(ii) of this title or this section" for "section 7410(a)(2)(E)(i) of this title" in par. (1) and penultimate sentence.

1977—Subsec. (a)(1). Pub. L. 95–190 substituted "(relating to significant deterioration of air quality)" for ", relating to significant deterioration of air quality".

EFFECTIVE DATE

Section effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

§ 7427. Public notification

(a) Warning signs; television, radio, or press notices or information

Each State plan shall contain measures which will be effective to notify the public during any calendar[1] on a regular basis of instances or areas in which any national primary ambient air quality standard is exceeded or was exceeded during any portion of the preceding calendar year to advise the public of the health hazards associated with such pollution, and to enhance public awareness of the measures which can be

[1] See References in Text note below.

[1] So in original. Probably should be "calendar year".

study and report to Congress on progress made in carrying out part C of title I of the Clean Air Act (this part) and the problems associated in carrying out such section.

§ 7471. Plan requirements

In accordance with the policy of section 7401(b)(1) of this title, each applicable implementation plan shall contain emission limitations and such other measures as may be necessary, as determined under regulations promulgated under this part, to prevent significant deterioration of air quality in each region (or portion thereof) designated pursuant to section 7407 of this title as attainment or unclassifiable.

(July 14, 1955, ch. 360, title I, § 161, as added Pub. L. 95–95, title I, § 127(a), Aug. 7, 1977, 91 Stat. 731; amended Pub. L. 101–549, title I, § 110(1), Nov. 15, 1990, 104 Stat. 2470.)

AMENDMENTS

1990—Pub. L. 101–549 substituted "designated pursuant to section 7407 of this title as attainment or unclassifiable" for "identified pursuant to section 7407(d)(1)(D) or (E) of this title".

§ 7472. Initial classifications

(a) Areas designated as class I

Upon the enactment of this part, all—

(1) international parks,

(2) national wilderness areas which exceed 5,000 acres in size,

(3) national memorial parks which exceed 5,000 acres in size, and

(4) national parks which exceed six thousand acres in size,

and which are in existence on August 7, 1977, shall be class I areas and may not be redesignated. All areas which were redesignated as class I under regulations promulgated before August 7, 1977, shall be class I areas which may be redesignated as provided in this part. The extent of the areas designated as Class I under this section shall conform to any changes in the boundaries of such areas which have occurred subsequent to August 7, 1977, or which may occur subsequent to November 15, 1990.

(b) Areas designated as class II

All areas in such State designated pursuant to section 7407(d) of this title as attainment or unclassifiable which are not established as class I under subsection (a) of this section shall be class II areas unless redesignated under section 7474 of this title.

(July 14, 1955, ch. 360, title I, § 162, as added Pub. L. 95–95, title I, § 127(a), Aug. 7, 1977, 91 Stat. 731; amended Pub. L. 95–190, § 14(a)(40), Nov. 16, 1977, 91 Stat. 1401; Pub. L. 101–549, title I, §§ 108(m), 110(2), Nov. 15, 1990, 104 Stat. 2469, 2470.)

AMENDMENTS

1990—Subsec. (a). Pub. L. 101–549, § 108(m), inserted at end "The extent of the areas designated as Class I under this section shall conform to any changes in the boundaries of such areas which have occurred subsequent to August 7, 1977, or which may occur subsequent to November 15, 1990."

Subsec. (b). Pub. L. 101–549, § 110(2), substituted "designated pursuant to section 7407(d) of this title as attainment or unclassifiable" for "identified pursuant to section 7407(d)(1)(D) or (E) of this title".

1977—Subsec. (a)(4). Pub. L. 95–190 inserted a comma after "size".

§ 7473. Increments and ceilings

(a) Sulfur oxide and particulate matter; requirement that maximum allowable increases and maximum allowable concentrations not be exceeded

In the case of sulfur oxide and particulate matter, each applicable implementation plan shall contain measures assuring that maximum allowable increases over baseline concentrations of, and maximum allowable concentrations of, such pollutant shall not be exceeded. In the case of any maximum allowable increase (except an allowable increase specified under section 7475(d)(2)(C)(iv) of this title) for a pollutant based on concentrations permitted under national ambient air quality standards for any period other than an annual period, such regulations shall permit such maximum allowable increase to be exceeded during one such period per year.

(b) Maximum allowable increases in concentrations over baseline concentrations

(1) For any class I area, the maximum allowable increase in concentrations of sulfur dioxide and particulate matter over the baseline concentration of such pollutants shall not exceed the following amounts:

Pollutant	Maximum allowable increase (in micrograms per cubic meter)
Particulate matter:	
Annual geometric mean	5
Twenty-four-hour maximum	10
Sulfur dioxide:	
Annual arithmetic mean	2
Twenty-four-hour maximum	5
Three-hour maximum	25

(2) For any class II area, the maximum allowable increase in concentrations of sulfur dioxide and particulate matter over the baseline concentration of such pollutants shall not exceed the following amounts:

Pollutant	Maximum allowable increase (in micrograms per cubic meter)
Particulate matter:	
Annual geometric mean	19
Twenty-four-hour maximum	37
Sulfur dioxide:	
Annual arithmetic mean	20
Twenty-four-hour maximum	91
Three-hour maximum	512

(3) For any class III area, the maximum allowable increase in concentrations of sulfur dioxide and particulate matter over the baseline concentration of such pollutants shall not exceed the following amounts:

Pollutant	Maximum allowable increase (in micrograms per cubic meter)
Particulate matter:	
Annual geometric mean	37
Twenty-four-hour maximum	75
Sulfur dioxide:	
Annual arithmetic mean	40
Twenty-four-hour maximum	182
Three-hour maximum	700

(4) The maximum allowable concentration of any air pollutant in any area to which this part applies shall not exceed a concentration for such pollutant for each period of exposure equal to—

section shall address at least the following measures:

(A) the establishment of clean air corridors, in which additional restrictions on increases in emissions may be appropriate to protect visibility in affected class I areas;

(B) the imposition of the requirements of part D of this subchapter affecting the construction of new major stationary sources or major modifications to existing sources in such clean air corridors specifically including the alternative siting analysis provisions of section 7503(a)(5) of this title; and

(C) the promulgation of regulations under section 7491 of this title to address long range strategies for addressing regional haze which impairs visibility in affected class I areas.

(e) Duties of Administrator

(1) The Administrator shall, taking into account the studies pursuant to subsection (a)(1) of this section and the reports pursuant to subsection (d)(2) of this section and any other relevant information, within eighteen months of receipt of the report referred to in subsection (d)(2) of this section, carry out the Administrator's regulatory responsibilities under section 7491 of this title, including criteria for measuring "reasonable progress" toward the national goal.

(2) Any regulations promulgated under section 7491 of this title pursuant to this subsection shall require affected States to revise within 12 months their implementation plans under section 7410 of this title to contain such emission limits, schedules of compliance, and other measures as may be necessary to carry out regulations promulgated pursuant to this subsection.

(f) Grand Canyon visibility transport commission

The Administrator pursuant to subsection (c)(1) of this section shall, within 12 months, establish a visibility transport commission for the region affecting the visibility of the Grand Canyon National Park.

(July 14, 1955, ch. 360, title I, § 169B, as added Pub. L. 101–549, title VIII, § 816, Nov. 15, 1990, 104 Stat. 2695.)

REFERENCES IN TEXT

The Clean Air Act Amendments of 1990, referred to in subsec. (b), probably means Pub. L. 101–549, Nov. 15, 1990, 104 Stat. 2399. For complete classification of this Act to the Code, see Short Title note set out under section 7401 of this title and Tables.

The Federal Advisory Committee Act, referred to in subsec. (c)(4), is Pub. L. 92–463, Oct. 6, 1972, 86 Stat. 770, as amended, which is set out in the Appendix to Title 5, Government Organization and Employees.

PART D—PLAN REQUIREMENTS FOR NONATTAINMENT AREAS

SUBPART 1—NONATTAINMENT AREAS IN GENERAL

§ 7501. Definitions

For the purpose of this part—

(1) REASONABLE FURTHER PROGRESS.—The term "reasonable further progress" means such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date.

(2) NONATTAINMENT AREA.—The term "nonattainment area" means, for any air pollutant, an area which is designated "nonattainment" with respect to that pollutant within the meaning of section 7407(d) of this title.

(3) The term "lowest achievable emission rate" means for any source, that rate of emissions which reflects—

(A) the most stringent emission limitation which is contained in the implementation plan of any State for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable, or

(B) the most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent.

In no event shall the application of this term permit a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance.

(4) The terms "modifications" and "modified" mean the same as the term "modification" as used in section 7411(a)(4) of this title.

(July 14, 1955, ch. 360, title I, § 171, as added Pub. L. 95–95, title I, § 129(b), Aug. 7, 1977, 91 Stat. 745; amended Pub. L. 101–549, title I, § 102(a)(2), Nov. 15, 1990, 104 Stat. 2412.)

AMENDMENTS

1990—Pub. L. 101–549, § 102(a)(2)(A), struck out "and section 7410(a)(2)(I) of this title" after "purpose of this part".

Pars. (1), (2). Pub. L. 101–549, § 102(a)(2)(B), (C), amended pars. (1) and (2) generally. Prior to amendment, pars. (1) and (2) read as follows:

"(1) The term 'reasonable further progress' means annual incremental reductions in emissions of the applicable air pollutant (including substantial reductions in the early years following approval or promulgation of plan provisions under this part and section 7410(a)(2)(I) of this title and regular reductions thereafter) which are sufficient in the judgment of the Administrator, to provide for attainment of the applicable national ambient air quality standard by the date required in section 7502(a) of this title.

"(2) The term 'nonattainment area' means, for any air pollutant an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the Administrator to be reliable) to exceed any national ambient air quality standard for such pollutant. Such term includes any area identified under subparagraphs (A) through (C) of section 7407(d)(1) of this title."

EFFECTIVE DATE

Part effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

§ 7502. Nonattainment plan provisions in general

(a) Classifications and attainment dates

(1) Classifications

(A) On or after the date the Administrator promulgates the designation of an area as a

nonattainment area pursuant to section 7407(d) of this title with respect to any national ambient air quality standard (or any revised standard, including a revision of any standard in effect on November 15, 1990), the Administrator may classify the area for the purpose of applying an attainment date pursuant to paragraph (2), and for other purposes. In determining the appropriate classification, if any, for a nonattainment area, the Administrator may consider such factors as the severity of nonattainment in such area and the availability and feasibility of the pollution control measures that the Administrator believes may be necessary to provide for attainment of such standard in such area.

(B) The Administrator shall publish a notice in the Federal Register announcing each classification under subparagraph (A), except the Administrator shall provide an opportunity for at least 30 days for written comment. Such classification shall not be subject to the provisions of sections 553 through 557 of title 5 (concerning notice and comment) and shall not be subject to judicial review until the Administrator takes final action under subsection (k) or (*l*) of section 7410 of this title (concerning action on plan submissions) or section 7509 of this title (concerning sanctions) with respect to any plan submissions required by virtue of such classification.

(C) This paragraph shall not apply with respect to nonattainment areas for which classifications are specifically provided under other provisions of this part.

(2) Attainment dates for nonattainment areas

(A) The attainment date for an area designated nonattainment with respect to a national primary ambient air quality standard shall be the date by which attainment can be achieved as expeditiously as practicable, but no later than 5 years from the date such area was designated nonattainment under section 7407(d) of this title, except that the Administrator may extend the attainment date to the extent the Administrator determines appropriate, for a period no greater than 10 years from the date of designation as nonattainment, considering the severity of nonattainment and the availability and feasibility of pollution control measures.

(B) The attainment date for an area designated nonattainment with respect to a secondary national ambient air quality standard shall be the date by which attainment can be achieved as expeditiously as practicable after the date such area was designated nonattainment under section 7407(d) of this title.

(C) Upon application by any State, the Administrator may extend for 1 additional year (hereinafter referred to as the "Extension Year") the attainment date determined by the Administrator under subparagraph (A) or (B) if—

(i) the State has complied with all requirements and commitments pertaining to the area in the applicable implementation plan, and

(ii) in accordance with guidance published by the Administrator, no more than a minimal number of exceedances of the relevant national ambient air quality standard has occurred in the area in the year preceding the Extension Year.

No more than 2 one-year extensions may be issued under this subparagraph for a single nonattainment area.

(D) This paragraph shall not apply with respect to nonattainment areas for which attainment dates are specifically provided under other provisions of this part.

(b) Schedule for plan submissions

At the time the Administrator promulgates the designation of an area as nonattainment with respect to a national ambient air quality standard under section 7407(d) of this title, the Administrator shall establish a schedule according to which the State containing such area shall submit a plan or plan revision (including the plan items) meeting the applicable requirements of subsection (c) of this section and section 7410(a)(2) of this title. Such schedule shall at a minimum, include a date or dates, extending no later than 3 years from the date of the nonattainment designation, for the submission of a plan or plan revision (including the plan items) meeting the applicable requirements of subsection (c) of this section and section 7410(a)(2) of this title.

(c) Nonattainment plan provisions

The plan provisions (including plan items) required to be submitted under this part shall comply with each of the following:

(1) In general

Such plan provisions shall provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards.

(2) RFP

Such plan provisions shall require reasonable further progress.

(3) Inventory

Such plan provisions shall include a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in such area, including such periodic revisions as the Administrator may determine necessary to assure that the requirements of this part are met.

(4) Identification and quantification

Such plan provisions shall expressly identify and quantify the emissions, if any, of any such pollutant or pollutants which will be allowed, in accordance with section 7503(a)(1)(B) of this title, from the construction and operation of major new or modified stationary sources in each such area. The plan shall demonstrate to the satisfaction of the Administrator that the emissions quantified for this purpose will be consistent with the achievement of reasonable further progress and will not interfere with attainment of the applicable national ambient

air quality standard by the applicable attainment date.

(5) Permits for new and modified major stationary sources

Such plan provisions shall require permits for the construction and operation of new or modified major stationary sources anywhere in the nonattainment area, in accordance with section 7503 of this title.

(6) Other measures

Such plan provisions shall include enforceable emission limitations, and such other control measures, means or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for attainment of such standard in such area by the applicable attainment date specified in this part.

(7) Compliance with section 7410(a)(2)

Such plan provisions shall also meet the applicable provisions of section 7410(a)(2) of this title.

(8) Equivalent techniques

Upon application by any State, the Administrator may allow the use of equivalent modeling, emission inventory, and planning procedures, unless the Administrator determines that the proposed techniques are, in the aggregate, less effective than the methods specified by the Administrator.

(9) Contingency measures

Such plan shall provide for the implementation of specific measures to be undertaken if the area fails to make reasonable further progress, or to attain the national primary ambient air quality standard by the attainment date applicable under this part. Such measures shall be included in the plan revision as contingency measures to take effect in any such case without further action by the State or the Administrator.

(d) Plan revisions required in response to finding of plan inadequacy

Any plan revision for a nonattainment area which is required to be submitted in response to a finding by the Administrator pursuant to section 7410(k)(5) of this title (relating to calls for plan revisions) must correct the plan deficiency (or deficiencies) specified by the Administrator and meet all other applicable plan requirements of section 7410 of this title and this part. The Administrator may reasonably adjust the dates otherwise applicable under such requirements to such revision (except for attainment dates that have not yet elapsed), to the extent necessary to achieve a consistent application of such requirements. In order to facilitate submittal by the States of adequate and approvable plans consistent with the applicable requirements of this chapter, the Administrator shall, as appropriate and from time to time, issue written guidelines, interpretations, and information to the States which shall be available to the public, taking into consideration any such guidelines, interpretations, or information provided before November 15, 1990.

(e) Future modification of standard

If the Administrator relaxes a national primary ambient air quality standard after November 15, 1990, the Administrator shall, within 12 months after the relaxation, promulgate requirements applicable to all areas which have not attained that standard as of the date of such relaxation. Such requirements shall provide for controls which are not less stringent than the controls applicable to areas designated nonattainment before such relaxation.

(July 14, 1955, ch. 360, title I, § 172, as added Pub. L. 95–95, title I, § 129(b), Aug. 7, 1977, 91 Stat. 746; amended Pub. L. 95–190, § 14(a)(55), (56), Nov. 16, 1977, 91 Stat. 1402; Pub. L. 101–549, title I, § 102(b), Nov. 15, 1990, 104 Stat. 2412.)

AMENDMENTS

1990—Pub. L. 101–549 amended section generally, substituting present provisions for provisions which related to: in subsec. (a), expeditious attainment of national ambient air quality standards; in subsec. (b), requisite provisions of plan; and in subsec. (c), attainment of applicable standard not later than July 1, 1987.

1977—Subsec. (b)(4). Pub. L. 95–190, § 14(a)(55), substituted "subsection (a) of this section" for "paragraph (1)".

Subsec. (c). Pub. L. 95–190, § 14(a)(56), substituted "December 31" for "July 1".

NONATTAINMENT AREAS

Section 129(a) of Pub. L. 95–95, as amended by Pub. L. 95–190, § 14(b)(2), (3), Nov. 16, 1977, 91 Stat. 1404, provided that:

"(1) Before July 1, 1979, the interpretative regulation of the Administrator of the Environmental Protection Agency published in 41 Federal Register 55524–30, December 21, 1976, as may be modified by rule of the Administrator, shall apply except that the baseline to be used for determination of appropriate emission offsets under such regulation shall be the applicable implementation plan of the State in effect at the time of application for a permit by a proposed major stationary source (within the meaning of section 302 of the Clean Air Act) [section 7602 of this title].

"(2) Before July 1, 1979, the requirements of the regulation referred to in paragraph (1) shall be waived by the Administrator with respect to any pollutant if he determines that the State has—

"(A) an inventory of emissions of the applicable pollutant for each nonattainment area (as defined in section 171 of the Clean Air Act [section 7501 of this title]) that identifies the type, quantity, and source of such pollutant so as to provide information sufficient to demonstrate that the requirements of subparagraph (C) are being met;

"(B) an enforceable permit program which—

"(i) requires new or modified major stationary sources to meet emission limitations at least as stringent as required under the permit requirements referred to in paragraphs (2) and (3) of section 173 of the Clean Air Act [section 7503 of this title] (relating to lowest achievable emission rate and compliance by other sources) and which assures compliance with the annual reduction requirements of subparagraph (C); and

"(ii) requires existing sources to achieve such reduction in emissions in the area as may be obtained through the adoption, at a minimum of reasonably available control technology, and

"(C) a program which requires reductions in total allowable emissions in the area prior to July 1, 1979, so as to provide for the same level of emission reduction as would result from the application of the regulation referred to in paragraph (1).

The Administrator shall terminate such waiver if in his judgment the reduction in emissions actually being at-

closed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, to persons carrying out the National Academy of Sciences' study and investigation provided for in section 7521(c) of this title, or when relevant in any proceeding under this chapter. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpena served upon any person under this subparagraph,[4] the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator to appear and produce papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) Judicial review

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 7412 of this title, any standard of performance or requirement under section 7411 of this title, any standard under section 7521 of this title (other than a standard required to be prescribed under section 7521(b)(1) of this title), any determination under section 7521(b)(5)[1] of this title, any control or prohibition under section 7545 of this title, any standard under section 7571 of this title, any rule issued under section 7413, 7419, or under section 7420 of this title, or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 7410 of this title or section 7411(d) of this title, any order under section 7411(j) of this title, under section 7412 of this title,,[3] under section 7419 of this title, or under section 7420 of this title, or his action under section 1857c–10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I of this chapter) which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).

(c) Additional evidence

In any judicial proceeding in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as to[5] the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(d) Rulemaking

(1) This subsection applies to—

(A) the promulgation or revision of any national ambient air quality standard under section 7409 of this title,

(B) the promulgation or revision of an implementation plan by the Administrator under section 7410(c) of this title,

(C) the promulgation or revision of any standard of performance under section 7411 of this title, or emission standard or limitation under section 7412(d) of this title, any standard under section 7412(f) of this title, or any regulation under section 7412(g)(1)(D) and (F) of this title, or any regulation under section 7412(m) or (n) of this title,

(D) the promulgation of any requirement for solid waste combustion under section 7429 of this title,

[4] So in original. Probably should be "subsection,".

[5] So in original. The word "to" probably should not appear.

(E) the promulgation or revision of any regulation pertaining to any fuel or fuel additive under section 7545 of this title,

(F) the promulgation or revision of any aircraft emission standard under section 7571 of this title,

(G) the promulgation or revision of any regulation under subchapter IV–A of this chapter (relating to control of acid deposition),

(H) promulgation or revision of regulations pertaining to primary nonferrous smelter orders under section 7419 of this title (but not including the granting or denying of any such order),

(I) promulgation or revision of regulations under subchapter VI of this chapter (relating to stratosphere and ozone protection),

(J) promulgation or revision of regulations under part C of subchapter I of this chapter (relating to prevention of significant deterioration of air quality and protection of visibility),

(K) promulgation or revision of regulations under section 7521 of this title and test procedures for new motor vehicles or engines under section 7525 of this title, and the revision of a standard under section 7521(a)(3) of this title,

(L) promulgation or revision of regulations for noncompliance penalties under section 7420 of this title,

(M) promulgation or revision of any regulations promulgated under section 7541 of this title (relating to warranties and compliance by vehicles in actual use),

(N) action of the Administrator under section 7426 of this title (relating to interstate pollution abatement),

(O) the promulgation or revision of any regulation pertaining to consumer and commercial products under section 7511b(e) of this title,

(P) the promulgation or revision of any regulation pertaining to field citations under section 7413(d)(3) of this title,

(Q) the promulgation or revision of any regulation pertaining to urban buses or the clean-fuel vehicle, clean-fuel fleet, and clean fuel programs under part C of subchapter II of this chapter,

(R) the promulgation or revision of any regulation pertaining to nonroad engines or nonroad vehicles under section 7547 of this title,

(S) the promulgation or revision of any regulation relating to motor vehicle compliance program fees under section 7552 of this title,

(T) the promulgation or revision of any regulation under subchapter IV–A of this chapter (relating to acid deposition),

(U) the promulgation or revision of any regulation under section 7511b(f) of this title pertaining to marine vessels, and

(V) such other actions as the Administrator may determine.

The provisions of section 553 through 557 and section 706 of title 5 shall not, except as expressly provided in this subsection, apply to actions to which this subsection applies. This subsection shall not apply in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of subsection 553(b) of title 5.

(2) Not later than the date of proposal of any action to which this subsection applies, the Administrator shall establish a rulemaking docket for such action (hereinafter in this subsection referred to as a "rule"). Whenever a rule applies only within a particular State, a second (identical) docket shall be simultaneously established in the appropriate regional office of the Environmental Protection Agency.

(3) In the case of any rule to which this subsection applies, notice of proposed rulemaking shall be published in the Federal Register, as provided under section 553(b) of title 5, shall be accompanied by a statement of its basis and purpose and shall specify the period available for public comment (hereinafter referred to as the "comment period"). The notice of proposed rulemaking shall also state the docket number, the location or locations of the docket, and the times it will be open to public inspection. The statement of basis and purpose shall include a summary of—

(A) the factual data on which the proposed rule is based;

(B) the methodology used in obtaining the data and in analyzing the data; and

(C) the major legal interpretations and policy considerations underlying the proposed rule.

The statement shall also set forth or summarize and provide a reference to any pertinent findings, recommendations, and comments by the Scientific Review Committee established under section 7409(d) of this title and the National Academy of Sciences, and, if the proposal differs in any important respect from any of these recommendations, an explanation of the reasons for such differences. All data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule.

(4)(A) The rulemaking docket required under paragraph (2) shall be open for inspection by the public at reasonable times specified in the notice of proposed rulemaking. Any person may copy documents contained in the docket. The Administrator shall provide copying facilities which may be used at the expense of the person seeking copies, but the Administrator may waive or reduce such expenses in such instances as the public interest requires. Any person may request copies by mail if the person pays the expenses, including personnel costs to do the copying.

(B)(i) Promptly upon receipt by the agency, all written comments and documentary information on the proposed rule received from any person for inclusion in the docket during the comment period shall be placed in the docket. The transcript of public hearings, if any, on the proposed rule shall also be included in the docket promptly upon receipt from the person who transcribed such hearings. All documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking shall be placed in the docket as soon as possible after their availability.

(ii) The drafts of proposed rules submitted by the Administrator to the Office of Management

and Budget for any interagency review process prior to proposal of any such rule, all documents accompanying such drafts, and all written comments thereon by other agencies and all written responses to such written comments by the Administrator shall be placed in the docket no later than the date of proposal of the rule. The drafts of the final rule submitted for such review process prior to promulgation and all such written comments thereon, all documents accompanying such drafts, and written responses thereto shall be placed in the docket no later than the date of promulgation.

(5) In promulgating a rule to which this subsection applies (i) the Administrator shall allow any person to submit written comments, data, or documentary information; (ii) the Administrator shall give interested persons an opportunity for the oral presentation of data, views, or arguments, in addition to an opportunity to make written submissions; (iii) a transcript shall be kept of any oral presentation; and (iv) the Administrator shall keep the record of such proceeding open for thirty days after completion of the proceeding to provide an opportunity for submission of rebuttal and supplementary information.

(6)(A) The promulgated rule shall be accompanied by (i) a statement of basis and purpose like that referred to in paragraph (3) with respect to a proposed rule and (ii) an explanation of the reasons for any major changes in the promulgated rule from the proposed rule.

(B) The promulgated rule shall also be accompanied by a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations during the comment period.

(C) The promulgated rule may not be based (in part or whole) on any information or data which has not been placed in the docket as of the date of such promulgation.

(7)(A) The record for judicial review shall consist exclusively of the material referred to in paragraph (3), clause (i) of paragraph (4)(B), and subparagraphs (A) and (B) of paragraph (6).

(B) Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section). Such reconsideration shall not postpone the effectiveness of the rule. The effectiveness of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.

(8) The sole forum for challenging procedural determinations made by the Administrator under this subsection shall be in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section) at the time of the substantive review of the rule. No interlocutory appeals shall be permitted with respect to such procedural determinations. In reviewing alleged procedural errors, the court may invalidate the rule only if the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.

(9) In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or

(D) without observance of procedure required by law, if (i) such failure to observe such procedure is arbitrary or capricious, (ii) the requirement of paragraph (7)(B) has been met, and (iii) the condition of the last sentence of paragraph (8) is met.

(10) Each statutory deadline for promulgation of rules to which this subsection applies which requires promulgation less than six months after date of proposal may be extended to not more than six months after date of proposal by the Administrator upon a determination that such extension is necessary to afford the public, and the agency, adequate opportunity to carry out the purposes of this subsection.

(11) The requirements of this subsection shall take effect with respect to any rule the proposal of which occurs after ninety days after August 7, 1977.

(e) Other methods of judicial review not authorized

Nothing in this chapter shall be construed to authorize judicial review of regulations or orders of the Administrator under this chapter, except as provided in this section.

(f) Costs

In any judicial proceeding under this section, the court may award costs of litigation (including reasonable attorney and expert witness fees) whenever it determines that such award is appropriate.

(g) Stay, injunction, or similar relief in proceedings relating to noncompliance penalties

In any action respecting the promulgation of regulations under section 7420 of this title or the administration or enforcement of section 7420 of this title no court shall grant any stay, injunctive, or similar relief before final judgment by such court in such action.

(h) Public participation

It is the intent of Congress that, consistent with the policy of subchapter II of chapter 5 of

(e) The annual primary standard is met when the annual average concentration in a calendar year is less than or equal to 53 ppb, as determined in accordance with Appendix S of this part for the annual standard.

(f) The 1-hour primary standard is met when the three-year average of the annual 98th percentile of the daily maximum 1-hour average concentration is less than or equal to 100 ppb, as determined in accordance with Appendix S of this part for the 1-hour standard.

(g) The secondary standard is attained when the annual arithmetic mean concentration in a calendar year is less than or equal to 0.053 ppm, rounded to three decimal places (fractional parts equal to or greater than 0.0005 ppm must be rounded up). To demonstrate attainment, an annual mean must be based upon hourly data that are at least 75 percent complete or upon data derived from manual methods that are at least 75 percent complete for the scheduled sampling days in each calendar quarter.

[75 FR 6531, Feb. 9, 2010]

§ 50.12 National primary and secondary ambient air quality standards for lead.

(a) National primary and secondary ambient air quality standards for lead and its compounds, measured as elemental lead by a reference method based on appendix G to this part, or by an equivalent method, are: 1.5 micrograms per cubic meter, maximum arithmetic mean averaged over a calendar quarter.

(b) The standards set forth in this section will remain applicable to all areas notwithstanding the promulgation of lead national ambient air quality standards (NAAQS) in §50.16. The lead NAAQS set forth in this section will no longer apply to an area one year after the effective date of the designation of that area, pursuant to section 107 of the Clean Air Act, for the lead NAAQS set forth in §50.16; except that for areas designated nonattainment for the lead NAAQS set forth in this section as of the effective date of §50.16, the lead NAAQS set forth in this section will apply until that area submits, pursuant to section 191 of the Clean Air Act, and EPA approves, an implementation plan providing for attainment and/or maintenance of the lead NAAQS set forth in §50.16.

(Secs. 109, 301(a) Clean Air Act as amended (42 U.S.C. 7409, 7601(a)))

[43 FR 46258, Oct. 5, 1978, as amended at 73 FR 67051, Nov. 12, 2008]

§ 50.13 National primary and secondary ambient air quality standards for $PM_{2.5}$.

(a) The national primary and secondary ambient air quality standards for particulate matter are 15.0 micrograms per cubic meter ($\mu g/m^3$) annual arithmetic mean concentration, and 35 $\mu g/m^3$ 24-hour average concentration measured in the ambient air as $PM_{2.5}$ (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either:

(1) A reference method based on appendix L of this part and designated in accordance with part 53 of this chapter; or

(2) An equivalent method designated in accordance with part 53 of this chapter.

(b) The annual primary and secondary $PM_{2.5}$ standards are met when the annual arithmetic mean concentration, as determined in accordance with appendix N of this part, is less than or equal to 15.0 $\mu g/m^3$.

(c) The 24-hour primary and secondary $PM_{2.5}$ standards are met when the 98th percentile 24-hour concentration, as determined in accordance with appendix N of this part, is less than or equal to 35 $\mu g/m^3$.

[71 FR 61224, Oct. 17, 2006]

§ 50.14 Treatment of air quality monitoring data influenced by exceptional events.

(a) *Requirements.* (1) A State may request EPA to exclude data showing exceedances or violations of the national ambient air quality standard that are directly due to an exceptional event from use in determinations by demonstrating to EPA's satisfaction that such event caused a specific air pollution concentration at a particular air quality monitoring location.

(2) Demonstration to justify data exclusion may include any reliable and

(b) [Reserved]

[72 FR 13581, Mar. 22, 2007]

Subpart Z—Provisions for Implementation of $PM_{2.5}$ National Ambient Air Quality Standards

SOURCE: 72 FR 20664, April 25, 2007, unless otherwise noted.

§ 51.1000 Definitions.

The following definitions apply for purposes of this subpart. Any term not defined herein shall have the meaning as defined in 40 CFR 51.100.

Act means the Clean Air Act as codified at 42 U.S.C. 7401–7671q. (2003).

Attainment date means the date by which an area, under an approved State implementation plan, is required to attain the $PM_{2.5}$ NAAQS (based on the average of three consecutive years of ambient air quality data).

Baseline year inventory for the RFP plan is the emissions inventory for the year also used as the base year for the attainment demonstration.

Benchmark RFP plan means the reasonable further progress plan that requires generally linear emission reductions in pollutants from the baseline emissions year through the milestone inventory year.

Date of designation means the effective date of the $PM_{2.5}$ area designation as promulgated by the Administrator.

Direct $PM_{2.5}$ emissions means solid particles emitted directly from an air emissions source or activity, or gaseous emissions or liquid droplets from an air emissions source or activity which condense to form particulate matter at ambient temperatures. Direct $PM_{2.5}$ emissions include elemental carbon, directly emitted organic carbon, directly emitted sulfate, directly emitted nitrate, and other inorganic particles (including but not limited to crustal material, metals, and sea salt).

Existing control measure means any Federally enforceable national, State, or local control measure that has been approved in the SIP and that results in reductions in emissions of $PM_{2.5}$ or $PM_{2.5}$ precursors in a nonattainment area.

Full implementation inventory is the projected RFP emission inventory for the year preceding the attainment date, representing a level of emissions that demonstrates attainment.

Milestone year inventory is the projected RFP emission inventory for the applicable RFP milestone year (*i.e.* 2009 and, where applicable, 2012).

$PM_{2.5}$ NAAQS means the particulate matter national ambient air quality standards (annual and 24-hour) codified at 40 CFR 50.7.

$PM_{2.5}$ design value for a nonattainment area is the highest of the three-year average concentrations calculated for the monitors in the area, in accordance with 40 CFR part 50, appendix N.

$PM_{2.5}$ attainment plan precursor means SO_2 and those other $PM_{2.5}$ precursors emitted by sources in the State which the State must evaluate for emission reduction measures to be included in its $PM_{2.5}$ nonattainment area or maintenance area plan.

$PM_{2.5}$ precursor means those air pollutants other than $PM_{2.5}$ direct emissions that contribute to the formation of $PM_{2.5}$. $PM_{2.5}$ precursors include SO_2, NO_x, volatile organic compounds, and ammonia.

Reasonable further progress (RFP) means the incremental emissions reductions toward attainment required under sections 172(c)(2) and 171(1).

Subpart 1 means the general attainment plan requirements found in subpart 1 of part D of title I of the Act.

§ 51.1001 Applicability of part 51.

The provisions in subparts A through X of this part apply to areas for purposes of the $PM_{2.5}$ NAAQS to the extent they are not inconsistent with the provisions of this subpart.

§ 51.1002 Submittal of State implementation plan.

(a) For any area designated by EPA as nonattainment for the $PM_{2.5}$ NAAQS, the State must submit a State implementation plan satisfying the requirements of section 172 of the Act and this subpart to EPA by the date prescribed by EPA which will be no later than 3 years from the date of designation.

(b) The State must submit a plan consistent with the requirements of

section 110(a)(2) of the Act unless the State already has fulfilled this obligation for the purposes of implementing the $PM_{2.5}$ NAAQS.

(c) *Pollutants contributing to fine particle concentrations.* The State implementation plan must identify and evaluate sources of $PM_{2.5}$ direct emissions and $PM_{2.5}$ attainment plan precursors in accordance with §§ 51.1009 and 51.1010. After January 1, 2011, for purposes of establishing emissions limits under 51.1009 and 51.1010, States must establish such limits taking into consideration the condensable fraction of direct $PM_{2.5}$ emissions. Prior to this date, States are not prohibited from establishing source emission limits that include the condensable fraction of direct $PM_{2.5}$.

(1) The State must address sulfur dioxide as a $PM_{2.5}$ attainment plan precursor and evaluate sources of SO_2 emissions in the State for control measures.

(2) The State must address NO_X as a $PM_{2.5}$ attainment plan precursor and evaluate sources of NO_X emissions in the State for control measures, unless the State and EPA provide an appropriate technical demonstration for a specific area showing that NO_X emissions from sources in the State do not significantly contribute to $PM_{2.5}$ concentrations in the nonattainment area.

(3) The State is not required to address VOC as a $PM_{2.5}$ attainment plan precursor and evaluate sources of VOC emissions in the State for control measures, unless:

(i) the State provides an appropriate technical demonstration for a specific area showing that VOC emissions from sources in the State significantly contribute to $PM_{2.5}$ concentrations in the nonattainment area, and such demonstration is approved by EPA; or

(ii) The EPA provides such a technical demonstration.

(4) The State is not required to address ammonia as a $PM_{2.5}$ attainment plan precursor and evaluate sources of ammonia emissions from sources in the State for control measures, unless:

(i) The State provides an appropriate technical demonstration for a specific area showing that ammonia emissions from sources in the State significantly contribute to $PM_{2.5}$ concentrations in the nonattainment area, and such demonstration is approved by EPA; or

(ii) The EPA provides such a technical demonstration.

(5) The State must submit a demonstration to reverse any presumption in this rule for a $PM_{2.5}$ precursor with respect to a particular nonattainment area, if the administrative record related to development of its SIP shows that the presumption is not technically justified for that area.

§ 51.1003 [Reserved]

§ 51.1004 Attainment dates.

(a) Consistent with section 172(a)(2)(A) of the Act, the attainment date for an area designated nonattainment for the $PM_{2.5}$ NAAQS will be the date by which attainment can be achieved as expeditiously as practicable, but no more than five years from the date of designation. The Administrator may extend the attainment date to the extent the Administrator determines appropriate, for a period no greater than 10 years from the date of designation, considering the severity of nonattainment and the availability and feasibility of pollution control measures.

(b) In the SIP submittal for each of its nonattainment areas, the State must submit an attainment demonstration justifying its proposed attainment date. For each nonattainment area, the Administrator will approve an attainment date at the same time the Administrator approves the attainment demonstration for the area, consistent with the attainment date timing provision of section 172(a)(2)(A) and paragraph (a) of this section.

(c) Upon a determination by EPA that an area designated nonattainment for the $PM_{2.5}$ NAAQS has attained the standard, the requirements for such area to submit attainment demonstrations and associated reasonably available control measures, reasonable further progress plans, contingency measures, and other planning SIPs related to attainment of the $PM_{2.5}$ NAAQS shall be suspended until such time as: the area is redesignated to attainment, at which time the requirements no longer apply; or EPA determines that the area has violated the $PM_{2.5}$ NAAQS,

at which time the area is again required to submit such plans.

§ 51.1005 One-year extensions of the attainment date.

(a) Pursuant to section 172(a)(2)(C)(ii) of the Act, a State with an area that fails to attain the $PM_{2.5}$ NAAQS by its attainment date may apply for an initial 1-year attainment date extension if the State has complied with all requirements and commitments pertaining to the area in the applicable implementation plan, and:

(1) For an area that violates the annual $PM_{2.5}$ NAAQS as of its attainment date, the annual average concentration for the most recent year at each monitor is 15.0 $\mu g/m^3$ or less (calculated according to the data analysis requirements in 40 CFR part 50, appendix N).

(2) For an area that violates the 24-hour $PM_{2.5}$ NAAQS as of its attainment date, the 98th percentile concentration for the most recent year at each monitor is 65 $\mu g/m^3$ or less (calculated according to the data analysis requirements in 40 CFR part 50, appendix N).

(b) An area that fails to attain the $PM_{2.5}$ NAAQS after receiving a 1-year attainment date extension may apply for a second 1-year attainment date extension pursuant to section 172(a)(2)(C)(ii) if the State has complied with all requirements and commitments pertaining to the area in the applicable implementation plan, and:

(1) For an area that violates the annual $PM_{2.5}$ NAAQS as of its attainment date, the two-year average of annual average concentrations at each monitor, based on the first extension year and the previous year, is 15.0 $\mu g/m^3$ or less (calculated according to the data analysis requirements in 40 CFR part 50, appendix N).

(2) For an area that violates the 24-hour $PM_{2.5}$ NAAQS as of its attainment date, the two-year average of annual 98th percentile concentrations at each monitor, based on the first extension year and the previous year, is 65 $\mu g/m^3$ or less (calculated according to the data analysis requirements in 40 CFR part 50, appendix N).

§ 51.1006 Redesignation to nonattainment following initial designations for the $PM_{2.5}$ NAAQS.

Any area that is initially designated "attainment/unclassifiable" for the $PM_{2.5}$ NAAQS may be subsequently redesignated to nonattainment if ambient air quality data in future years indicate that such a redesignation is appropriate. For any such area that is redesignated to nonattainment for the $PM_{2.5}$ NAAQS, any absolute, fixed date that is applicable in connection with the requirements of this part is extended by a period of time equal to the length of time between the effective date of the initial designation for the $PM_{2.5}$ NAAQS and the effective date of redesignation, except as otherwise provided in this subpart.

§ 51.1007 Attainment demonstration and modeling requirements.

(a) For any area designated as nonattainment for the $PM_{2.5}$ NAAQS, the State must submit an attainment demonstration showing that the area will attain the annual and 24-hour standards as expeditiously as practicable. The demonstration must meet the requirements of § 51.112 and Appendix W of this part and must include inventory data, modeling results, and emission reduction analyses on which the State has based its projected attainment date. The attainment date justified by the demonstration must be consistent with the requirements of § 51.1004(a). The modeled strategies must be consistent with requirements in § 51.1009 for RFP and in § 51.1010 for RACT and RACM. The attainment demonstration and supporting air quality modeling should be consistent with EPA's $PM_{2.5}$ modeling guidance.

(b) *Required time frame for obtaining emissions reductions.* For each nonattainment area, the State implementation plan must provide for implementation of all control measures needed for attainment as expeditiously as practicable, but no later than the beginning of the year prior to the attainment date. Consistent with section 172(c)(1) of the Act, the plan must provide for implementation of all RACM and RACT as expeditiously as practicable. The plan also must include RFP milestones in accordance with

§ 51.1009, and control measures needed to meet these milestones, as necessary.

§ 51.1008 Emission inventory requirements for the $PM_{2.5}$ NAAQS.

(a) For purposes of meeting the emission inventory requirements of section 172(c)(3) of the Act for nonattainment areas, the State shall, no later than three years after designation:

(1) Submit to EPA Statewide emission inventories for direct $PM_{2.5}$ emissions and emissions of $PM_{2.5}$ precursors. For purposes of defining the data elements for these inventories, the $PM_{2.5}$ and $PM_{2.5}$ precursor-relevant data element requirements under subpart A of this part shall apply.

(2) Submit any additional emission inventory information needed to support an attainment demonstration and RFP plan ensuring expeditious attainment of the annual and 24-hour $PM_{2.5}$ standards.

(b) For inventories required for submission under paragraph (a) of this section, a baseline emission inventory is required for the attainment demonstration required under § 51.1007 and for meeting RFP requirements under § 51.1009. As determined on the date of designation, the base year for this inventory shall be the most recent calendar year for which a complete inventory was required to be submitted to EPA pursuant to subpart A of this part. The baseline emission inventory for calendar year 2002 or other suitable year shall be used for attainment planning and RFP plans for areas initially designated nonattainment for the $PM_{2.5}$ NAAQS in 2004–2005.

§ 51.1009 Reasonable further progress (RFP) requirements.

(a) Consistent with section 172(c)(2) of the Act, State implementation plans for areas designated nonattainment for the $PM_{2.5}$ NAAQS must demonstrate reasonable further progress as provided in § 51.1009(b) through (h).

(b) If the State submits to EPA an attainment demonstration and State implementation plan for an area which demonstrates that it will attain the PM NAAQS within five years of the date of designation, the State is not required to submit a separate RFP plan. Compliance with the emission reduction measures in the attainment demonstration and State implementation plan will meet the requirements for achieving reasonable further progress for the area.

(c) For any area for which the State submits to EPA an approvable attainment demonstration and State implementation plan that demonstrates the area needs an attainment date of more than five years from the date of designation, the State also must submit an RFP plan. The RFP plan must describe the control measures that provide for meeting the reasonable further progress milestones for the area, the timing of implementation of those measures, and the expected reductions in emissions of direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors. The RFP plan is due to EPA within three years of the date of designation.

(1) For any State that submits to EPA an approvable attainment demonstration and State implementation plan justifying an attainment date of more than five and less than nine years from the date of designation, the RFP plan must include 2009 emissions milestones for direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors demonstrating that reasonable further progress will be achieved for the 2009 emissions year.

(2) For any area that submits to EPA an approvable attainment demonstration and State implementation plan justifying an attainment date of nine or ten years from the date of designation, the RFP plan must include 2009 and 2012 emissions milestones for direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors demonstrating that reasonable further progress will be achieved for the 2009 and 2012 emissions years.

(d) The RFP plan must demonstrate that in each applicable milestone year, emissions will be at a level consistent with generally linear progress in reducing emissions between the base year and the attainment year.

(e) For a multi-State nonattainment area, the RFP plans for each State represented in the nonattainment area must demonstrate RFP on the basis of common multi-State inventories. The States within which the area is located must provide a coordinated RFP plan.

Each State in a multi-State nonattainment area must ensure that the sources within its boundaries comply with enforceable emission levels and other requirements that in combination with the reductions planned in other state(s) will provide for attainment as expeditiously as practicable and demonstrate reasonable further progress.

(f) In the benchmark RFP plan, the State must identify direct $PM_{2.5}$ emissions and $PM_{2.5}$ attainment plan precursors regulated under the $PM_{2.5}$ attainment plan and specify target emission reduction levels to be achieved during the milestone years. In developing the benchmark RFP plan, the State must develop emission inventory information for the geographic area included in the plan and conduct the following calculations:

(1) For direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor addressed in the attainment strategy, the full implementation reduction is calculated by subtracting the full implementation inventory from the baseline year inventory.

(2) The "milestone date fraction" is the ratio of the number of years from the baseline year to the milestone inventory year divided by the number of years from the baseline year to the full implementation year.

(3) For direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor addressed in the attainment strategy, a benchmark emission reduction is calculated by multiplying the full implementation reduction by the milestone date fraction.

(4) The benchmark emission level in the milestone year is calculated for direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor by subtracting the benchmark emission reduction from the baseline year emission level. The benchmark RFP plan is defined as a plan that achieves benchmark emission levels for direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor addressed in the attainment strategy for the area.

(5) In comparing inventories between baseline and future years for direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor, the inventories must be derived from the same geographic area. The plan must include emissions estimates for all types of emitting sources and activities in the geographic area from which the emission inventories for direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor addressed in the plan are derived.

(6) For purposes of establishing motor vehicle emissions budgets for transportation conformity purposes (as required in 40 CFR part 93) for a $PM_{2.5}$ nonattainment area, the State shall include in its RFP submittal an inventory of on-road mobile source emissions in the nonattainment area.

(g) The RFP plan due three years after designation must demonstrate that emissions for the milestone year are either:

(1) At levels that are roughly equivalent to the benchmark emission levels for direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor to be addressed in the plan; or

(2) At levels included in an alternative scenario that is projected to result in a generally equivalent improvement in air quality by the milestone year as would be achieved under the benchmark RFP plan.

(h) The equivalence of an alternative scenario to the corresponding benchmark plan must be determined by comparing the expected air quality changes of the two scenarios at the design value monitor location. This comparison must use the information developed for the attainment plan to assess the relationship between emissions reductions of the direct $PM_{2.5}$ emissions and each $PM_{2.5}$ attainment plan precursor addressed in the attainment strategy and the ambient air quality improvement for the associated ambient species.

§51.1010 Requirements for reasonably available control technology (RACT) and reasonably available control measures (RACM).

(a) For each $PM_{2.5}$ nonattainment area, the State shall submit with the attainment demonstration a SIP revision demonstrating that it has adopted all reasonably available control measures (including RACT for stationary

sources) necessary to demonstrate attainment as expeditiously as practicable and to meet any RFP requirements. The SIP revision shall contain the list of the potential measures considered by the State, and information and analysis sufficient to support the State's judgment that it has adopted all RACM, including RACT.

(b) In determining whether a particular emission reduction measure or set of measures must be adopted as RACM under section 172(c)(1) of the Act, the State must consider the cumulative impact of implementing the available measures. Potential measures that are reasonably available considering technical and economic feasibility must be adopted as RACM if, considered collectively, they would advance the attainment date by one year or more.

§ 51.1011 Requirements for mid-course review.

(a) Any State that submits to EPA an approvable attainment plan for a $PM_{2.5}$ nonattainment area justifying an attainment date of nine or ten years from the date of designation also must submit to EPA a mid-course review six years from the date of designation.

(b) The mid-course review for an area must include:

(1) A review of emissions reductions and progress made in implementing control measures to reduce emissions of direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors contributing to $PM_{2.5}$ concentrations in the area;

(2) An analysis of changes in ambient air quality data for the area;

(3) Revised air quality modeling analysis to demonstrate attainment;

(4) Any new or revised control measures adopted by the State, as necessary to ensure attainment by the attainment date in the approved SIP of the nonattainment area.

§ 51.1012 Requirement for contingency measures.

Consistent with section 172(c)(9) of the Act, the State must submit in each attainment plan specific contingency measures to be undertaken if the area fails to make reasonable further progress, or fails to attain the $PM_{2.5}$ NAAQS by its attainment date. The contingency measures must take effect without significant further action by the State or EPA.

APPENDIXES A–K TO PART 51
[RESERVED]

APPENDIX L TO PART 51—EXAMPLE REGULATIONS FOR PREVENTION OF AIR POLLUTION EMERGENCY EPISODES

The example regulations presented herein reflect generally recognized ways of preventing air pollution from reaching levels that would cause imminent and substantial endangerment to the health of persons. States are required under subpart H to have emergency episodes plans but they are not required to adopt the regulations presented herein.

1.0 *Air pollution emergency.* This regulation is designed to prevent the excessive buildup of air pollutants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these pollutants on the health of persons.

1.1 *Episode criteria.* Conditions justifying the proclamation of an air pollution alert, air pollution warning, or air pollution emergency shall be deemed to exist whenever the Director determines that the accumulation of air pollutants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of persons. In making this determination, the Director will be guided by the following criteria:

(a) *Air Pollution Forecast:* An internal watch by the Department of Air Pollution Control shall be actuated by a National Weather Service advisory that Atmospheric Stagnation Advisory is in effect or the equivalent local forecast of stagnant atmospheric condition.

(b) *Alert:* The Alert level is that concentration of pollutants at which first stage control actions is to begin. An Alert will be declared when any one of the following levels is reached at any monitoring site:

SO_2—800 μg/m³ (0.3 p.p.m.), 24-hour average.
PM_{10}—350 μg/m³, 24-hour average.
CO—17 mg/m³ (15 p.p.m.), 8-hour average.
Ozone (O_2)=400 μg/m³ (0.2 ppm)-hour average.
NO_2–1130 μg/m³ (0.6 p.p.m.), 1-hour average,
282 μg/m³ (0.15 p.p.m.), 24-hour average.

In addition to the levels listed for the above pollutants, meterological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase, or in the case of ozone, the situation is likely to reoccur within the next 24-hours unless control actions are taken.

(c) *Warning:* The warning level indicates that air quality is continuing to degrade and