

ORAL ARGUMENT NOT YET SCHEDULED
IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 15-1385 (and consolidated case Nos. 15-1392, 15-1490, 15-1491, 15-1494)

MURRAY ENERGY CORPORATION,
Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

Petition for Review of Final Administrative Actions of the
United States Environmental Protection Agency

**PROOF OPENING BRIEF OF PUBLIC HEALTH AND
ENVIRONMENTAL PETITIONERS**

Seth L. Johnson
David S. Baron
Earthjustice
1625 Massachusetts Ave., NW
Suite 702
Washington, DC 20036-2212
(202) 667-4500
sjohnson@earthjustice.org
dbaron@earthjustice.org

Joshua Stebbins
Joshua Berman*
Sierra Club
50 F Street, NW
Eighth Floor
Washington, DC 20001
(202) 547-1141
josh.stebbins@sierraclub.org
josh.berman@sierraclub.org

*Counsel for Sierra Club, Physicians for
Social Responsibility, National Parks
Conservation Association, Appalachian
Mountain Club, and West Harlem
Environmental Action, Inc.*

Counsel for Sierra Club

DATED: April 22, 2016

* Application for admission to the D.C. Circuit is pending.

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CORPORATION,)	
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<i>Petitioner,</i>)	
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v.)	No. 15-1385
)	(consolidated with Nos. 15-1392,
)	15-1490, 15-1491, 15-1494)
U.S. ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
<i>Respondent.</i>)	
<hr/>		

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

In accordance with Circuit Rule 28(a)(1), Sierra Club, Physicians for Social Responsibility, National Parks Conservation Association, Appalachian Mountain Club, and West Harlem Environmental Action, Inc. (collectively, “Public Health and Environmental Petitioners”) hereby certify as follows:

(A) Parties, Intervenors and *Amici*

(i) Parties, Intervenors, and *Amici* Who Appeared in the District Court

This case is a petition for review of final agency action, not an appeal from the ruling of a district court.

(ii) Parties to This Case

Petitioner:

15-1385 Murray Energy Corporation

- 15-1392 Arizona, Arkansas, New Mexico Environmental Department,
North Dakota, and Oklahoma
- 15-1490 Sierra Club, Physicians for Social Responsibility, National
Parks Conservation Association, Appalachian Mountain Club,
and West Harlem Environmental Action, Inc.
- 15-1491 Chamber of Commerce of the United States of America,
National Association of Manufacturers, American Petroleum
Institute, Utility Air Regulatory Group, Portland Cement
Association, American Coke and Coal Chemicals Institute,
Independent Petroleum Association of America, National
Oilseed Processors Association, and American Fuel &
Petrochemical Manufacturers
- 15-1494 Texas and Texas Commission on Environmental Quality

Respondent:

The respondent in all cases is the U.S. Environmental Protection Agency.

Also named as a respondent in case Nos. 15-1392, 15-1490, 15-1491, and 15-1494 is Gina McCarthy, in her official capacity as Administrator of the U.S. Environmental Protection Agency (collectively, “EPA”).

Intervenors:

Wisconsin, Utah, Kentucky, and Louisiana have been granted leave to intervene on behalf of Petitioners in No. 15-1392. American Lung Association, Sierra Club, Natural Resources Defense Council, and Physicians for Social Responsibility have been granted leave to intervene on behalf of Respondents in Nos. 15-1385, 15-1392, 15-1491, and 15-1494. Chamber of Commerce of the United States of America, National Association of Manufacturers, American Petroleum Institute, Utility Air Regulatory Group, Portland Cement Association, American Coke and Coal Chemicals Institute, Independent Petroleum Association of America, National Oilseed Processors Association, American Fuel & Petrochemical Manufacturers, American Chemistry Council, American Forest & Paper Association, American Foundry Society, American Iron and Steel Industry, and American Wood Council have been granted leave to intervene on behalf of Respondents in No. 15-1490.

(iii) *Amici* in This Case

Institute for Policy Integrity at New York University School of Law has been granted leave to participate as *amicus curiae* in support of Respondents. American Thoracic Society has been granted leave to participate as *amicus curiae* in support of Public Health and Environmental Petitioners.

(B) Circuit Rule 26.1 Disclosure for Public Health and Environmental Petitioners

See disclosure form filed separately.

(C) Ruling Under Review

Petitioners seek review of the final action taken by EPA at 80 Fed. Reg. 65,292 (Oct. 26, 2015) and titled “National Ambient Air Quality Standards for Ozone.”

(D) Related Cases

Public Health and Environmental Petitioners are not aware of any related cases not already consolidated in this matter.

DATED: April 22, 2016

Respectfully submitted,

/s/Seth L. Johnson

Seth L. Johnson

David S. Baron

Earthjustice

1625 Massachusetts Ave., NW

Suite 702

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sjohnson@earthjustice.org

dbaron@earthjustice.org

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Joshua Berman*

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50 F Street, NW

Eighth Floor

Washington, DC 20001

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)	
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_____)	

RULE 26.1 DISCLOSURE STATEMENT

Pursuant to Federal Rules of Appellate Procedure 26.1 and 28(a)(1) and D.C. Circuit Rules 26.1 and 28(a)(1)(A), Sierra Club, Physicians for Social Responsibility, National Parks Conservation Association, Appalachian Mountain Club, and West Harlem Environmental Action, Inc., make the following disclosures:

Sierra Club

Non-Governmental Corporate Party to this Action: Sierra Club.

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party's Stock: None.

Party's General Nature and Purpose: Sierra Club, a corporation organized and existing under the laws of the State of California, is a national nonprofit organization dedicated to the protection and enjoyment of the environment.

Physicians for Social Responsibility

Non-Governmental Corporate Party to this Action: Physicians for Social Responsibility ("PSR").

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party's Stock: None.

Party's General Nature and Purpose: PSR is a corporation organized and existing under the laws of Massachusetts. It is a national nonprofit organization of medical and public health professionals and lay advocates dedicated to promoting peace, strengthening public health and child health, and supporting environmental integrity.

National Parks Conservation Association

Non-Governmental Corporate Party to this Action: National Parks Conservation Association.

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party's Stock: None.

Party's General Nature and Purpose: National Parks Conservation Association, a corporation organized and existing under the laws of the District of Columbia, is a

national nonprofit organization dedicated to protecting and enhancing America's National Parks for present and future generations.

Appalachian Mountain Club

Non-Governmental Corporate Party to this Action: Appalachian Mountain Club.

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party's Stock: None.

Party's General Nature and Purpose: Appalachian Mountain Club, a corporation organized and existing under the laws of the Commonwealth of Massachusetts, is a national nonprofit organization dedicated to promoting the protection, enjoyment, and wise use of the mountains, rivers, and trails of the Northeast Outdoors.

West Harlem Environmental Action, Inc.

Non-Governmental Corporate Party to this Action: West Harlem Environmental Action, Inc. ("WE ACT for Environmental Justice").

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party's Stock: None.

Party's General Nature and Purpose: WE ACT for Environmental Justice is a corporation organized and existing under the laws of New York. Founded in 1988, it is a Northern Manhattan community-based organization whose mission is to build healthy communities by assuring that people of color and/or those with low-

income participate meaningfully in the creation of sound and fair environmental health and protection policies and practices.

DATED: April 22, 2016

Respectfully submitted,

/s/Seth L. Johnson

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Earthjustice

1625 Massachusetts Ave., NW

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Washington, DC 20036-2212

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sjohnson@earthjustice.org

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josh.stebbins@sierraclub.org

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

Pursuant to Circuit Rule 28(a)(3), the following is a glossary of acronyms and abbreviations used in this brief:

ATS	American Thoracic Society
CASAC	Clean Air Scientific Advisory Committee
CASAC Letter	EPA-HQ-OAR-2008-0699-0190
Dkt	EPA-HQ-OAR-2008-0699
EPA	U.S. Environmental Protection Agency and Gina McCarthy, Administrator
Exposure Assessment	EPA-HQ-OAR-2008-0699-1190
ISA	EPA-HQ-OAR-2008-0699-0405
NAAQS	National ambient air quality standards
PA	EPA-HQ-OAR-2008-0699-0404
ppb	Parts per billion
ppm	Parts per million
PSD	Prevention of significant deterioration
RTC	EPA-HQ-OAR-2008-0699-4309
Sierra Club Comments	EPA-HQ-OAR-2008-0699-2720
SO ₂	Sulfur dioxide

PRELIMINARY STATEMENT

Ozone pollution causes serious health impacts in both healthy adults and sensitive subgroups such as children. It also harms plant life and entire ecosystems. EPA has a statutory duty to protect people and the environment from these impacts. The standards EPA established here allow ozone levels that EPA agrees cause adverse health and environmental effects. EPA also allowed certain large industrial sources to be built without making the legally-required showing that they will comply with the new ozone standards.

JURISDICTIONAL STATEMENT

Agency. Respondents U.S. Environmental Protection Agency and Gina McCarthy, Administrator (collectively, “EPA” or “the agency”) have jurisdiction to revise primary (health-protective) and secondary (welfare-protective) national ambient air quality standards (“standards” or “NAAQS”) for ozone under the Clean Air Act (“the Act”). 42 U.S.C. § 7409.

Court of Appeals. Pursuant to 42 U.S.C. § 7607(b)(1), this Court has jurisdiction to review the final EPA actions, taken at 80 FR 65,292 (Oct. 26, 2015), JA____, challenged in this proceeding.

Timeliness. This petition for review was timely filed within the Act’s 60-day window, 42 U.S.C. § 7607(b)(1), on December 23, 2015.

STATUTES AND REGULATIONS

Pertinent statutes and regulations appear in an addendum to this brief.

STATEMENT OF ISSUES

Whether EPA acted unlawfully and arbitrarily in:

1. Adopting an ozone health standard that allows multiple days each year where ozone air pollution exceeds levels that EPA itself found cause adverse health effects.
2. Departing without rational explanation from its science advisors' finding that a specific level of ozone exposure causes adverse effects with substantial scientific certainty.
3. Without rational explanation, redefining "adverse" health effects to exclude harms that EPA itself previously found "adverse" for sensitive populations.
4. Refusing to adopt a separate seasonal standard to protect trees and plants from ozone damage, and to specify requisite levels of protection therefor, as unanimously recommended by its science advisors.
5. Exempting certain new or modified major industrial plants from demonstrating, as the Act requires, that their emissions will not cause or contribute to violations of the new ozone standards.

STATEMENT OF THE CASE

Ozone, the main component of urban smog, is a corrosive air pollutant that inflames the lungs, constricts breathing, and likely kills people. *See Am. Trucking Ass'ns v. EPA*, 283 F.3d 355, 359 (D.C. Cir. 2002) (“ATA”); 80 FR 65,308/3-09/1, JA____-__; Dkt¹-0405 (“ISA”) 2-20 to -22 tbl.2-1, JA____-__. It causes asthma attacks, emergency room visits, hospitalizations for serious bronchial conditions, and other serious health harms. *E.g.*, Dkt-0404 (“PA”) 3-18, 3-26 to -29, 3-32, JA____, ____-__, ____; ISA 2-16 to -18, 2-22 to -24 tbl.2-1, JA____-__, ____-__. Ozone-induced health problems can force people to change their ordinary activities, requiring children to stay indoors and forcing people to take medication and miss work or school. *E.g.*, PA 4-12, JA____. Because their respiratory tracts are not fully developed, children are physiologically especially vulnerable to ozone pollution, particularly when they have elevated respiratory rates, as when playing outdoors. *E.g.*, *id.* 3-81 to -82, JA____-__. People with lung disease and the elderly also have heightened vulnerability, but ozone can affect healthy adults too. *See* 80 FR 65,310/3, JA____. Asthmatics suffer more severe impacts from ozone exposure than healthy individuals do and are more vulnerable at lower levels of exposure. *Id.* 65,311/1 n.37, 65,322/3, JA____, ____.

¹ All “Dkt” references are to document numbers in EPA docket EPA-HQ-OAR-2008-0699 (*e.g.*, “Dkt-0405” means EPA-HQ-OAR-2008-0699-0405).

At hearings, members of the public told EPA about how asthma attacks, which ozone pollution triggers, affect them. Laura Paul, of Clarendon, Texas, told about the experience she and her son Tyler have had with asthma, and how air pollution can make his condition “life threatening”:

Tyler’s lungs are already sensitive. When he breathes in a powerful irritant, his lung tissues swell further, making it hard for him to breathe. He coughs, he wheezes, and he struggles, and we know how quickly a severe asthma attack can become a life threatening event.

We live out about 60 miles from the city. The last time Tyler had an asthma attack, I decided to drive him myself to the hospital 60 miles away. That stretch was unbearable, looking behind, thinking that your child’s going to die. There’s no terms to put to that. Now, I don’t take the risk. Call the ambulance. The last time he went, the ambulance crew came, and they didn’t realize how severe he was. We made it 30 miles, and they did back-to-back treatments and had him on oxygen, and they said, we’re glad that you brought him in and we picked him up.

Dkt-4245 at 126, JA _____. Judith Ramirez, a student at Desert Mirage High School in Coachella Valley, CA, told about how her youngest brother has asthma, and as a result

it’s very hard for him to be outside, because sometimes the air triggers [breathing problems]....

I remember his first attack. I had to wake up at night, because I heard him coughing. And then I started yelling, because he couldn’t breathe. He was turning red and his coughs were just very strong and we had to take him to the ER multiple times. And it’s not something that—it’s not a good memory. I want to remember him as a happy kid who could run around playing tag with his friends, but instead he has to stay inside.

Dkt-4247 at 319, JA____; *see id.* 13, 350, JA____, _____. Cherelle Blazer's son and husband are both vulnerable to asthma attacks—one put her husband in a coma—and she described how high pollution episodes in Mansfield, TX, where they live, affect her entire family:

If [my son] goes out and plays on a day that is a bad ozone day, a bad air day, that night is horrible. We're up all night. He's having asthma attacks every two or three hours. He has to have a nebulizer. My husband can't sleep, I can't sleep. The next day, he's unable to focus at school, if he's able to go to school at all.

Dkt-4245 at 76-77, JA____ - _____. Ozone levels in the Ramirez's and Blazers' communities violate the standards at issue here, but the Pauls' community likely complies with them, for the closest ozone monitor to Clarendon, TX, currently meets the standards. *See* Dkt-1743 at 14 (then-preliminary assessment shows Amarillo area would meet new standard as of 2014), JA_____.

Ozone also damages vegetation and forested ecosystems, causing or contributing to widespread stunting of plant growth, tree deaths, visible leaf injury, reduced carbon storage, and reduced crop yields. PA 5-2 to -3, JA____ - ____; ISA 9-1, JA____. The damage includes tree-growth losses reaching 30-50% in some areas, and widespread visible leaf injury, including 25-37% of sites studied in just one state. PA 5-13, JA____; ISA 9-40, JA____. By harming vegetation, ozone can also damage entire ecosystems. 80 FR 65,370/1-2, 65,377/3, JA____, _____.

The Clean Air Act requires EPA to set “primary” and “secondary” standards for pollutants like ozone to protect public health and welfare, respectively. 42 U.S.C. §§ 7408(a), 7409(a)-(b). EPA must review and, as appropriate, revise these standards at least every five years. *Id.* § 7409(d)(1). The Act creates “an independent scientific review committee,” now called the Clean Air Scientific Advisory Committee (“CASAC”), to recommend to EPA appropriate revisions to the standards. *Id.* § 7409(d)(2)(A)-(B). If EPA departs “in any important respect” from CASAC’s recommendations, EPA must explain why. *Id.* § 7607(d)(3), (d)(6)(A). Further, as part of the Act’s system for assuring that clean air is maintained, Congress established permitting requirements in communities that EPA has not designated as “nonattainment”—treated as violating—any standard for a pollutant. *See id.* §§ 7471, 7475. These requirements bar construction of proposed new or modified major factories and power plants (“sources”) unless they show they will not cause or contribute to violations of any standard, anywhere. *Id.* § 7475(a)(3).

I. EPA’S ESTABLISHMENT OF AN UNDERPROTECTIVE HEALTH STANDARD.

EPA must set primary (“health”) standards at a level “requisite to protect the public health,” “allowing an adequate margin of safety.” *Id.* § 7409(b)(1). To meet this health protection mandate, the standard must “be set at a level at which there is

‘an absence of adverse effect’ on...sensitive individuals” such as children, the elderly, and people with respiratory illnesses. *Lead Indus. Ass’n v. EPA*, 647 F.2d 1130, 1153 (D.C. Cir. 1980); accord, e.g., *Coal. of Battery Recyclers Ass’n v. EPA*, 604 F.3d 613, 618 (D.C. Cir. 2010). EPA must protect public health from “not just known adverse effects, but those of scientific uncertainty or that research has not yet uncovered.” *American Lung Ass’n v. EPA*, 134 F.3d 388, 389 (D.C. Cir. 1998) (citation and quotation marks omitted). Primary standards must be based exclusively on protection of health, without regard to implementation costs. *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 465-71 (2001).

The last three times EPA has reviewed the ozone health standard, it has found that the standard was insufficient to protect public health with an adequate margin of safety and thus has revised it. Before 1997, the standard required control of 1-hour average ozone levels; EPA then revised the standard to limit ozone over an 8-hour period, requiring that the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone level be below 0.08 parts per million (“ppm”). 62 FR 38,856, 38,856/1 (1997), JA____; 40 C.F.R. § 50.10(b). On the next review, in 2008, EPA again found the science required it to strengthen the standard, and tightened the level to 0.075 ppm. 73 FR 16,436, 16,436/1, JA____. That 0.075 ppm level was laxer than the 0.060-0.070 ppm range CASAC unanimously recommended, see *Mississippi v. EPA*, 744 F.3d 1334, 1355 (D.C.

Cir. 2013), and in 2009, EPA commenced reconsideration of the standard in light of CASAC's advice and objections raised by the medical and public health communities, among others. Notice, *Mississippi*, 744 F.3d 1334 (D.C. Cir. Sept. 16, 2009) (No. 08-1200), JA ____ - __; *see also* 75 FR 2938 (2010) (proposal on reconsideration). But abruptly, in 2011, EPA announced that it was deferring completion of the reconsideration, instead purportedly wrapping the reconsideration of the 2008 standard into the next regularly required revision. *Mississippi*, 744 F.3d at 1341; Dec. of Regina McCarthy ¶ 8, *American Lung Ass'n v. EPA*, No. 11-1396 (D.C. Cir. Dec. 8, 2011), JA ____ - __. That most recent revision—revising the standard's level to 0.070 ppm because science again showed ozone was more dangerous than EPA previously acknowledged, 80 FR 65,292, JA ____—is at issue in this case.²

The scientific record in 2008, including controlled human “chamber” studies, and thousands of epidemiological, animal, and toxicological studies, convinced CASAC that a standard of 0.060 to at most 0.070 ppm was requisite.

² Despite assuring this Court that “EPA’s deferral” decision didn’t “conclude[] its voluntary rulemaking reconsidering the 2008 Ozone NAAQS” and EPA “would...be completing the reconsideration in conjunction with the next periodic review,” EPA here gave scant attention to its reconsideration proposal, EPA Mot. to Dismiss 2, *American Lung*, No. 11-1396 (D.C. Cir. Dec. 8, 2011), JA ____; *Mississippi*, 744 F.3d at 1341. *See* Dkt-4309 (“RTC”) 351 (using new record to establish new standard), JA ____.

Today, there are even more scientific studies showing harm from ozone within and just above that range. In a chamber study, typically, healthy young adults exercise in an experimental chamber while being exposed to ozone-contaminated air. *See* Dkt-2720 (“Sierra Club Comments”) 62-63, JA____ - __; *see also* ISA at lx, JA____; PA 1-22 to -23, JA____ - __. In 2008, EPA had no such studies examining the impact on lung function of exposures from 0.061-0.079 ppm, and highly-limited studies at 0.060 ppm. *See Mississippi*, 744 F.3d at 1349. In the rulemaking at issue, EPA had two new chamber studies of healthy young adult participants, one examining results at both 0.063 ppm and at 0.072 ppm, and one examining results at 0.060 ppm. PA 3-27, 3-58 tbl.3-1 & nn.37-38, JA____, _____. Particularly notable, at 0.072 ppm, there was a group mean decrease in lung functioning and increase in self-reported respiratory symptoms, and both results were statistically significant; at lower levels, there was a group mean decrease in lung functioning (sometimes statistically significant), as well as statistically significant increased pulmonary inflammation, and a substantial percentage—16% in one study—of the healthy young adult participants experienced at least 10% lung function decrement. *Id.* 3-12, 3-14, 3-58 tbl.3-1 & nn.37-38, JA____, _____, _____. EPA also had more epidemiological studies linking ozone concentrations below 0.070 ppm to hospitalizations for breathing problems and early deaths. *See, e.g.*, Sierra Club Comments 78-86, JA____ - __.

Based on guidance from the American Thoracic Society and CASAC, as well as its own past practice, EPA agreed that the chamber study results at the 0.072 ppm level showed an “adverse effect” in healthy young adults. *E.g.*, 80 FR 65,363/1-2, JA _____. CASAC said adverse effects almost certainly would occur in sensitive populations at 0.070 ppm. Dkt-0190 (“CASAC Letter”) 6, 8, JA _____, _____. However, in conflict with CASAC, EPA did not find adverse effects in sensitive populations at 0.070 ppm, and, without rational explanation, EPA departed from its 2008 finding that a 10% lung function decrement was adverse for sensitive populations. *See* 80 FR 65,357/3-58/2, JA _____ - ____; *see also* 73 FR 16,454/3-55/1 (2008 final rule) (agreeing that 10% decrement “should be considered adverse for asthmatic individuals”), JA _____ - ____.

EPA also ran simulations of ozone exposures in up to 15 metropolitan areas if they improved their air quality to just meet the current standard or various proposed standard levels. Dkt-1190 (“Exposure Assessment”) 1-5 to -6, 5-10 tbl.5-1, JA _____ - ___, _____. In all 15 areas, based on predictions of potential emission reductions, possible weather conditions, and simulations of people’s activities, it modeled how many children and asthmatic children it thought would be exposed one or more times to various levels of ozone pollution under these scenarios. 80 FR 65,312/2, JA _____. EPA found that, if these areas just met a 0.070 ppm standard, thousands of children would likely be exposed at least twice annually to ozone

levels EPA itself acknowledged as dangerous, and hundreds of thousands faced exposure at least once annually to dangerous levels. *Id.* 65,313 tbl.1, JA____.³ Indeed, because compliance with the standard only depends on the fourth-highest annual ozone level averaged over three years, areas can comply with the standard despite having many days with high ozone levels in a year. *See, e.g., id.* 65,351/1, JA____.

Based on all the evidence, CASAC found that there was “substantial scientific certainty of a variety of adverse effects, including decrease in lung function, increase in respiratory symptoms, and increase in airway inflammation” at the 0.070 ppm level. CASAC Letter 8, JA____; *accord id.* at ii, 6, JA____, _____. It further found that exposure at even lower levels resulted in adverse effects. *Id.* 6-7, JA____ - _____. Though CASAC recommended a general range of 0.060 and 0.070 ppm for the standard’s level, it further advised EPA to set the standard below 0.070 ppm. *Id.* at ii, 8, JA____, _____.

³ EPA also predicted numbers of people who would experience various health effects—lung function decrement of varying degrees and outcomes like emergency room visits—or die in some or all of these 15 areas under various ozone standards. *Id.* 65,314/3, JA____; 79 FR 75,234, 75,276/1 (Dec. 17, 2014), JA____. EPA specifically predicted that hundreds of thousands of children and asthmatic children will have multiple incidences of dangerous lung function decrement, 80 FR 65,315 tbl.2, JA____, and that hundreds to thousands more deaths will occur with a 0.070 ppm standard than would with a stricter one, 79 FR 75,277 tbl.3, JA____.

EPA proposed to revise the standard by adjusting the level to between 0.065 and 0.070 ppm and solicited comment on establishing it at 0.060 ppm. 79 FR 75,234, 75,236/3 (Dec. 17, 2014), JA _____. It did not propose to alter the standard’s “form”—the way EPA calculates compliance with the standard (by dropping the three highest daily ozone levels every year, then averaging the fourth-highest value over three years).

Leading medical societies, including the American Medical Association, the American Thoracic Society, American Academy of Pediatrics, and American Heart Association, as well as the EPA-chartered Children’s Health Protection Advisory Committee, all urged EPA to set the standard at the health-protective 0.060 ppm level based on the science showing adverse effects from ozone above that level. *E.g.*, Dkt-3863 at 1, JA ____; Sierra Club Comments ex.4 at 2 (letter from Children’s Health Protection Advisory Committee to CASAC), JA _____. Ozone pollution disproportionately affects minority and lower-income communities, Sierra Club Comments 240-57, JA ____ - __, and civil rights groups and groups dedicated to the principles of environmental justice also asked EPA for a 0.060 ppm standard. *E.g.*, Dkt-2252 at 1 (WE ACT for Environmental Justice), JA ____; Dkt-2580 at 1 (numerous groups, including NAACP), JA ____; Dkt-3297 at 2 (GreenLatinos), JA _____. New York State and California agreed that 0.070 ppm was unjustifiable. Dkt-3438 at 2, JA ____; Dkt-2090 at 3, JA _____. Environmental

and public health groups warned that a 0.070 ppm standard would be arbitrary and unlawful, particularly because the standard's form allows areas to comply with the standard yet have multiple days per year that exceed the level of the standard by, on average, 0.004-0.008 ppm. Sierra Club Comments 11-12, 136, JA____ - __, ____; *see also* Dkt-1173 at 2 (Physicians for Social Responsibility), JA____.

EPA ultimately selected the least protective standard it had proposed: 0.070 ppm, while retaining the standard's 3-year average, fourth-highest form. 80 FR 65,294/1, JA____. EPA agreed that many areas that comply with the new standard have multiple days each year with ozone levels at or above levels EPA itself agrees cause adverse health effects in healthy young adults. *See id.* 65,351/3, JA____; RTC 194-95, JA____ - __. EPA also did not refute or in the final rule address CASAC's finding that adverse effects would occur at a 0.070 ppm level. Nor did EPA explain how its test for the adversity of effects demonstrated in chamber studies protected sensitive populations.

II. EPA'S ESTABLISHMENT OF AN UNDERPROTECTIVE WELFARE STANDARD.

EPA must also establish secondary ("welfare") standards that "shall specify a level of air quality the attainment and maintenance of which...is requisite to protect the public welfare from any known or anticipated adverse effects" from ozone. 42 U.S.C. § 7409(b)(2); *Am. Farm Bureau Fed'n v. EPA*, 559 F.3d 512, 530

(D.C. Cir. 2009). Effects on welfare include impacts on soils, water, crops, vegetation, wildlife, climate, and personal comfort and well-being. 42 U.S.C. § 7602(h).

In 2008, EPA set the ozone welfare standard identical to the health standard, despite advice from CASAC, EPA staff, and the National Park Service that EPA needed to set a separate “cumulative seasonal” welfare standard to protect against ozone-related harms to vegetation and ecosystems. 73 FR 16,497/3-99/1, 16,500/2, JA ____ - __, _____. In *Mississippi*, this Court held that EPA had done so unlawfully and arbitrarily, for EPA had failed to comply with the Act’s command to “specify a level” of air pollution requisite to protect public welfare against ozone-related harms to vegetation and ecosystems. 744 F.3d at 1358-62.

In the rulemaking at issue here, CASAC, EPA staff, and the Park Service again told EPA that the science called for a separate welfare protection standard. *E.g.*, CASAC Letter 11-12, JA ____ - __; PA 6-57 to -58, JA ____ - __; Dkt-3871, JA _____. EPA again refused, claiming that the primary standard was nearly as good as would be a separate welfare standard set at a level it called requisite to protect tree growth. *E.g.*, 80 FR 65,294/2, JA _____. Yet, the record showed numerous areas met the primary standard while simultaneously exceeding the level of air quality that EPA itself called requisite. Dkt-4249, JA _____. Further, the level EPA called requisite allowed significantly more vegetation harm than CASAC found to result

in adverse effects. CASAC Letter 13-15, JA____-__; 80 FR 65,406/1-07/1, JA____-__. Finally, EPA refused to identify a level of air quality requisite to protect against visible foliar (leaf) damage. 80 FR 75,407/2-08/1, JA____-__.

III. EPA’S DECISION TO ALLOW NEW MAJOR SOURCES TO VIOLATE THE STANDARDS.

EPA created a “grandfathering” exemption to allow construction of certain new or modified major sources without the Act-required demonstration that they will not cause or contribute to violations of the new standard. *Id.* 65,431/1-34/3, JA____-__; 42 U.S.C. § 7475(a)(3). So long as the proposed source’s permit application was found to be complete by October 1, 2015, or its draft permit was publicly noticed before December 28, 2015, it is exempt from satisfying that demonstration requirement with respect to the new ozone standards. 80 FR 65,433/2, JA____. As a result, such would-be emitters of major amounts of ozone-forming pollution can be constructed without regard to whether they will result in dangerous levels of ozone pollution, even in areas with air quality right at or even above the level of the new standards.

SUMMARY OF ARGUMENT

Because EPA set the health standard with a form and level that combine to allow ozone pollution levels that EPA acknowledges cause adverse effects in healthy young adults, the standard unlawfully and arbitrarily fails to protect the

health of both these and more sensitive populations, like asthmatic children, from acknowledged adverse effects. EPA identified 8-hour exposures to 0.072 ppm ozone as causing adverse effects, yet EPA does not dispute that the form (3-year average of annual fourth-highest daily maximum) means that areas meeting the standard can—and many will—have multiple days every year with ozone concentrations at or above that 0.072 ppm level.

Independently, the health standard is also arbitrary because EPA failed to rationally explain why it only acknowledged adverse effects occur with 8-hour exposures to 0.072 ppm ozone. EPA gave no scientific rebuttal to CASAC's plain findings that, for sensitive populations, such effects “almost certainly” and with “substantial scientific certainty” occur with 8-hour exposures to 0.070 ppm ozone. Nor did EPA provide a rational explanation of how its new, more demanding test for finding adverse health effects based on the results of chamber studies protects sensitive populations.

EPA illegally and arbitrarily rejected calls from CASAC and the National Park Service for a separate welfare standard to protect plants and forests against damaging cumulative ozone exposures over each growing season. EPA claimed that the 8-hour health standard would provide protection comparable to a weak cumulative standard, but that approach allows ozone levels that CASAC and EPA itself linked to “unacceptable” growth loss in trees. Moreover, the record shows the

health standard does not provide protection comparable to even EPA's weak cumulative benchmark at a number of national parks—places EPA itself found warrant special protection from ozone damage. EPA also violated the Act by failing to “specify a level” of air quality requisite to protect against widespread ozone damage to leaves, despite specific recommendations from CASAC and the Park Service for such a level.

EPA's grandfathering exemption flouts the plain text of the Act. Contrary to EPA's claim, there is no ambiguity to the Act's mandate that construction of any new or modified major source in certain areas can proceed only with a showing that the source will not cause or contribute to violations of ozone standards.

STANDING

Petitioners are national, regional, and local nonprofit organizations dedicated to protecting human health and/or the environment from air pollution. *See* Declarations. They have members who live, work, and recreate in areas with ozone pollution in excess of levels EPA itself identified as harmful, as well as levels recommended for protection of their health and welfare by CASAC, leading medical societies, and other authorities identified herein. *Id.* They also have members who live, work, and recreate in areas where source construction activities are subject to EPA's grandfathering exemption. The final action challenged herein prolongs exposure of Petitioners' members to ozone levels associated with a

variety of adverse health and welfare effects, including premature deaths, hospitalizations, emergency room visits, breathing impairment, damage to vegetation and forests, and other serious effects as further described herein, thereby threatening their health and welfare and depriving them of protections the Act guarantees. Moreover, EPA's grandfathering exemption deprives them of Act-mandated procedural protections, including informed decisionmaking, proper analysis of, notice, and opportunity to comment on whether pollution impacts from new or modified major sources will cause or contribute to violations of the ozone standard, in areas where Petitioners' members live, work, and recreate. Further support for Petitioners' standing appears in the materials cited in this brief and in the attached declarations. Accordingly, Petitioners have standing to pursue this case. *See, e.g., Friends of the Earth v. Laidlaw Env'tl. Servs.*, 528 U.S. 167, 183 (2000); *Sierra Club v. EPA*, 699 F.3d 530, 533 (D.C. Cir. 2012).

STANDARD OF REVIEW

At issue is whether EPA's action was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 42 U.S.C. § 7607(d)(9); *see also id.* § 7607(d)(1)(A). For matters of statutory interpretation, "[i]f 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." *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 842-43 (1984). If the statute is ambiguous,

under *Chevron* step two, a reasonable agency interpretation of the statute receives deference. *Id.* 843. Unless otherwise expressly indicated, references herein to “unlawful” agency action address both violation of unambiguous congressional intent under *Chevron* step one and unreasonable agency interpretation under step two.

The agency’s action is arbitrary and capricious if, for example, the agency “entirely failed to consider an important aspect of the problem,” *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), or failed to “identif[y] and explain[] the reasoned basis for its decision,” *Transactive Corp. v. United States*, 91 F.3d 232, 236 (D.C. Cir. 1996). *See also, e.g., Catawba County v. EPA*, 571 F.3d 20, 41 (D.C. Cir. 2009) (arbitrary and capricious standard of review under Clean Air Act is same as under Administrative Procedure Act).

ARGUMENT

I. THE PRIMARY STANDARD IS UNLAWFUL AND ARBITRARY.

A. EPA’s Standard Unlawfully and Arbitrarily Allows Communities to Suffer Many Days of Ozone Levels That EPA Itself Agrees Cause Adverse Effects.

EPA itself found that a single-day exposure to 6.6-hour averages of 0.072 ppm of ozone causes adverse health effects in healthy young adults, based on a controlled human experiment that showed a statistically significant reduction in lung function and increase in respiratory symptoms at that exposure level. *E.g.*, 80

FR 65,330/2-31/2, 65,346/3, 65,363/2, 65,364/1, JA____-__, ____, ____, ____; RTC 11, JA____. EPA further found that vulnerable populations like asthmatics, children, and the elderly would “likely” experience adverse effects “following exposures somewhat below 72 ppb^[4].” 80 FR 65,357/2-3, 65,363/1, JA____, ____.

EPA also found that even a single exposure to ozone above the 0.070 ppm level “can cause adverse effects in some people.” *E.g., id.* 65,325/2, JA____. Indeed, when a single day has ozone levels above 0.070 ppm, EPA calls the air “unhealthy for sensitive groups,” and cities often warn residents that the air is unsafe, urging children, asthmatics, and the elderly to limit outdoor activity. *Id.* 65,366/1 & n.152, 65,368/3, JA____, ____.

By setting the standard’s level at 0.070 ppm and its form as the average, over three years, of the annual fourth-highest maximum daily 8-hour average ozone level, EPA allows ozone levels to exceed—multiple times in any year—levels that EPA itself agrees cause adverse health effects. Because the standard looks only at the fourth-highest ozone level in a given year, and then averages that reading with the fourth-highest ozone levels in each of the two preceding years, areas that comply with EPA’s standard can and do have ozone levels above the 0.070, 0.072, and higher ppm benchmarks even over a dozen times in a year. Such

⁴ To convert parts per billion (“ppb”) to ppm, divide by 1,000. Thus, 72 ppb is 0.072 ppm.

areas have no duty to clean up their air further. The standard is unlawful and arbitrary because it allows areas to continue to have air quality that EPA acknowledges is harmful to health.

Repeated exceedances of these thresholds is not just a theoretical possibility. EPA-published monitoring data submitted by public health petitioners shows that numerous cities have met EPA's standard while recording multiple days with ozone levels well above not only the 0.070 ppm benchmark but also the 0.072 ppm benchmark EPA itself found causes adverse effects even in healthy adults:

Areas meeting EPA's 0.070 ppm standard (3-year average of annual 4th-highest daily average over 2011-2013 in 0.066-0.070 ppm range)	Number of times in single year area(s) had ozone levels at or above 0.072 ppm
Columbia, SC	16
Cadillac, MI	15
Athens, GA; Fort Wayne, IN; Clarksville, TN-KY	12
Huntsville, AL; Pensacola-Ferry Pass-Brent, FL; Omaha-Council Bluffs, NE-IA; Columbia, MO	11
Clinton, IA	10
Huntington-Ashland, WV-KY-OH; Watertown-Fort Drum, NY; Madison, WI	9
Pascagoula, MS; Anderson, IN; Jefferson City, MO	8
Johnstown, PA; Augusta-Richmond, GA-SC; Greenville, NC; Corpus Christi, TX; Effingham, IL; Terre Haute, IN; Syracuse, NY; Greenville-Mauldin-Easley, SC; Brigham City, UT	7
Elkhart-Goshen, IN; Gulfport-Biloxi, MS; Manchester-Nashua, NH; Fayetteville, NC; Durham, NC; Anderson, SC; Price, UT; Dalton, GA; Muncie, IN; Lafayette, IN	6
Lafayette, LA; Poughkeepsie-Newburgh-Middletown, NY; Parkersburg-Marietta-Vienna, WV-OH; Prescott, AZ; Lake Charles, LA; Daphne-Fairhope-Foley, AL; Decatur, AL; Rockland, ME; Show Low, AZ; Rockford, IL; Elizabethtown, KY; Somerset, KY; Albany-Schenectady-Troy, NY; Sioux Falls, SD; Redding, CA; Quincy, IL-MO; Baraboo, WI; Reno-Sparks, NV	5
Fernley, NV; Rocky Mount, NC; Jackson, MS; Morgantown, WV; Logan, UT-ID; Fort Payne, AL; Hobbs, NM; Scranton-Wilkes Barre, PA; Victoria, TX	4
Worcester, MA; Lakeland, FL; Berlin, NH-VT; Florence, SC; Boise City-Nampa, ID	3
Harrison, AR; Chambersburg, PA; Kinston, NC; Grand Junction, CO; Deming, NM; Asheville, NC; Williamsport, PA	2
Mobile, AL; Riverton, WY; Panama City-Lynn Haven, FL	1

See Sierra Club Comments ex.10, JA ____ - __. Indeed, these cities recorded ozone levels in some cases as high as 0.111 ppm, and numerous cities recorded ozone levels at or above benchmarks at least as high as 0.080 ppm while still meeting the standard EPA set here. *See id.* 145-51 tbl.17, ex.10 (examples of metropolitan areas with at least one day at or above 0.080 ppm ozone that would have met standard at issue include Akron, OH (highest daily level 0.091 ppm); Albany, NY (0.083 ppm); Columbia, SC (0.085 ppm); Corpus Christi, TX (0.087 ppm); Huntsville, AL (0.082 ppm); Jackson, MS (0.085 ppm); Manchester, NH (0.090 ppm); and Reno, NV (0.081 ppm)), JA ____ - __, ____ - __.

EPA agrees that areas meeting its standard can, do, and will have ozone levels above 0.070 ppm multiple times in a given year. RTC 194-95 (“EPA does not dispute the results of air quality analyses submitted by [Sierra Club]....”), JA ____ - __; *accord* 80 FR 65,351/3, JA ____; *see also* Sierra Club Comments 136, 138-41 (describing data), JA ____, ____ - __. Indeed, based on actual air quality data, EPA found that in an area that just meets a 0.070 ppm standard with EPA’s fourth-highest form, the highest day in any year averages about 0.077-0.078 ppm—meaning that many areas actually have days with even worse ozone pollution. Dkt-4393 at 3 tbl.1 (median high is 77 ppb; mean high is 77.9 ppb), JA _____. The second-highest day averages about 0.074 ppm. *Id.* (median second-high is 74 ppb; mean second-high is 74.1 ppb), JA _____.

EPA thus agrees science shows adverse effects result for healthy people at ozone pollution levels that EPA agrees will occur repeatedly under the standard. Its decision to set the standard with a combination of form and level that EPA knows allows adverse effects is unlawful and irrational. *See Mississippi*, 744 F.3d at 1358 (indicating that “scientific evidence” can “direct [EPA] to a specific outcome” for a standard (emphasis in original)); *American Lung*, 134 F.3d at 393 (noting that “scientific certainty” can “prescribe[]” certain results). Indeed, national ambient air quality standards must “ensure that there is ‘an absence of adverse effects’” from the pollutant on sensitive populations. *Lead Indus.*, 647 F.2d at 1153 (quoting S. Rep. No. 91-1196, at 10 (1970)); *accord, e.g., American Lung*, 134 F.3d at 389. EPA here unlawfully and arbitrarily denies people the right to enjoy being outdoors without facing threats to their wellbeing from air pollution. *See* 116 Cong. Reg. 32,901/1 (Sept. 21, 1970) (remarks of Sen. Muskie) (“This bill states that all Americans in all parts of the Nation should have clean air to breathe, air that will have no adverse effects on their health.”).

Without disputing this binding case law, EPA claims that in the face of “scientific uncertainties,” it need not set “zero-risk” standards. *See* RTC 196-97, JA____-__. But here, there is no material uncertainty that the standard allows ozone levels that harm people. EPA agrees it does. EPA also agrees that major metropolitan areas will meet the standard while having repeated days with ozone

pollution at levels that EPA agrees can and will result in adverse effects. Thus, EPA's reliance on "the impossibility...for [sic] NAAQS removing all health risk" is specious, *id.* 197, JA____, because the issue is whether EPA can establish standards that permit known adverse health effects to remain.

EPA further seeks to rely on an "exposure assessment" to claim that, once the standard is implemented, even though it allows multiple occurrences of harmful ozone levels every year, EPA believes a limited number of people will be exposed to such levels. 80 FR 65,351/3-52/2, 65,363/2-64/2, 65,365/2-3, JA____ - ____, ____ - ____, ____; RTC 193-95, 198-99, JA____ - ____, ____ - ____. The exposure assessment is an EPA-created estimate for 15 metropolitan areas, under which EPA assumes certain reductions in emissions of ozone-forming compounds, models the resulting ozone levels under varying weather conditions, and simulates individuals' activity patterns and resulting ozone exposure levels. 80 FR 65,311/1-14/1, JA____ - __; Exposure Assessment 3-13 & fig.3-2, JA____.

EPA's reliance is misplaced because, as explained above, and as EPA has itself admitted, "[s]tandards must be based on a judgment of a safe air quality level and not on an estimate of how many persons will intersect given concentration levels." 44 FR 8202, 8210/1 (1979), JA____; *see also Nat'l Ass'n of Mfrs. v. EPA*, 750 F.3d 921, 926 (D.C. Cir. 2014) ("The point of the NAAQS program is to safeguard the quality of the 'ambient air,' which is defined as the 'portion of the

atmosphere, external to buildings, to which the general public has access.”); *cf.* 73 FR 16,482/2 (2008 ozone standard) (“the exposure assessment does not provide a basis for choosing a level within the proposed range.”), JA _____. Moreover, compliance with the standard is not measured in terms of how many people are exposed to air pollution, but in terms of air quality conditions. *See* 80 FR 65,452/3, 65,458/1-60/1 (codified at 40 C.F.R. § 50.19(b), 40 C.F.R. pt.50 app.U), JA _____.

Even if the exposure assessment were relevant and reasonable for EPA to rely on, it predicts that in just the 15 areas it covers, compliance with EPA’s standard would still result in exposure of significant numbers of school-aged children to conditions that EPA agrees cause adverse effects. EPA claims multiple-exposures at and above 0.070 ppm are a primary concern, *id.* 65,363/3, JA _____, yet the exposure assessment estimates that in just the 15 areas evaluated, 18,000 children will experience these multiple exposures at and above 0.070 ppm in a high-pollution year. Exposure Assessment app.5F at 5F-55 tbl.5F-5, JA _____. It predicts up to 12,000 children in these areas will experience at least one day of ozone levels around 0.080 ppm, well above any exposure level considered safe, and 236,000 will experience ozone levels at or above 0.070 ppm. *Id.*, JA _____; 80 FR 65,345/3 (even single exposure to 0.070 or 0.080 ppm ozone can cause adverse effects), JA _____. Finally, for asthmatic children, who most need protection from

ozone pollution, *see* 80 FR 65,311/1 n.37, JA____, the exposure assessment predicts that in these 15 areas alone, up to 2,300 such children will experience multiple exposures to levels of at least 0.070 ppm in a year and 27,000 will experience such exposures at least once per year. Exposure Assessment app.5F at 5F-55 tbl.5F-5, JA____.

These figures cover only 15 areas, representing about 19 million—roughly 24%—of the approximately 74 million children in the United States. *Compare id.* 5-10 tbl.5-1 (study areas contain about 19 million school-aged children), JA____, *with* 80 FR 65,311/1 (“about 74 million people...are under 18 years of age”), JA____. Thus, the nation-wide numbers would be substantially higher.

EPA “notes that not every occurrence of an exposure of concern will result in an adverse effect” and that the standard will significantly reduce exposures. 80 FR 65,363/3-64/1, JA____ - __. But as explained above, the Act requires EPA to protect public health, not just reduce exposures, and EPA fails to explain why the remaining exposures of concern for tens to hundreds of thousands of children are not a public health concern. *See American Lung*, 134 F.3d at 389, 392 (“The link between this conclusion [that certain pollution was not a public health problem] and the factual record as interpreted by EPA—that ‘repeated’ exposure is ‘significant’ and that thousands of asthmatics are exposed more than once a year—is missing.”). Indeed, EPA fails to address its own finding that 66% of healthy

young adults manifested adverse effects at the 0.072 ppm level that the standard allows multiple days each year (as EPA agrees real-world monitoring data shows), and its agreement that asthmatics are likely more sensitive to ozone pollution. *See* 80 FR 65,311/1 n.37, 65,330/3-31/2, JA____, ____ - __.

EPA's reliance on the exposure assessment is further irrational given the assessment's gaps acknowledged by EPA. For example, EPA agrees that school-aged children who engage in extensive outdoor activities on a daily basis over summer, often in summer camps, are a population the Act protects. RTC 121, JA____. Over 12.5 million people attend or work at camps, with the majority being under age 12, and, per a survey, over 75% of camps report campers spend at least seven hours a day outdoors. Sierra Club Comments 121, JA____. To examine potential exposures for these children, EPA performed a "sensitivity analysis" that found predicted exposures increased by 33% over the numbers EPA relied on for all children, illustrating that children, like campers, who are outside for long periods daily face greater exposure. *See* Exposure Assessment app.5G at 5G-29, JA____. Rather than explain how the standard provides requisite protection for this sensitive population, EPA dismissed its sensitivity analysis's results and claimed that the analysis "is likely only applicable to a small fraction of children." RTC 111-13, JA____ - __. EPA thus failed to explain how the exposure assessment supports EPA's conclusion that the standard protects the EPA-acknowledged

sensitive population of school-aged campers, for which it “must afford requisite protection, with an adequate margin of safety,” *id.* 118, 121 (“The Clean Air Act does not deny requisite protection to children attending summer camps, to those children playing outdoors for multiple hours, or to those who go camping.”), JA____, _____. *See State Farm*, 463 U.S. at 43 (failure to consider important issue is arbitrary); *Farm Bureau*, 559 F.3d at 524 (where EPA explanation contradicts agency’s own finding in same rulemaking, explanation is arbitrary).

EPA also claims as a “secondary” consideration that its chosen form “can provide stability for ongoing implementation programs.” 80 FR 65,352/1, JA____. EPA concedes that this alleged benefit does not provide a clear basis for its fourth-high average approach. *Id.*, JA____. Moreover, EPA fails to offer any rational explanation for why or how a “stable” standard that averages out or ignores dangerous ozone levels complies with the statutory mandate to provide requisite health protection.

EPA cites (*id.* 65,350/3 n.120, JA____) *ATA* as allowing consideration of program stability in picking the standard’s form, but that case does not allow EPA to simply cite “stability” without any explanation of how such stability serves the statutory goal of health protection. In *ATA*, there was a discernable explanation for why EPA permitted certain days to escape regulation: to ensure areas focused on controlling what EPA considered the more worrisome problem of annual pollution

levels. *See* 283 F.3d at 373-75. No such explanation exists here, for the form merely serves to allow areas to write off the precise ozone conditions EPA concedes are dangerous.

Though EPA claims that a fourth-highest averaging approach here could benefit public health by reducing situations in which areas “shift from meeting the standard to violating the standard” due to, for example, erratic weather conditions, it fails to explain how “it is possible” that this shifting could affect pollution control programs in a way that could harm public health, 80 FR 65,351/1-2, JA _____. To the contrary, EPA’s approach allows such areas to routinely experience highly dangerous pollution levels without receiving any protection. *See supra* pp.19-24. EPA cannot and does not give any explanation how the denial of protection from unhealthy ozone levels is consistent with the Act’s health-protective mandate. *See American Lung*, 134 F.3d at 392 (EPA must explain how standard will protect public health).

B. EPA Arbitrarily Dismissed CASAC Findings and Evidence That Adverse Effects Occur in Sensitive Populations at and Below 0.070 ppm.

Independent of EPA’s above-described unlawful and arbitrary failure to protect against exposures to 8-hour ozone levels EPA acknowledged cause adverse effects in healthy young adults, EPA also unlawfully and arbitrarily failed to explain its departure from CASAC’s advice that specific lower 8-hour ozone levels

cause adverse effects and EPA's departure from its own previous finding that certain effects were adverse for sensitive populations.

1. EPA Failed to Rationally Explain Its Departure from CASAC's Scientific Finding That Adverse Effects Occur at 0.070 ppm.

CASAC told EPA that the science shows that people suffer adverse effects from ozone at and below the 0.070 ppm level:

The 70 ppb-8hr benchmark level reflects the fact that in healthy subjects, decreases in lung function and respiratory symptoms occur at concentrations as low as 72 ppb and...these effects almost certainly occur in some people, including asthmatics and others with low lung function who are less tolerant of such effects, at levels of 70 ppb and below.

....

At 70 ppb, there is substantial scientific certainty of a variety of adverse effects, including decrease in lung function, increase in respiratory symptoms, and increase in airway inflammation.

CASAC Letter 6, 8 (emphasis added), JA____, ____; *accord id.* at ii (similar to second quotation), JA____. As CASAC's reference to "fact" and "substantial scientific certainty" makes clear, CASAC's findings of adverse effects at 0.070 ppm are scientific findings of what likely occurs following exposure to ozone at that level. *Id.* 6, 8 (emphasis added), JA____, ____; *see also* 80 FR 65,363/2 (EPA agrees combination of lung decrement and respiratory symptoms is adverse), JA____.

EPA must “fully explain its reasons for any departure from” “CASAC’s expert scientific recommendations.” *Mississippi*, 744 F.3d at 1354-55 (explaining why Congress created CASAC); *see also* 42 U.S.C. § 7607(d)(3), (d)(6) (EPA must explain reasons for departure in “any important respect” from CASAC’s recommendations). *Mississippi* made clear that if CASAC “explained that, based on its expert scientific judgment, it...believed adverse health effects were likely to occur at the 0.070 ppm level, then [§ 7607](d)(6) would have required EPA to explain why it disagreed with this scientific conclusion,” giving “a sound scientific reason for its disagreement.” 744 F.3d at 1355, 1357-58. Yet, here EPA failed to rationally address precisely that scientific conclusion from CASAC.

Rather than specifically address CASAC’s scientific finding that adverse health effects are substantially certain to occur at 0.070 ppm of ozone, EPA incorrectly asserted that its decision was “consistent with CASAC’s advice, based on the scientific evidence.” 80 FR 65,362/1, JA____; *accord* RTC 210, 223, JA____, _____. This assertion is irreconcilable with the plain text of CASAC’s letter. EPA acknowledged that CASAC found that adverse effects would occur with exposures below 0.072 ppm over eight hours, but it claimed that “CASAC did not provide advice as to how far below 72 ppb adverse effects would likely occur,” *E.g.*, 80 FR 65,357/3, JA____; RTC 202, JA____; *accord, e.g.*, 80 FR 65,353/2 (“CASAC did not specify or otherwise indicate how far below” 0.072 ppm adverse

effects “almost certainly occur”), JA____; *see also* 80 FR 65,362/1 (citing prior discussion), JA____. That claim is false. CASAC plainly identified “70 ppb” as a level where “there is substantial scientific certainty of a variety of adverse effects” and identified “70 ppb” as a level at and below which the adverse combination of lung function decrements and respiratory symptoms “almost certainly occur in some people, including asthmatics and others with low lung function who are less tolerant of such effects.” CASAC Letter 6, 8, JA____, _____. Because it conflicts with the record, EPA’s claim is arbitrary. *Nat’l Lime Ass’n v. EPA*, 233 F.3d 625, 634-35 (D.C. Cir. 2000) (EPA action is arbitrary where “it relied on a factually incorrect assertion,” as demonstrated by record); *see also Farm Bureau*, 559 F.3d at 521 (rejecting EPA claim that its decision was consistent with CASAC recommendation).

Such explanation as EPA did provide neither confronted CASAC’s specific finding of harmful effects at 0.070 ppm, nor justified rejecting that finding. EPA apparently relied on an inference that because CASAC recommended an overall range of 0.060-0.070 ppm for the standard’s level, CASAC must have believed that 0.070 ppm was an acceptable level. *See* 79 FR 75,300/2 (proposal) (quoting CASAC’s finding of “substantial scientific certainty,” but noting that CASAC recommended EPA set the standard within the 0.060-0.070 ppm range and called decision about final level “a policy judgment”), JA____. But the decision about the

final level of the standard requires the application of law—the Clean Air Act—to facts—the science about the effects of ozone on human health. *See Mississippi*, 744 F.3d at 1358 (“The task of determining what standard is ‘requisite’ to protect the qualitative value of public health...necessarily requires the exercise of policy judgment.”). CASAC’s expertise is scientific, not legal. *See id.* 1354; *see also* 42 U.S.C. § 7409(d)(2) (CASAC is “independent scientific review committee”).⁵ CASAC here made the “scientific judgment that adverse effects would occur” at the 0.070 ppm level; EPA thus had to “explain why it disagreed with this scientific conclusion,” based on “sound scientific” reasons. *Mississippi*, 744 F.3d at 1357-58. EPA didn’t do so, at most relying on CASAC’s assertions about the legal implication of CASAC’s scientific finding. Thus, EPA cannot dismiss CASAC’s explicit scientific findings of adverse health effects at 0.070 ppm merely because CASAC also included 0.070 ppm in its general range. EPA’s failure to rationally dispute—much less refute—CASAC’s finding of substantial scientific certainty that adverse effects would occur at 0.070 ppm—below the 0.072 ppm level EPA identified—renders EPA’s standard unlawful and arbitrary.

⁵ None of the members of CASAC’s Ozone Review Panel appears to have been a lawyer: all but two had doctoral and/or medical degrees, and the two exceptions worked as a professor of preventative medicine and as a scientist on air pollution issues. *See* CASAC Letter at ix-x, JA ____ - ____.

2. EPA Arbitrarily Redefined “Adverse” Health Effects to Exclude Harms That EPA Previously Deemed “Adverse” for Asthmatics.

EPA also had before it evidence from new controlled human exposure studies demonstrating health effects at levels below 0.070 ppm that EPA previously called “adverse.” Yet EPA concluded that these effects were no longer adverse without rationally explaining how it reached that conclusion.

Studies where human volunteers are exposed to known concentrations of ozone, often in an experimental chamber (“chamber studies”), are generally considered the gold standard in ozone research. *See* PA 1-22, JA____; Sierra Club Comments 62, JA____. Researchers typically measure volunteers’ lung function (measured as “forced expiratory volume in one second” or “FEV₁”) before and after the test. Volunteers enter a large chamber where ozone concentrations are precisely controlled, and then alternate periods of exercise and rest over 6.6 hours.

These studies’ “closely monitored conditions” and controlled setting make them highly probative, but they generally test only young, healthy, nonsmokers—*i.e.*, not children, severely ill people, or other sensitive subpopulations. *See* PA 1-22, JA____; Sierra Club Comments 62-63, JA____ - __. EPA has acknowledged that when chamber studies use only healthy subjects, individuals with lung disease or other risk factors will experience responses at even lower levels and suffer more severe responses at higher levels. *See, e.g.*, 73 FR 16,463/1 (“controlled human exposure studies that employ subjects who do not have lung disease will likely

underestimate the effects in those people that do have asthma or other lung diseases.”), JA_____.

In the 2008 ozone rulemaking, EPA found that lung function decrement of 10% or greater was “harmful (or ‘adverse’) to asthmatics.” *Mississippi*, 744 F.3d at 1349 (citing 73 FR 16,454-55). Indeed, EPA in the 2008 final rule “strongly” rejected comments suggesting that “transient decreases in FEV₁ of 10-20% are not by themselves significant or meaningful to asthmatics,” explaining that for such people, this level of lung function decrease “would likely interfere with the normal activities for many individuals, and would likely result in more frequent medication use.” 73 FR 16,463/2-3, JA_____. Though key chamber studies found that some of their healthy young adult subjects “experienced lung function decrements of at least ten percent—a level EPA considers to be harmful (or ‘adverse’) to asthmatics”—at 0.06 ppm ozone, the Court upheld EPA’s decision not to set the standard at that level. *Mississippi*, 744 F.3d at 1349-50. The Court so held based solely on EPA’s conclusion that those studies’ sample size was too small to provide certainty as to the results, noting that further similar studies could “yet reveal that the 0.060 ppm level produces significant adverse decrements that simply cannot be attributed to normal variation in lung function.” *Id.*

By the time of the 2015 ozone review, there were twice as many controlled human exposure studies available, including two new studies evaluating exposures

to 0.060-0.063 ppm ozone. Sierra Club Comments 62, 64, JA____, _____. EPA did not (and could not) question whether exposures at 0.060 ppm caused decrements of 10% or more and conceded that the effects were “not isolated effects on idiosyncratically responding individuals.” RTC 23, JA____. Instead, without even acknowledging its departure, EPA changed its test for finding effects “adverse.” See 80 FR 65,357/1-58/2, JA____ - ___. Whereas before, a chamber study finding a 10% or greater lung function decrement in healthy adults was considered proof that such concentrations would result in adverse effects in asthmatics, EPA now claimed that in order to prove an “adverse effect,” chamber studies must show both a decrement in lung function and evidence of respiratory symptoms (*e.g.*, coughing or wheezing) in the healthy adult test subjects, and the new studies had not shown respiratory symptoms at statistically significant levels. See *id.* 65,330/2-31/1, JA____ - __; RTC 16, JA____. EPA’s abandonment of its prior test was arbitrary.

EPA suggests its new test merely followed the American Thoracic Society’s guidance, which identifies the “reversible loss of lung function in combination with the presence of symptoms” as one of several grounds for finding an effect adverse. See 80 FR 65,330/2 (quoting American Thoracic Society (“ATS”), *What Constitutes an Adverse Health Effect of Air Pollution?*, 161 Am. J. Respir. Crit. Care Med. 665 (2000) (“Thoracic Society Guidance”), JA____), JA____. But that guidance also explains that “air pollution-related symptoms associated with

diminished quality of life or with a change in clinical status should be considered adverse at the individual level.” Thoracic Society Guidance 671, JA____. A change in clinical status is “one requiring medical care or a change in medication.” *Id.*, JA_____.

In past rulemakings establishing ambient air quality standards, EPA has found that chamber studies demonstrating a significant lung function decrement in healthy adults satisfy the Thoracic Society criteria because “for people with lung disease, even moderate functional responses (e.g., FEV₁ decrements of $\geq 10\%$ but $< 20\%$) would likely interfere with normal activities for many individuals, and would likely result in more frequent medication use.” 73 FR 16,463/2-3 (2008 Ozone Final Rule), JA____; *see Mississippi*, 744 F.3d at 1349 (noting that “EPA considers [10% decrement] to be harmful (or ‘adverse’) to asthmatics”) (citing 73 FR at 16,454-55) (emphasis added). In the 2010 sulfur dioxide (“SO₂”) ambient air quality standard rulemaking, EPA explained this same analysis:

Even without...the 2000 ATS guidelines..., EPA would consider the asymptomatic decrements in lung function associated with 5-10 minute SO₂ exposures as low as 200 ppb to be adverse.... EPA has stated that similar moderate or greater decrements in lung function (e.g., a $\geq 15\%$ decline in FEV₁...) in people with pre-existing respiratory disease could result in clinical outcomes such as increased medication usage and/or disruption of normal activities...which would also be considered adverse effects of air pollution under ATS guidelines.

EPA-HQ-OAR-2007-0352-1450 at 16, JA____; *see also, e.g., id.* 17 (similar), JA____; 74 FR 64,810, 64,816/3, 64,817/2-3 (2009) (similar), JA____, ____.

Thus, the scientific argument was: (1) chamber studies demonstrate that measured ozone concentrations lead to lung function effects over a specific threshold in healthy adults; (2) sensitive individuals, like asthmatics, are at least as sensitive to these same ozone concentrations, so these same concentrations cause at least those same lung function decrements in these sensitive individuals; (3) asthmatics or people with lung disease suffering lung function decrements over these thresholds will have to change their normal activities and will likely increase their use of medication; and (4) these ozone-triggered effects fit the Thoracic Society definition of “adverse effects.” EPA now abandons this logic, and asserts that proof of significant lung function decrements in healthy adults is not enough.

EPA’s new test irrationally requires a demonstration of lung function decrement plus evidence of respiratory symptoms in healthy human test subjects, but this population is not the sole target for the Act’s protections. The standard must be not only adequate to protect the average member of the population, but also to guard against adverse effects in vulnerable subpopulations, such as children, the elderly, and people with lung disease. *See American Lung*, 134 F.3d at 389; *see also Coal. of Battery Recyclers*, 604 F.3d at 618; *Farm Bureau*, 559 F.3d at 524; *Lead Indus.*, 647 F.2d at 1153. For ethical reasons, however,

researchers do not use especially-vulnerable individuals as test subjects in chamber studies. But under EPA's new criteria for demonstrating adverse effects, the only way that chamber studies—the gold standard of human health effects studies—can now demonstrate an adverse effect in sensitive individuals is to demonstrate respiratory symptoms in the people least likely to experience them—healthy adults. There is no rational basis under the Act for adopting this new test for demonstrating adverse effects and claiming that it will ensure the standard protects sensitive subpopulations. *See Lead Indus.*, 647 F.2d at 1155.

EPA wrongly asserts that its judgment here about the adversity of 10% decrements is not “inconsistent” with its judgment in the 2008 rule, RTC 21, JA _____. Not so. Here, it says such decrements are not adverse; in 2008, it said such decrements were adverse for asthmatics. 73 FR 16,454/3-55/1, JA _____; *Mississippi*, 744 F.3d at 1349 (citing same).

EPA's decision to change the criteria for demonstrating “adverse effects” was not driven by sound scientific judgment. It served only to dismiss the strong evidence showing that the standard EPA adopted will not protect asthmatics and other sensitive individuals. EPA's action was therefore arbitrary and capricious.

II. THE SECONDARY STANDARD FAILS TO PROVIDE REQUISITE PROTECTION FOR PUBLIC WELFARE.

Ozone pollution damages trees and plants, stunting their growth, blackening their leaves, curtailing their carbon storage, and harming forest ecosystems. ISA 1-8, 1-15, JA____, ____; Dkt-1191 at 7-6, JA____. Because these harms are tied to cumulative ozone exposure over an entire growing season rather than over an 8-hour period, EPA's science advisors unanimously called for a separate secondary (welfare) standard limiting such cumulative exposures to specified levels. CASAC Letter at iii-iv, JA____-____. So too did the National Park Service. Dkt-3871, JA____. EPA's rejection of that advice was unlawful and arbitrary.

A. EPA's Decision on the Level of Air Quality Requisite to Protect Against Ozone Harms to Plant Growth Was Illegal and Arbitrary.

CASAC found ozone caused adverse welfare effects, including growth loss to trees and plants, visible damage to leaves ("foliar injury"), harms to ecosystems, and losses in crop yields. CASAC Letter at iii, JA____. To provide requisite protection against these harms, it recommended adoption of a cumulative "W126" ozone standard in the range of 7 to 15 ppm-hours (a measure of cumulative ozone exposure) to be met during the growing season every year. *Id.*, JA____. More specifically, CASAC found that a cumulative seasonal standard of 7 ppm-hours would protect against ozone-induced growth loss in trees, a standard below 10 ppm-hours was required to reduce visible ozone damage to leaves, and a standard

below 15 ppm-hours was requisite to protect against crop-yield loss. *Id.*, JA _____. CASAC also found a single-season period for the cumulative standard (rather than averaging over multiple years) was warranted to protect against “the anticipated cumulative effects on perennial species,” and because “[t]he scientific analyses considered in this review, and the evidence upon which they are based, are from single-year results.” *Id.* 13, JA _____.

EPA rejected CASAC’s scientific advice, and instead adopted a welfare standard identical to the health standard. 80 FR 65,409/3, JA _____. EPA asserted that a cumulative level of 17 ppm-hours, averaged over three years, should be the target for protecting trees against ozone-induced growth loss. *Id.* 65,406/1-07/1, JA _____ - _____. EPA then claimed that the health standard of 0.070 ppm (measured as the 3-year average of the annual fourth-highest maximum daily 8-hour average) would suffice as a welfare standard because it would allegedly provide similar protection against tree growth loss as would a 3-year average cumulative standard of 17 ppm-hours. *Id.* 65,408/1-09/2, JA _____ - _____. EPA did not attempt to determine air quality levels requisite to protect against ozone damage to leaves or crops. *Id.* 65,407/1-08/1, JA _____ - _____.

EPA failed to provide the sound scientific reasons required by this Court for rejecting CASAC’s advice. *Mississippi*, 744 F.3d at 1355. As noted above, CASAC recommended an annual seasonal cumulative ozone limit of 7 ppm-hours

(not a 3-year average of 17 ppm-hours) to protect against growth loss in trees.

CASAC based that advice on data showing that at 7 ppm-hours ozone in a single year, there was less than 2% growth loss (“relative biomass loss” or “RBL”) in the median species of 12 tree species studied. 79 FR 75,340/1-2, JA _____. CASAC found 2% growth loss was “an appropriate scientifically based value to consider as a benchmark of adverse impact” for trees. CASAC Letter 14, JA ____; *see also* Dkt-0189 at 6 (CASAC statement that “2% relative biomass loss per year is an appropriate criterion for adverse effect”), JA _____.

Rather than rationally refuting CASAC’s advice, EPA misrepresented it. The agency claimed that CASAC identified 6% as its benchmark for an adverse level of growth loss, instead of the 2% level CASAC plainly specified. *See* 80 FR 65,406/2-3, JA _____. EPA did so by distorting a CASAC statement referring to a 6% growth loss as “unacceptably high.” In reality, CASAC merely cited the “unacceptably high” growth loss of 6% at 17 ppm-hours as an “example” of why a standard higher than 15 ppm-hours was not scientifically defensible. CASAC Letter at iii (emphasis added), JA _____. EPA further speculated that CASAC favored excluding one of the 12 tree species (cottonwood) from the growth loss analysis, a step that shifted to 19 ppm-hours the level at which the median species would show a 6% growth loss. *See, e.g.*, 79 FR 75,340 tbl.8, 75,343/2 & n.221, JA _____, _____. But CASAC said no such thing, and actually expressly relied on the

12-tree growth loss table that on its face included cottonwood.⁶ *See, e.g.*, CASAC Letter 14 (citing Dkt-0236 6-19 tbl.6-1, JA____), JA____. Moreover, CASAC rejected levels higher than 15 ppm-hours because “[m]ost of the analyses found effects below 15 ppm-hrs (many at 10 or even 7 ppm-hrs).” *Id.* 12, JA____.

Contrary to EPA’s assertions, 80 FR 65,394/3-95/1, JA____ - __, CASAC provided specific justifications for its choice of 2% growth loss as an adverse effects benchmark. It explained that a 2% level was “an appropriate scientifically based value” because of the cumulative effect of such growth losses over multiple years, and was consistent with a 1-2% threshold for growth loss developed by a separate consensus workshop of leading experts on ecological effects of ozone. CASAC Letter 14, JA____; *see also* PA 6-16 (describing the expert workshop), JA____.

Nor did CASAC’s recommendation of a 7-15 ppm-hours range justify EPA’s rejection of CASAC’s more specific 7 ppm-hours benchmark to protect against tree growth loss. As noted above, CASAC found that different levels within the range were needed to protect against different welfare impacts. EPA

⁶ EPA cited a CASAC statement that the cottonwood data received “too much emphasis,” but that statement referred to portions of the draft Policy Assessment highlighting the ozone-sensitivity of cottonwood, including a separate figure addressing cottonwood data—a degree of attention not given other tree species. CASAC Letter 10 (citing Dkt-0236 at 5-14 fig.5-1, 5-17 fig.5-3, JA____, ____), JA____.

failed to provide a sound, science-based reason for rejecting CASAC's more specific advice on the level of protection requisite for tree growth.

EPA also arbitrarily rejected CASAC's unequivocal call for a single-season, rather than 3-year average, cumulative benchmark. The agency asserted that effects were greater with multi-year exposures, but did not (and could not) explain how an approach that averages out high-pollution years limits such exposures more effectively than a standard that must be met each and every year. *See* 80 FR 65,404/2-3, JA _____. The agency further claimed a 3-year average would promote greater "stability" in implementing the standard by giving less weight to extreme pollution events, but failed to scientifically refute CASAC's findings that: 1) the cumulative standard already provided stability from the influence of such events because it measures total exposure over a 3-month period; and 2) "[t]he case has not been made that welfare benefits from the stability of a 3-year average are greater than those from using the biologically relevant 1-year value," CASAC Letter 13, JA _____. *See Mississippi*, 744 F.3d at 1355 (requiring "sound scientific reason" for EPA disagreement with CASAC's scientific advice). Indeed, EPA provided no showing that the alleged additional stability from a 3-year average would provide any tangible welfare benefits at all, much less benefits of such magnitude as to allow single-season cumulative ozone levels associated with "unacceptably high" growth loss.

Further, EPA's choice of a 3-year average 17 ppm-hours benchmark was simply not supported by the record. EPA said 17 ppm-hours was justified because: 1) CASAC had identified a 6% growth loss as "unacceptably high"; 2) growth loss for the median species (out of 11)⁷ was 6% at 19 ppm-hours; and 3) to avoid unacceptable growth loss, the benchmark should therefore be set "somewhat below" 19 ppm-hours. 80 FR 65,406/2-07/1, JA ____ - __. Even if 6% growth loss were a defensible benchmark for protecting public welfare, EPA's rationale fails because the growth-loss data on which both CASAC and EPA relied was for single-year exposures, not three-year averages: thus, when CASAC was referring to a 6% growth loss as "unacceptably high," it was referring to such loss occurring in a single year. CASAC Letter at iii ("The scientific analyses considered in this review, and the evidence upon which they are based, are from single-year results."), JA _____. Likewise, the data EPA relied on as showing a 6% growth loss at 19 ppm-hours was for a single year's exposure—not a three-year average. 80 FR 65,391 tbl.4 ("Tree Seedling Biomass Loss...Estimated for [Ozone] Exposure Over a Season" (emphasis added)), JA _____.

A 3-year average benchmark of 17 ppm-hours allows single-year levels well in excess of 19 ppm-hours. Indeed, parks and wilderness areas—places that EPA

⁷ As noted above, EPA wrongly reduced the number of species considered from 12 to 11 based on a misrepresentation of CASAC's views.

itself stressed should be the particular focus of vegetation protection, *id.* 65,405/2-3, JA____—have repeatedly recorded single-year levels substantially higher than 19 ppm-hours while meeting a 3-year average of 17 ppm-hours. Dkt-4249 (showing single-year levels of 24.0 ppm-hours (Superstition), 22.9 (Saguaro), 22.0 (Mesa Verde), 20.5 (Wind Cave), 19.8 (Zion), 19.1 (Lassen Volcanic), 21.0 (Weminuche), and 26.2 (Rocky Mountain) during periods meeting 3-year average 17 ppm-hours level), JA____. Thus EPA’s chosen benchmark arbitrarily allows annual levels associated with “unacceptably high” growth loss in the very kinds of places EPA says protection against ozone-induced growth loss is most critical.

EPA wrongly implied that CASAC endorsed a 3-year average as long as the average was lower than the relevant single-year benchmark. *See* 80 FR 65,406/3-07/1, JA____ - __. Rather, CASAC said that if a 3-year average is used, “then the level of the standard should be revised downward such that the annual level in any given year of the three year period would not exceed the scientifically recommended range of annual levels of 7 ppm-hrs to 15 ppm-hrs.” CASAC Letter 15 (emphasis added), JA____. EPA’s approach arbitrarily flouts that advice and allows annual ozone damage to tree growth that both EPA and CASAC found unacceptable.

B. EPA Illegally and Arbitrarily Refused to Adopt a Separate Standard to Protect Against Ozone Harms to Plants and Ecosystems.

Five times over the past decade CASAC has recommended adoption of a separate “W126” welfare standard to limit cumulative ozone harm to plants over each growing season. *Id.* at iii, 12, JA____, ____; Dkt-0240 at 1-2, JA____-__; Dkt-0410 at 5-7, JA____-__; Dkt-0411 at 3, JA____; Dkt-0412 at 2-3, JA____-__. The National Park Service has concurred. Dkt-0104, JA____; Dkt-0123, JA____; Dkt-3871, JA____. EPA itself “agree[d] that...the W126 Index—and not an 8-hour daily maximum concentration...—is the appropriate metric for assessing exposures of concern for vegetation, characterizing risk to public welfare, and evaluating what air quality conditions might provide the desired degree of public welfare protection.” 80 FR 65,399/3, JA____.

Yet EPA here refused to adopt a cumulative seasonal welfare standard. EPA justified its refusal by citing data showing that, for certain recent years, almost all counties that met a 0.070 ppm 8-hour standard also met a target cumulative level of 17 ppm-hours, averaged over three years (far weaker than the 7-15 ppm-hours single-year range CASAC called for). *Id.* 65,408/3-09/2, JA____-__.

EPA’s action was unlawful and arbitrary. First, CASAC expressly rejected the sort of comparison EPA relied on here because, among other things: 1) the 8-hour form of the standard was “inadequate” “to protect vegetation and ecosystem services from adverse effects”; 2) control strategies to meet an 8-hour standard

would not necessarily be effective in assuring compliance with a cumulative standard; and 3) “the current form of the standard is much less biologically relevant for protecting vegetation than is a seasonal, peak weighted index such as the W126, which was designed to measure the cumulative effects of ozone exposure.” CASAC Letter 11-12, JA ____ - __. Far from refuting these findings, EPA agreed that the lack of a relationship between 8-hour and cumulative levels “indicates that in some locations, [ozone] air quality patterns can lead to elevated cumulative, seasonal [ozone] exposures without the occurrence of elevated daily maximum 8-hour average [ozone] concentrations.” 79 FR 75,344/2 (emphasis added), JA ____.

Second, EPA’s comparison does not show equivalent protection even if 17 ppm-hours 3-year average were the right benchmark for a cumulative standard. For example, monitors in some of the nation’s most iconic national parks, including Grand Canyon, Canyonlands, Mesa Verde, and Zion, as well as Maroon Bells-Snowmass and Weminuche wilderness areas have all recorded cumulative 3-year average levels higher than 17 ppm-hours during periods when a 0.070 ppm 8-hour level was met. Dkt-4249, JA _____. As noted above, these are places that Congress has set aside to preserve in pristine natural condition, and that EPA itself found should receive particular protection. *Supra* pp.46-47; 80 FR 65,376/3-77/1, JA ____ - __; PA 6-50, JA _____.

Third, EPA's comparison assumed a weak form and level for the cumulative standard (17 ppm-hours averaged over 3 years) that was far less protective than even the upper end of the CASAC range (15 ppm-hours single-season maximum). For more protective cumulative levels, the data showed numerous areas that met the 0.070 ppm 8-hour health standard but violated a 3-year average cumulative level. For example, in the 13-year period studied by EPA, there were more than 1,300 occurrences where monitors reached or exceeded CASAC's 7 ppm-hours benchmark for protecting tree growth (even after averaging over three years), while meeting the health standard. Dkt-4325 at 14 tbl.9, JA _____. And if EPA had looked at single-year cumulative levels as CASAC recommended (rather than averaging them out over 3 years), it would have found that numerous national parks and wilderness areas far exceeded even a 17 ppm-hours threshold while meeting the health standard. Dkt-4249, JA ____; PA 5-28 to -29 tbl.5-2, JA ____ - _____. These include national parks and Class I wilderness areas⁸ like Grand Canyon (maximum annual level of 21.7 ppm-hours), Petrified Forest (18.6 ppm-hours), Saguaro (20.2 ppm-hours), Mesa Verde (22 ppm-hours), Canyonlands (23.6 ppm-hours), Zion (19.8 ppm-hours), Carlsbad Caverns (26.7 ppm-hours), Wind Cave

⁸ "Class I" areas include 156 national parks and wilderness areas for which Congress has directed special protection from air pollution. *See* 42 U.S.C. § 7472(a); 64 FR 35,714, 35,715/2 n.4, 35,716 (1999), JA ____ - ____.

(20.6 ppm-hours), Chiricahua (19.8 ppm-hours), Superstition (19.6 ppm-hours), Maroon Bells-Snowmass (23 ppm-hours), Weminuche (20.8 ppm-hours), and Bridger (18.8 ppm-hours). 79 FR 75,331-32 tbl.7, JA ____ - __; Dkt-4249, JA ____.

Fourth, EPA never explained why it rejected a separate cumulative standard. EPA made no claim that the 8-hour form of the standard was more protective of welfare values, or that there was a consistent, fundamental relationship between the two metrics—nor could it. *See* 80 FR 65,400/2 (EPA “ha[s] not...claimed there to be ‘congruence’ between the two metrics...or that the two metrics coincide exactly”), JA _____. For all appearances, EPA made the welfare standard identical to the health standard simply to avoid the inconvenience of having to implement two standards, hardly a lawful basis for decision.⁹ *See* 42 U.S.C. § 7409(b)(2); *Whitman*, 531 U.S. at 471 n.3. This Court has rejected prior EPA attempts to rely on similar specious claims of alleged equivalence between 8-hour and cumulative standards, and should do so here as well. *Mississippi*, 744 F.3d at 1361; *Farm Bureau*, 559 F.3d at 530.

⁹ Indeed, EPA proposed to set the welfare standard identical to the health standard before EPA had even decided on the level for the health standard. *See* 79 FR 75,351/1, JA _____.

C. EPA Illegally and Arbitrarily Failed to Identify the Level of Air Quality Requisite to Protect Against Adverse Effects From Visible Leaf Damage.

EPA and CASAC have long identified visible leaf damage as an adverse welfare effect of ozone. 73 FR 16,496/2, JA____; CASAC Letter at iii, 10, 15, JA____, _____, _____; PA 5-87, JA____. Such damage is widespread and can blacken or mar the leaf surface (see figure below), thereby impairing the beauty of affected trees and plants and rendering them more susceptible to disease and insect infestation. EPA-HQ-OAR-2005-0172-11917 at 2, JA____; Dkt-1191 at 7-4, JA____. It also can lead to reduced plant absorption of carbon, alteration of plant diversity, and interference with cultural values of Native Americans for whom impacted areas are sacred. Dkt-1191 at 2-6, JA____; 80 FR 65,383/1-2, JA_____.

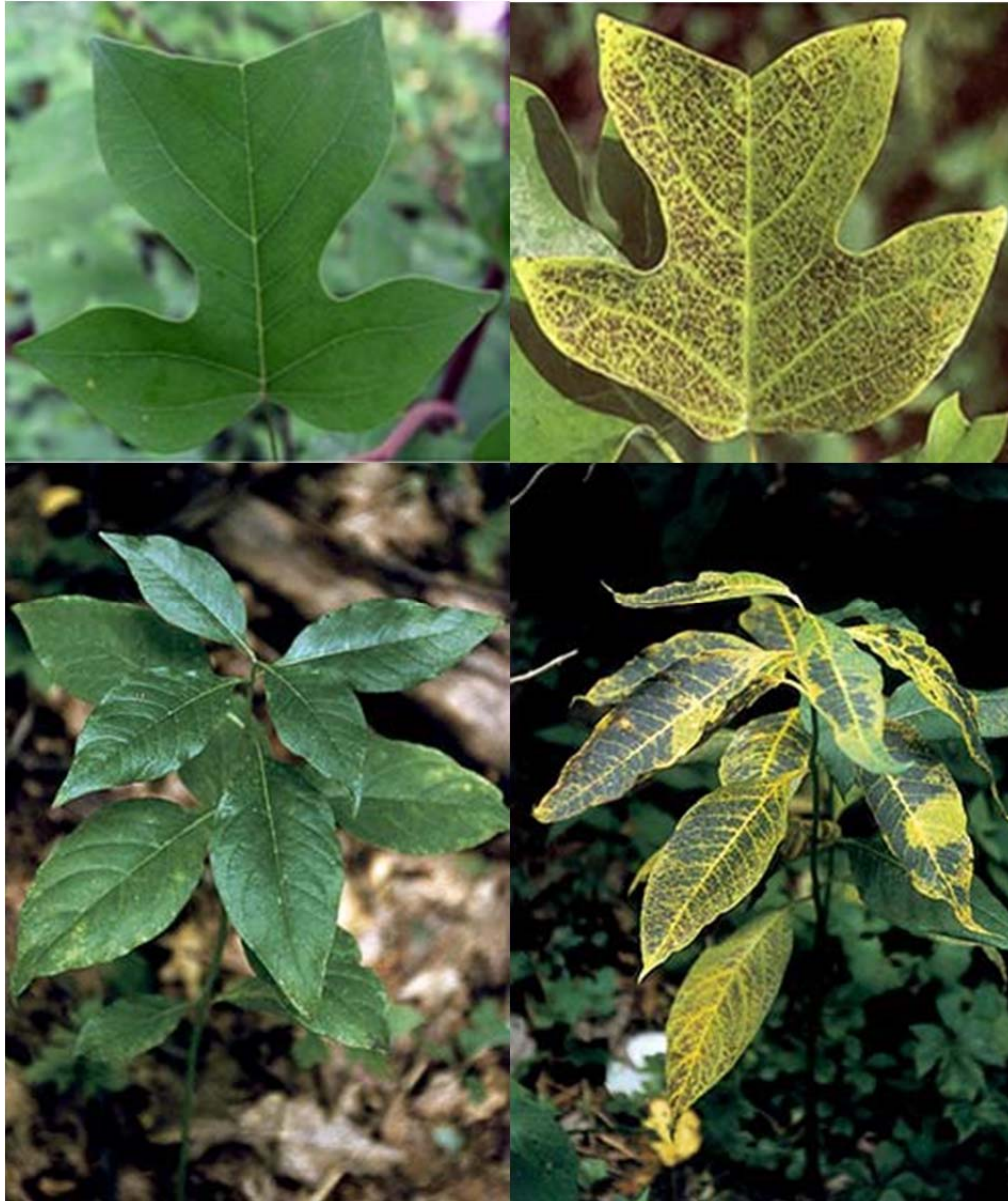


Figure: Examples of Leaf Damage from Ozone Exposure, Dkt-0234 at 7-6, JA_____.

EPA's refusal to identify a level of air quality adequate to protect against such harms was unlawful and arbitrary. The Act requires EPA to "specify a level of air quality the attainment and maintenance of which...is requisite to protect the public welfare from any known or anticipated adverse effects." 42 U.S.C.

§ 7409(b)(2). Thus, EPA must identify a specific level of air quality requisite to protect the welfare value at issue and set a secondary standard to provide that level of protection. *Farm Bureau*, 559 F.3d at 529-30; *accord Mississippi*, 744 F.3d at 1360-61. “EPA’s failure to identify such a level when deciding where to set the level of air quality required by the revised secondary...NAAQS is contrary to the statute and therefore unlawful. Furthermore, the failure to set any target level...deprived the EPA’s decisionmaking of a reasoned basis.” *Farm Bureau*, 559 F.3d at 530; *accord Mississippi*, 744 F.3d at 1360. So too here. EPA failed to identify a target level of air quality requisite to protect against visible damage to leaves. The agency’s 3-year 17 ppm-hours benchmark was directed at growth loss and (allegedly) at related ecosystem effects, not leaf damage. 80 FR 65,406/1, 65,408/1, JA____, ____.

EPA justified its approach on the ground that the revised primary standard would provide some additional protection for leaves, that specifying a level of protection for leaves would involve “significant challenges,” and that there was allegedly a lack of established criteria for the appropriate level of protection against leaf damage (an incorrect claim, as explained below). *Id.* 65,407/3, JA____. This Court rejected the very same kinds of excuses in *Farm Bureau*, holding they did not overcome EPA’s statutory duty to identify a target level of protection. 559 F.3d at 529-30 (alleged incidental welfare benefits from primary

standard and uncertainties in selecting level of welfare protection did not overcome statutory mandate to identify a level of requisite welfare protection). And as in *Farm Bureau*, EPA's failure to identify a target protection level "deprived the EPA's decisionmaking of a reasoned basis." *Id.* 530.

This case is unlike *Center for Biological Diversity v. EPA*, 749 F.3d 1079, 1090-91 (D.C. Cir. 2014), where the Court upheld EPA findings that uncertainties were so "unusually profound" that EPA "could not form" a reasoned judgment on a requisite level for welfare protection. EPA made no such finding here, nor could it. Based on the evidence, CASAC specifically found that "[an ozone] level below 10 ppm-hrs is required to reduce foliar injury."¹⁰ CASAC Letter at iii, JA _____. It further found that a level of 7 ppm-hours "offers additional protection against...foliar injury." *Id.* 15, JA _____. The Park Service published guidelines in 2011 indicating that an ozone level of 7 ppm-hours or greater would have a moderate impact on ozone-sensitive vegetation, while a level greater than 13 ppm-hours would have a major impact. Dkt-4332 at 14, JA _____. The Park Service based these levels in part on recommendations from the expert workgroup (cited

¹⁰ Contrary to EPA's claims (80 FR 65,396/1, JA _____), CASAC did not mistakenly read the data as showing no increase in leaf injury above 10 ppm-hours. CASAC specifically acknowledged that 10 ppm-hours was "not a threshold for no injury." Dkt-0189 at 7, JA _____. Rather, it is a level below which significant reductions occur in the number of sites suffering visible leaf damage. *See* Dkt-1191 at 7-18 fig.7-10, JA _____.

above) that found a standard of “5-9 ppm-hrs would protect plants in natural ecosystems against foliar injury.” *Id.*, JA _____. In the rulemaking here, the Park Service (citing its 2011 guidelines) expressly recommended a standard “at the lower end” of the CASAC-recommended range of 7-15 ppm-hours “in order to address foliar injury.” Dkt-3871 at 2 (emphasis added), JA _____.

The above-cited recommendations and supporting material provided EPA with more than enough information to reasonably specify an ozone level to protect against leaf damage. EPA may rely on CASAC’s advice, and indeed must do so absent an adequate explanation. *ATA*, 283 F.3d at 378-79. Likewise, the Park Service’s views provide a particularly strong basis for decision here given that EPA itself has repeatedly stressed that the welfare standard must emphasize protection of national parks and similar protected areas. Further, the Park Service’s 2011 guidelines and its subsequent comments refute EPA’s claim of a lack of established criteria for protection against leaf damage.

Accordingly, EPA has failed to meet the “especially heavy” burden of showing that it was impossible to “specify a level” of ozone air quality to provide requisite protection against leaf damage, as the Act requires. *Sierra Club v. EPA*, 719 F.2d 436, 462-63 (D.C. Cir. 1983) (citation omitted).

III. EPA UNLAWFULLY WAIVED PERMITTING REQUIREMENTS DESIGNED TO PREVENT VIOLATIONS OF THE NEW STANDARDS.

The Act provides that “[n]o major emitting facility...may be constructed in any area [not designated “nonattainment”] unless...the owner or operator of such facility demonstrates...that the emissions from the construction or operation of such facility will not cause, or contribute to, air pollution in excess of any...national ambient air quality standard in any air quality control region.” 42 U.S.C. § 7475(a)(3); *see id.* § 7471. Despite the plain language of § 7475(a)(3), EPA’s final rule amends the federal construction (“PSD” or “prevention of significant deterioration”) permitting regulations to allow certain major emitting facilities to be constructed without demonstrating that emissions from the project will not cause or contribute to violations of the new standard. *See* 40 C.F.R. §§ 51.166(i)(11), 52.21(i)(12); *see also* 80 FR 65,433/1-34/3 (describing final action and rationale), JA ____ - __. Specifically, EPA has waived the requirement to comply with § 7475(a)(3) with respect to the new ozone standard for projects that had complete applications as of October 1, 2015, or that had a draft permit publicly noticed before December 28, 2015. This “grandfathering exemption” violates the plain and unambiguous language of § 7475(a)(3).

EPA identifies no ambiguity in § 7475(a)(3)’s requirement. It does not dispute that the new ozone standards fall within “any...national ambient air quality

standard” covered by the provision. Nor does EPA dispute that the statute requires this demonstration of compliance for any such standard in effect at the time the permit is issued. *See* 79 FR 75,377/2 (explaining EPA policy is “to require that PSD permit applications must include a demonstration that new major sources and...modifications will not cause or contribute to a violation of any NAAQS that is in effect as of the date the PSD permit is issued”), JA____. Finally, EPA does not claim that there is any relevant statutory exemption from this requirement. To the contrary, the only major emitting facilities the Act exempts are those for which construction commenced by August 7, 1977, thus demonstrating that EPA lacks authority to invent a new exemption, 42 U.S.C. § 7475(a); *see also id.* § 7478(b). *See Andrus v. Glover Constr. Co.*, 446 U.S. 608, 616-17 (1980) (“Where Congress explicitly enumerates certain exceptions to a general prohibition, additional exceptions are not to be implied, in the absence of evidence of a contrary legislative intent.”).

EPA’s statutory argument is not based on any ambiguity in § 7475(a), but instead on a concocted conflict between the obligations of § 7475(a) and the requirement of § 7475(c) to grant or deny permits within one year after a complete permit application is filed. *See* 80 FR 65,433/3 (asserting EPA has authority to “balance[] competing objectives of the statutory PSD program found in [§ 7475]”), JA____. EPA’s statutory argument is meritless.

First, there is no actual conflict between these provisions. Even assuming the promulgation of a new standard might limit the ability to approve certain permits within the deadlines of § 7475(c)—a conclusion that has no record basis—such limitations do not preclude EPA from complying with all its statutory obligations. If EPA cannot approve a project within the applicable deadline because the source has not satisfied its statutory obligation to demonstrate that the proposed facility will not cause or contribute to a violation of the new standard, the Act provides two alternatives: 1) either deny the permit application because it does not meet the requirements of the statute, or 2) acknowledge that with the promulgation of a new standard, the application is no longer complete. *See Hibbs v. Winn*, 542 U.S. 88, 101 (2004) (“A statute should be construed so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant.”) (internal quotation and citation omitted).

Second, even if it turns out in certain cases to be undesirable from EPA’s perspective to comply with both sections, that difficulty does not allow EPA to pick which provision to ignore. An agency may not “avoid the Congressional intent clearly expressed in the text simply by asserting that its preferred approach would be better policy.” *Engine Mfrs. Ass’n v. EPA*, 88 F.3d 1075, 1089 (D.C. Cir. 1996). As the Supreme Court recently explained, the agency’s “authority and responsibility to resolve some questions left open by Congress that arise during the

law's administration" does not extend to "include a power to revise clear statutory terms that turn out not to work in practice." *Utility Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2446 (2014). "An agency confronting resource constraints may change its own conduct, but it cannot change the law." *Id.*

EPA's reliance on legislative history does not overcome the unambiguous statute. It quotes one sentence of a 1976 Senate Report to argue that Congress opposed "bureaucratic delay." *See* 80 FR 65,434/1, JA____. Requiring compliance with new standards mandated by Congress to protect public health and welfare hardly qualifies as "bureaucratic delay," and, regardless, this single snippet from a report accompanying a bill that did not even include the requirement ultimately codified in § 7475(a)(3)¹¹ cannot justify a policy that is otherwise inconsistent with the policy choices made by Congress in adopting the construction permitting program.

In enacting the prevention of significant deterioration permitting program, Congress made two fundamental policy choices: 1) it is preferable to prevent air pollution from becoming a problem in the first place by limiting pollution from newly constructed sources; and 2) it is better to install pollution controls when new

¹¹ *See* S. 3219, 94th Cong. § 6 (1976) (proposing new Clean Air Act § 110(g)(4) outlining requirements for permits that do not include demonstrating compliance with standards).

sources are being constructed rather than as retrofits on existing sources. *See, e.g.*, S. Rep. No. 95-127, at 11 (1977) (“This legislation defines ‘significant deterioration’ in all clean air areas as a specified amount of additional pollution.... This definition is intended to prevent any major decline in air quality currently existing in clean air areas and will provide a margin of safety for the future.”); H.R. Rep. No. 94-1175, at 107, 114 (1976) (explaining that “[p]ermitting unrestricted deterioration of air quality up to the ambient standards involves trying to cure a condition after it has developed rather than using practical and currently available means to prevent or minimize the condition in the first place” and that “[c]ommon sense dictates that it is substantially less expensive to prevent air pollution problems—and health problems—before they develop than it is to abate dangerous pollution levels”).

EPA’s elevation of timely approval over careful review would defeat both these congressional choices. Grandfathering allows projects to be built without a showing that they will not cause or contribute to violations of the standards. If these sources are built and violations then occur, states will be responsible for developing plans to control emissions to bring air pollution levels back down to meet the standards. 42 U.S.C. §§ 7410, 7502. Such plans require the adoption of retrofit control technology requirements for existing major sources. *Id.* § 7502(c)(1). The result is that these same sources given a pass under the

construction permitting program could ultimately be required to address these emissions in a much less cost-effective manner through retrofit controls.

Grandfathering sources from § 7475's requirements, and ignoring the foreseeable pollution problems that the statutory program is specifically designed to avoid, undermines the "prevention" function of the prevention of significant deterioration permitting program and the choices made by Congress.

The statutory language of § 7475(a) is plain: a new source must demonstrate that it will not cause or contribute to a violation of any national ambient air quality standards, including the new standard. Unless a source can meet these requirements, it may not be built. The statute provides EPA no authority to waive these requirements.

CONCLUSION

For the foregoing reasons, the Court should remand the primary and secondary standards and vacate the grandfathering provision. In light of EPA's repeated delays in updating the ozone standards and the significant public health and welfare impacts at stake, the Court should also set a deadline for EPA to complete remand proceedings. *See Env'tl. Def. Fund v. EPA*, 852 F.2d 1316, 1331 (D.C. Cir. 1988) (setting deadline for action on remand because of "EPA's history of delay and missed deadlines"). As EPA took the action here in response to a 17-

month court-ordered deadline,¹² the same timeframe should be ample for EPA to complete remand proceedings.

DATED: April 22, 2016

Respectfully submitted,

/s/Seth L. Johnson

Seth L. Johnson

David S. Baron

Earthjustice

1625 Massachusetts Ave., NW

Suite 702

Washington, DC 20036-2212

(202) 667-4500

sjohnson@earthjustice.org

dbaron@earthjustice.org

Joshua Stebbins

Joshua Berman*

Sierra Club

50 F Street, NW

Eighth Floor

Washington, DC 20001

(202) 547-1141

josh.stebbins@sierraclub.org

josh.berman@sierraclub.org

*Counsel for Sierra Club, Physicians for
Social Responsibility, National Parks
Conservation Association, Appalachian
Mountain Club, and West Harlem
Environmental Action, Inc.*

Counsel for Sierra Club

¹² Order, *Sierra Club v. EPA*, No. 13-cv-2809 (N.D. Cal. Apr. 30, 2014).

* Application for admission to the D.C. Circuit is pending.

CERTIFICATE REGARDING WORD LIMITATION

Counsel hereby certifies, in accordance with Federal Rule of Appellate Procedure 32(a)(7)(C), that the foregoing **Proof Opening Brief of Public Health and Environmental Petitioners** contains 13,915 words, as counted by counsel's word processing system, and thus complies with the applicable word limit established by the Court.

DATED: April 22, 2016

/s/Seth L. Johnson

Seth L. Johnson

CERTIFICATE OF SERVICE

I hereby certify that on this 22nd day of April, 2016, I have served the foregoing **Proof Opening Brief of Public Health and Environmental Petitioners** on all registered counsel through the Court's electronic filing system (ECF).

/s/Seth L. Johnson
Seth L. Johnson

ORAL ARGUMENT NOT YET SCHEDULED
IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 15-1385 (and consolidated case Nos. 15-1392, 15-1490, 15-1491, 15-1494)

MURRAY ENERGY CORPORATION,
Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

Petition for Review of Final Administrative Actions of the
United States Environmental Protection Agency

**ADDENDA TO THE PROOF OPENING BRIEF OF
PUBLIC HEALTH AND ENVIRONMENTAL PETITIONERS**

Seth L. Johnson
David S. Baron
Earthjustice
1625 Massachusetts Ave., NW
Suite 702
Washington, DC 20036-2212
(202) 667-4500
sjohnson@earthjustice.org
dbaron@earthjustice.org

Joshua Stebbins
Joshua Berman*
Sierra Club
50 F Street, NW
Eighth Floor
Washington, DC 20001
(202) 547-1141
josh.stebbins@sierraclub.org
josh.berman@sierraclub.org

*Counsel for Sierra Club, Physicians for
Social Responsibility, National Parks
Conservation Association, Appalachian
Mountain Club, and West Harlem
Environmental Action, Inc.*

Counsel for Sierra Club

DATED: April 22, 2016

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DECLARATIONS

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DECLARATION OF RHONDA ANDERSON

I, Rhonda Anderson, hereby declare and state:

1. I am a member of the Sierra Club. I have been a member for 16 years. I also work for the Club as an organizer in its Detroit office, in Midtown.

2. I live in Detroit, Michigan. I grew up here, and have lived in the city my entire life. I currently live in the Davison Dexter area. I previously lived in Midtown, and I grew up in River Rouge. The River Rouge area where I grew up is the most polluted area in the state. It has operating coal-fired power plants, a coke battery plant, an auto plant, steel mills, a tar sands oil refinery, mineral processors, asphalt plants, and others, all of which emit air pollutants. I have no plans to move out of the Detroit area. I love this city. I think we're some of the strongest, most resilient people around.

3. I'm 65, and I have grandchildren and great-grandchildren. Two of my grandchildren live with me, along with one of my daughters, who has very bad asthma. When she was pregnant with my granddaughter who was born last March, her asthma got worse and I had to take her to emergency room because of it. My two newest grandchildren—one lives with me, and both just turned 1-year-old last month—have already been diagnosed with asthma. So many young and very young children, especially African American ones like mine, have asthma here that it almost seems normal for children to have it. That is an unnatural norm, and it's just morally wrong.

4. I have had asthma as long as I can remember. I had asthma so bad and stayed in the hospital so much that they put my bed in the hallway by the nurse's station. As an adult, I've also sometimes had to go to the hospital because of my asthma. We're really dependent on

inhalers and medication because the air here is so bad. I usually use my inhaler a few times a week. If I have a cold, it makes things much worse.


5. I spend a lot of time outdoors both for exercise and for work. Along with my daughters and their two infants, I walk around Palmer Park about twice a week for exercise. When we aren't walking there, we're walking around the neighborhood about 3 times a week. At work, I walk around outside daily. Also, as part of my organizing, I go to the River Rouge area regularly—about 3-4 times a week. I lead tours there as part of my work and participate in outdoor events, especially in the summer.

6. I know from my work and my personal experience that we have bad air here and the impacts of bad air. I'm most definitely concerned about impact of ozone pollution on me and my family. My aunt died in my grandmother's arms from an asthma attack. I know many people who have died from asthma attacks, including young adults. I am aware that people with asthma and older adults are especially vulnerable to ozone air pollution.

7. I am aware that ozone pollution levels in the Detroit area are higher than allowed under EPA's new ozone clean air standards. I'm most definitely concerned that any weakening of the standard would threaten my health. I don't know how much more we can bear. We have to take on so much as is. A weaker standard would harm me because it would allow the air to stay dirty, like it currently is. A stronger standard would require the air to be made and stay cleaner, which would benefit me by reducing the threats to my health and well-being.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13, 2016.


Rhonda Anderson

DECLARATION OF SUSAN ARNOLD

1. I am the Appalachian Mountain Club's (AMC) Vice President for Conservation. I have been in this position since May 2003. I oversee implementation of AMC's conservation mission, including our advocacy related to ground-level ozone pollution in parks, trails, and other natural areas throughout the Northeast and Mid-Atlantic regions of the United States. My work requires that I be familiar with AMC's purpose, organization, and activities, as well as the environmental interests and concerns of our members. My work also requires me to be familiar with the nature and scope of AMC's membership programs, its membership records, and the manner in which information on members can be retrieved.
2. AMC is a nonprofit corporation organized under the laws of the Commonwealth of Massachusetts that is dedicated to promoting the protection, enjoyment, and understanding of the mountains, forests, waters, and trails of America's Northeast and Mid-Atlantic regions. In furtherance of those purposes, AMC has long advocated for policies and programs to protect and enhance environmental quality in the Northeast and Mid-Atlantic outdoors, including air quality.
3. AMC regularly maintains membership records that include the address of each member. These records are regularly updated to add new members, reflect address changes, and remove the names of persons who are no longer members. AMC has approximately 90,000 members who reside in many states, including (for example) North Carolina, Virginia, West Virginia, Maryland, District of Columbia, Delaware, Pennsylvania, New Jersey, New York, Massachusetts, Rhode Island, Connecticut, Vermont, New Hampshire, Maine.
4. AMC members use and enjoy many of the national and state parks and forests in these states for hiking, paddling, wildlife watching, aesthetic enjoyment, and other forms of recreation.

For example, areas used and enjoyed by AMC members for these purposes include Delaware Water Gap National Recreation Area, White Mountain National Forest, Gateway National Recreation Area, Cape Cod National Seashore, Shenandoah National Park, Acadia National Park, Rock Creek National Park, the Mid-Atlantic Highlands region, the Appalachian National Scenic Trail (AT), and many other state and national parks and forests. In addition, AMC and our member volunteers maintain sections of the AT in Pennsylvania, New Jersey, Connecticut, Massachusetts, New Hampshire and Maine. Our member volunteers also maintain the New England National Scenic Trail, which passes through the Springfield and Holyoke region in Massachusetts.

5. AMC is very concerned about the threats posed by ozone to the health of its members and to the health of the ecosystems they use and enjoy. As an AMC member myself, and as one very familiar with the interests and concerns of our members, I know that AMC members are also deeply concerned about threats posed by ozone pollution to their health and to the environment in the places where they live and recreate. I know from published reports that ozone is a severe lung irritant, and that it also can cause serious damage to trees and other vegetation in the places where AMC members recreate, thereby impairing our use and enjoyment of these areas.

I declare under penalty of perjury that the foregoing is true and correct.

Dated this 19th day of April, 2016.



Susan Arnold

DECLARATION OF TODD CHAMBERLIN

1. I have been a member of Sierra Club since 1989 and am a board member of the Colorado state chapter.
2. I have lived in Carbondale, Colorado for the past 8 years. My home here is just a couple of miles from the Maroon Bells-Snowmass National Wilderness area. This is part of why I chose to live in Carbondale.
3. I have always enjoyed being outdoors – in fact, my first jobs out of college were with the Park Service as a park ranger in Rocky Mountain National Park and Zion National Park. I spend a lot of time outside near my home and in the surrounding wilderness areas. I have a dog – a cattle dog/border collie mix – and I walk or hike with him almost every day. I also go skiing near here at the four Aspen resorts that border Maroon Bells-Snowmass. I typically do downhill skiing about 6-12 times a year, and go cross country skiing or snowshoeing about 12 times a year each winter.
4. I am also outside gardening just about every day between May and August. I grow lettuce, spinach, onions, thyme, basil, peas, and tomatoes, among other things.
5. I go to the Maroon Bells-Snowmass National Wilderness area about once a month year round – and about three or four times a month during the summer – to hike or backpack. I often take photographs during these trips of the views, foliage, wildlife, and vegetation. I love the beautiful landscapes and all the natural aspects of the wilderness, including the plants and animals and beautiful vistas.
6. I go to many other wilderness areas and parks in Colorado, as well. I visit Mesa Verde National Park about once a year. I also visit Weminuche Wilderness area about once a year;

Colorado National Monument once or twice a year; Rocky Mountain National Park about once a year; Holy Cross Wilderness about six times a year; and Flat Tops Wilderness about two times a year.

7. I go to other national parks regularly, too. As I mentioned above, I once was a park ranger at Zion National Park in Utah, so I like going over to the Utah national parks a couple of times a year. I go to Zion itself at least once every other year; to Arches National Park about once a year; to Canyonlands National Park at least once every other year; and to Capitol Reef National Park at least once every other year.
8. I am concerned about the impact of ozone pollution on the wilderness areas and national parks that I frequent. I am aware from articles I have read and from my college education that ozone pollution can harm vegetation and trees. I have a degree in Ecology and Environmental Conservation from Colorado University, Boulder. North and east of Carbondale there are several wilderness areas where I regularly see lots dying trees, especially pine. Maroon Bells-Snowmass has begun to suffer, as well – there are patches of dying trees there, too, now. Maroon Bells-Snowmass is known for its aspen trees, and we are starting to see those die off as well now – more are dying than is normal. It upsets and worries me to see these dying and sick trees when I am hiking. It diminishes the beauty of the outdoors. I am concerned that the other wilderness areas and parks I visit are also being impacted by ozone pollution. I am seeing similar issues with vegetation in the other wilderness areas and National parks I visit here in Colorado and Utah. These die-offs effect everything from ecosystem health to water quality and can lead to more frequent and more intense forest fires.

9. I am also concerned about the impact of air pollution like ozone on my health. I am aware from publications I have read that ozone can be harmful to my health, too. North of Maroon Bells-Snowmass, about 20 miles from my house, is a lot of oil and gas drilling. I have read in the news that this area has the second highest concentration of oil and gas drilling in Colorado right now. I am very concerned about air pollution from there and from other areas blowing into the areas I live and recreate in; and damaging my health over the long term.
10. I fully support Sierra Club's efforts to require implementation of the Clean Air Act with national ozone standards that fully protect my health and the health and ecosystems of the wilderness areas and parks I like to visit.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 17 2016.



Todd Chamberlin

DECLARATION OF LAURA M. CONNORS

1. I am the Vice President of Membership for the National Parks Conservation Association (NPCA), a non-profit corporation organized under the laws of the District of Columbia. I work in NPCA's national office in Washington, D.C. I have been working at NPCA in that capacity since December 2015, and working in the NPCA Membership Department since October 1998. In that capacity, I am responsible for overseeing NPCA's direct marketing fundraising initiatives, as well as the Membership database. My work requires that I be familiar with NPCA's purpose, organization, structure and activities, and with national park interests and concerns of NPCA members. My work also requires me to be familiar with the nature and scope of NPCA's membership programs, its membership records, and the manner in which information on members can be retrieved.
2. NPCA is a national not-for-profit membership organization headquartered in Washington, D.C. NPCA's mission is to protect and enhance America's national parks for the use and enjoyment of present and future generations. Since NPCA was established in 1919, it has advocated for protection of the natural environment (including air quality) in and around the national parks, educated decision makers and the public about the importance of preserving the parks, worked to convince officials in the Executive Branch and members of Congress to uphold the laws that protect the public's use and enjoyment of the parks and to support new legislation to address threats to the parks, litigated to uphold these laws, and assessed the health of the parks and adequacy of park management to better inform the public and advocate for parks.
3. NPCA regularly maintains membership records that include the address of each member. These records are regularly updated each business day to add new members, reflect address

changes, and change in membership status for those who are no longer active members. The records are maintained on a computer database, from which I obtained the information provided below.

4. NPCA currently has more than 359,000 individual members, with members residing in all 50 states and the District of Columbia, and in other countries.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 18th day of April, 2016.

A handwritten signature in black ink, appearing to read "Laura Connors", is written over a horizontal line. The signature is cursive and extends to the right of the line.

Laura Connors

DECLARATION OF CECIL CORBIN-MARK

I, Cecil Corbin-Mark, declare as follows:

1. I am Deputy Director and Director of Policy Initiatives at West Harlem Environmental Action, Inc., which commonly goes by the name WE ACT for Environmental Justice. I have served in that role for about 10 years, and have worked at WE ACT since 1994. In my current capacity, I am responsible for and participate in management and operation of the organization, as well as for strategies and efforts to achieve our organizational mission. In that capacity, I am required to be familiar with the organization's structure, function, purpose, and membership.

2. WE ACT for Environmental Justice is incorporated in New York, with its headquarters in New York, NY. It is recognized as a not-for-profit corporation under section 501(c)(3) of the United States Internal Revenue Code. WE ACT for Environmental Justice is a Northern Manhattan community-based membership organization whose mission is to build healthy communities by assuring that people of color and/or those with low-income participate meaningfully in the creation of sound and fair environmental health and protection policies and practices. As a result of its ongoing work to educate and mobilize the more than 630,000 residents of Northern Manhattan on environmental issues affecting their quality of life, WE ACT for Environmental Justice has become a leader in the nationwide movement for environmental justice, influencing the creation of federal, state and local policies affecting the environment. It also has an office in Washington, DC, to assist with its work on federal environmental policy.

3. Air pollution is an important issue for the health and wellbeing of WE ACT's members and the Northern Manhattan community, which is overburdened by health and pollution challenges, like asthma. WE ACT participated in the comment process for the 2015

ozone standard, urging EPA to set the health standard at 60 parts per billion. *See* Comment of WE ACT for Environmental Justice, EPA-HQ-OAR-2008-0699-2252; Testimony of Dr. Jalonne White-Newsome, Director of Federal Policy, WE ACT for Environmental Justice, EPA-HQ-OAR-2008-0699-1459. It also organized a mass comment campaign, where over a hundred individuals sent postcards to EPA calling for a 60 ppb standard to help fulfill EPA's promise to "keep environmental justice a priority." EPA-HQ-OAR-2008-0699-2578.

4. WE ACT has over 400 members, most of whom live, work, and recreate in Upper Manhattan. From publicly available information I am aware that the readings of the air quality monitor located at 138th Street and Convent Avenue, near City College of New York, show that ozone pollution levels regularly exceed the standard WE ACT called for, and often daily ozone levels are above the level EPA said can harm healthy people. A stronger standard would lead to cleaner air, and less of a pollution burden on Northern Manhattan community members, including WE ACT's members.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 22, 2016.



Cecil Corbin-Mark

DECLARATION OF JOHN A. CRUICKSHANK

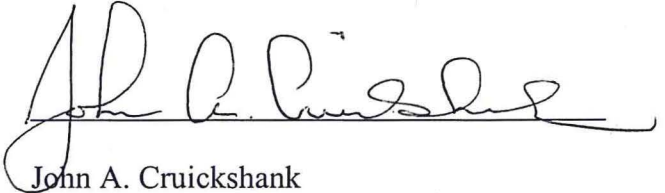
1. I have been a member of Sierra Club since 1985. I am the chair of the Piedmont Group, which is part of the Virginia Chapter.
2. I live in Charlottesville, VA, with my wife. We have lived in the city and Albemarle County for over thirty-five years.
3. We live very near to Shenandoah National Park. My wife and I spend a lot of time there hiking. For the past thirty-five years we have been going hiking and cross-country skiing in Shenandoah at least 10 times a year – we visit the park almost every month either to hike or cross-country ski. We also go camping once or twice a year in the Shenandoah National Park and go cross-country skiing in the winter when there is adequate snowfall. I am currently planning a two night Sierra Club camping trip at Loft Mountain Campground for May. My wife and I also go every year and stay in one of Shenandoah's lodges – either Big Meadows Lodge or Skyland Lodge.
4. I also visit Sherando Lake once or twice a year in the George Washington National Forest to go hiking or camping.
5. From reports, websites, and news articles I have read and from ranger programs I've attended at the park, I understand that ozone pollution has harmed the vegetation and wildlife in Shenandoah and stresses the park's ecosystem.
6. Indeed, over the last several decades, pollution has been having a visible impact on the park – especially in the last twenty years or so. Every time I go I see dead trees now. An entire grove of hemlocks near Skyland Lodge has died out.
7. The air pollution in the park diminishes my enjoyment of the trips we take there now. The dying trees I see greatly diminish my enjoyment of the park and remind me of the pollution

problems it faces. I am very concerned about the impact of air pollution like ozone on my health and my wife's health when we spend time in the park, and I am concerned about its impact on the local ecosystem.

8. I fully support Sierra Club's efforts to ensure that our national ozone standards are set at a level that fully implements the Clean Air Act by protecting our health and the health of the national parks I visit.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13, 2016.



John A. Cruickshank

DECLARATION OF HUDA FASHHO

1. I am the Member Services Manager for the Sierra Club, a non-profit corporation organized under the laws of the State of California. I work in Sierra Club's national office in San Francisco, California. I became Member Services Manager in 2011. In that capacity, I am responsible for planning, developing, and directing the programs and Club staff responsible for: providing information services to members, the operational and user aspects of the Club's member/donor database, the delivery of member/donor acknowledgments and membership renewals. My work requires that I be familiar with the Club's purpose, organization, structure and activities, and with environmental interests and concerns of Club members. My work also requires me to be familiar with the nature and scope of the Club's membership programs, its membership records, and the manner in which information on members can be retrieved.

2. The Sierra Club is a nonprofit corporation existing under the laws of California, with its principal place of business in San Francisco, California. The Club is a membership organization dedicated to exploring, enjoying, and protecting the wild places of the earth, and to protecting and restoring the quality of the natural and human environment. The Club's actions to protect and enhance the environment include advocacy and litigation to strengthen and enforce environmental laws and regulations. Club members are greatly concerned about air quality, and the Club has a long history of activities at both the local and national levels to protect air quality, often working closely with our members to provide them with services and information that are helpful to them locally.

3. The Club regularly maintains membership records that include the address of each member. These records are regularly updated each business day to add new members, reflect address changes, and change membership status for those who are no longer active members. The records are maintained on a computer database, from which I obtained the information provided below.

4. Sierra Club currently has 636,538 individual members, residing in all 50 states and Puerto Rico.

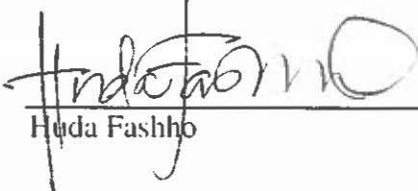
5. The Club has the following number of members living in the following counties:

- a. Los Angeles, CA: 27419
- b. Riverside, CA: 3041
- c. Garfield, CO: 232
- d. Washington, DC: 2137
- e. Anne Arundel, MD: 2190
- f. Baltimore, MD: 1717

- g. Prince George's, MD 1019
- h. Wayne, MI: 1876
- i. Albany, NY: 881
- j. New York, NY: 6021
- k. Hamilton, OH: 2060
- l. Lucas, OH: 603
- m. Oklahoma, OK: 153
- n. Tulsa, OK: 641
- o. Lehigh, PA: 678
- p. Northampton, PA: 599
- q. Providence, RI: 848
- r. Dallas, TX: 2315
- s. Hardin, TX: 33
- t. Harris, TX: 3299
- u. Jefferson, TX: 144
- v. Ablemarle, VA: 568

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed this 21 day of April, 2016.


Huda Fashho

DECLARATION OF PAUL FOFONOFF

1. I have been a member of the Appalachian Mountain Club (AMC) since 1985. Since about 2000 I have been chairperson for backpacking and have been volunteering to lead hiking trips.
2. I am also a member of the Sierra Club and have been since 2000.
3. I have lived in Shady Side, Maryland since about 1997. I work approximately ten miles away at the Smithsonian Environmental Research Center. The research center sits on a beautiful nature preserve, and so I go for a walk on the grounds every day at lunch. I also lead about 3 or 4 tours per year of the lands, including two every year for AMC.
4. I have had chronic asthma since I was ten years old. I control it with medication, but still need to use an inhaler from time to time – especially when air quality is poor.
5. I love to spend time outdoors, immersed in nature. I go to Shenandoah National Park (VA) two to five times per year to hike. I started going there in 1995 and have gone every year since to hike the trails. Additionally, I go for backpacking trips to the Monongahela (WV) or the George Washington (VA) National Forests about three to six times per year, on average. Some years, I take these backpacking trips every month between May and October. I also take day trips to numerous state and national parks nearer to my home in Maryland, usually to go bird watching or to look for wildflowers. I go to the C&O Canal National Historic Park, especially the Great Falls area in Maryland, about two or three times a year; I go to Rock Creek National Park (DC) about two or three times per year; and I go to Catoctin Mountain Park (MD) about once a year. I also visit parts of the Appalachian Trail in Maryland and Virginia (especially in Northern Virginia and Shenandoah) once or twice a year. When I go

on trips to any of these parks or forests, I often take photos of the views, the foliage, the trees, the wildflowers, and other natural scenery.

6. I regularly see damage to trees in these parks and forests. Most of the cases of sick trees that I've seen have been pretty scattered, but they are more common at high elevations. When in Shenandoah, for instance, I have frequently observed damage to trees, especially at upper elevations – this includes damage to the few remaining red spruce trees in that park.
7. I am concerned about the harm ozone causes to the parks and forests I routinely visit. Based on published articles and reports I have read, I am aware that ozone can damage and stress vegetation and ecosystems. As an amateur naturalist, one of the greatest pleasures I derive from my trips to these natural areas is appreciating the miraculous diversity of flora and fauna present in these parks and forests. I also value these trips for the natural beauty all around me when I'm in the woods. It diminishes my enjoyment when I observe damage to the trees or ecosystems of these special places, and it concerns me that ozone is contributing to this degradation. It upsets me to see how much some species are suffering. It concerns me that any harms from ozone that affect certain, sensitive species more than others could end up harming the biodiversity that I value so much in these parks and forests, too.
8. As someone with asthma, I am also very concerned about the health impacts of ozone pollution. I am aware from articles I have read that ozone can harm people's respiratory systems and exacerbate conditions like asthma. I am familiar with ozone's presence in my area because there are lots of "red" and "orange" alert days where I live in Maryland. On these days, authorities warn us not to exert ourselves outdoors and to avoid driving when possible. I am also afraid of ozone's impact of my health when I am hiking or backpacking. There have been days when I'm out on a trail and I can tell the air is really bad – it looks and

feels more like city air than it should. On days like this I have had to use my inhaler a lot more than usual. It is really annoying to not have your lungs working as well as they should when you've decided to spend the day outside and were expecting to do a lot of exercise – it makes the trips a lot less enjoyable. When I am planning my trips to Shenandoah now, I usually pick days when I know a cold front is coming – one reason for this is the improved air quality on those days.

9. I fully support Appalachian Mountain Club and Sierra Club's efforts to ensure that the Clean Air Act is properly implemented with national ozone standards that adequately protect my health and the health of the parks and forests that I frequent..

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 18 2016.



Paul Fofonoff

DECLARATION OF ALICYN GITLIN

1. I have been a member of Sierra Club for about five and a half years. In addition to being a member, I also work for Sierra Club as the Conservation Coordinator of its campaign to Protect the Greater Grand Canyon Ecoregion.
2. I live in Flagstaff, Arizona, which is about an hour and a half drive from the Grand Canyon. I have lived here since 1998. I moved here in part to be near all of the public lands in northern Arizona and southern Utah, including Grand Canyon National Park.
3. I am a very physically active person and love to be outside. I live near downtown Flagstaff, and so I walk a lot where I live. I walk to work almost every day, since it's only about three blocks from where I live. Downtown is also very close so I walk there often, too. I also go for a bike ride or a run most days, either before or after work.
4. I go to Grand Canyon National Park regularly. My work often takes me to Grand Canyon itself or to nearby towns like Tusayan, AZ – which is just a couple miles outside the south entrance gate to the park – to attend meetings, talk to media contacts, or take photographs. Even when my work itself is in nearby towns or the Kaibab National Forest, I usually end up going into the park to hike a few miles or even just to look out over the rim of the canyon for a while. If one of my projects at work necessitates it, however, I might be going to Grand Canyon every week, or more. Aside from these visits, I also usually go backpacking at Grand Canyon at least once or twice a year, and I often bring friends or family there to show them around when they are visiting me from out of town.
5. Grand Canyon is one of the largest untrammelled pieces of landscape left in the United States. I do my work because I feel like Grand Canyon has so much to teach people from all over the world about protecting the environment: for example, what a night sky really looks like or

what an intact ecosystem can be like. Because of Grand Canyon's elevational changes and because of the density of natural springs and seasonal (intermittent) streams in the Grand Canyon you find a lot of wildlife and plant life side by side there that might not normally occur in such close proximity. There is a tremendous diversity of bats, as well as many large mammals like bighorn sheep and mule deer. There are also some very rare species of plants at Grand Canyon, too. It is a unique and very special ecosystem.

6. I am very concerned about air pollution like ozone harming the ecosystem in Grand Canyon. As I mentioned above, the ecosystem is extremely diverse and varied and so in many cases you have narrow strips – along a stream for instance – that are essentially unique little ecosystems unto themselves. These smaller ecosystems make up the greater ecosystem of the park. If you were to lose vegetation in a particular place, it would cause a huge change because those resources provide habitat, or purchase to hunt from, or food for wildlife species and might not be replaceable (or replacements might be very hard to reach). I am aware from published reports that ozone pollution is harmful for plant life, as well as animals, and am concerned that ozone is harming or stressing the vegetation in the park, especially species that are especially sensitive to ozone pollution. I am also very concerned that ozone is harming the wildlife in the park directly. Some of the bighorn sheep in the park have lately been affected by a respiratory illness. Those animals don't need the further challenge of ozone pollution.
7. I also spend a lot of time in the Coconino National Forest and the Kaibab National Forest. I am out in these forests almost every weekend trail running, hiking, biking, or cross-country skiing, depending on the weather. This whole region's climate has been dominated by drought for at least the last decade, if not longer, and we have seen a lot of tree die-off in that

time. I am very concerned that ozone exacerbating the stress that drought is causing to the trees in these forests. Even cottonwoods, which grow right next to rivers, have been dying. I believe we need to do everything we can to protect the trees that are left. The wildlife here depends on the trees. Even the soil's health depends on these trees.

8. I also go to Zion National Park about once a year, usually to hike. Some of my favorite trails are Observation Point and Emerald Pools. On some trips, I camp and spend a few days in the park. I am concerned about ozone's impact on Zion, too. Like Grand Canyon, Zion has a lot of elevation changes and a unique and sensitive ecosystem. I am concerned ozone is harming or stressing vegetation in Zion and that this will cause the range of certain wildlife species to shrink. I do not want to that happening any faster than it already is, because the wildlife that depends on those ecosystems is not able to adapt any faster than it already is. If we exacerbate tree die off in Zion it could have serious ripple effects.
9. I am also very concerned about impacts of ozone pollution on my health. One of the things I love about Flagstaff is that it feels remote and rural. It is really upsetting to think this area is still subject to air pollution. I am especially concerned that ozone is harming me when I am out running or hiking and trying to get healthy. Hiking in Grand Canyon is one of the most physically challenging things I have ever done. When I am exerting myself to such an extent, air pollution is the last thing I want to worry about. Moreover, I do not want my health to suffer because I choose to spend so much time in an area like Grand Canyon, which is supposed to be pristine and wild. It upsets me to think that I am exposed to air pollution like ozone when I am outside trying to exercise and enjoy the peace and beauty of nature in these national parks and forests.

10. I fully support Sierra Club's efforts to ensure the Clean Air Act is implemented with national ozone standards that are fully protective of both my health and the health of the natural places where I live, work, and recreate.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 19 2016.



Alicyn Gitlin

DECLARATION OF KIMBERLEE GONZALEZ

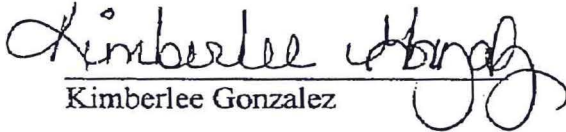
1. I am a member of WE ACT for Environmental Justice and am currently enrolled in the Environmental Health and Justice Leadership Training Program that WE ACT offers. I am 48 years old, married, and have three children ranging from 23 (daughter), 19 (son), and 14 (son). I am currently a stay-at-home mother, and I devote much of my time to volunteering at New York Presbyterian Hospital, New York Cares, and Catholic Charities. I also plan on getting more involved with WE ACT's work.
2. I have lived in Washington Heights for 23 years. I have lived in my current building, located on 162nd Street between Riverside Drive and Fort Washington Avenue, for 9 years. I'm outside all the time running errands, shopping, and traveling to my volunteer work. In the summer, I regularly walk from my home up to Fort Tryon Park, at 190th Street to exercise in the park.
3. From a document published by New York City entitled NYC Health Community Health Profiles 2015, written by the Commissioner of NYC Department of Health and Mental Hygiene, I am aware that Washington Heights has a high asthma rate and high air pollution. I can understand why. We are surrounded by highways and bridges (the George Washington and 155th Street), which bombard us with so much pollution from cars, buses, and trucks. I am worried about air quality in my community.
4. I'm aware of the challenges of living with respiratory conditions from my own family's experience. My mother, who lives in Queens, suffers from asthma and other severe respiratory disease, and she needs an inhaler and uses a nebulizer. I sometimes have to take care of her when she has bad symptoms, and I'm usually there on the weekends to help out. From the NYC Health report and my Environmental Health and Justice Leadership Training,

I am aware of how dangerous the poor air quality and pollution in my community is for people with respiratory conditions.

5. In the summer and the winter, the air gets thick and hazy in my neighborhood. The older I get, the harder it is to breathe when the air gets that way. As well as my current problems with the dirty air, I am worried about the impact of air pollution on my health as I get older and on the residents in my community. I want to be able to breathe clean air that won't put my and my family's health at risk, and I support WE ACT's efforts to make that happen.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 22, 2016.


Kimberlee Gonzalez

DECLARATION OF MICHAEL R. HARBUT, MD, MPH

1. I have been a member of Physicians for Social Responsibility (“PSR”) for at least 15 years. I have long been involved in working to improve public health. I received the Broad Street Pump Award from PSR for my work to drive the Environmental Protection Agency to tighten the standard for arsenic levels in ground water.

2. I live in Huntington Woods, Michigan, a suburb of Detroit. I have lived in my current neighborhood since 1993, and in the Detroit area essentially my entire life.

3. I am a physician with specialty board certification in environmental and occupational medicine. I received my medical license in 1984, and, since 1985, I have specialized in air- and water-borne toxins. I formerly served as the chair of the Occupational and Environmental Lung Disease section of the American College of Chest Physicians. Due to a disability stemming from international relief work I performed in the mid-1990s, I am now semi-retired. I continue to do research in the health effects of respiratory toxics and am on staff at Providence Hospital, in Southfield, Michigan, but I do very little clinical work at this point, though I maintain my license and continue to advise many of my old patients and their doctors.

4. Through my professional activities, I am very familiar with the health threats ozone air pollution poses, including to people who, like me, live in the Detroit area. Most of my patients live in the Detroit area, and many of them live with respiratory conditions. My standard advice to them is: stay indoors on ozone alert days.

5. I am 65 years old. I have an obstructive airways disease.

6. I have four children, ranging in age from 15 to 41. My 15-year-old son lives with his mother a few blocks from me. I see him regularly. My 19-year-old daughter, who recently moved to Chicago for college, has asthma. She regularly comes back home for visits. Her asthma has been a problem for years. For example, we had to keep her from running on ozone days in elementary school because that would trigger asthma attacks.

7. I spend time walking outside near my home and in my yard. I would like to spend more time outside in my community, but I am concerned about the health effects of air pollution on me. I liked going out to my children’s soccer games and on family outings. Now, on ozone alert days, I don’t go outside at all. When I went outside on such days in the past, I would find I got short of breath quickly and would feel a burning in my airways, just like patients I’ve seen.

8. I am very concerned about the impacts of ozone air pollution on me, my family, and my patients. From my professional activities, I know that ozone pollution is dangerous for all people, but especially for children, older adults, and people with respiratory conditions (including obstructive airways disease like what I have), and that there is evidence strongly suggesting that ozone pollution can cause cardiovascular harms. Similarly, I am very familiar with the Detroit area’s chronic air pollution problems, which include a problem with elevated ozone levels.

9. I am aware that the Environmental Protection Agency recently made the clean air standards for ozone pollution more protective of human health, though less protective than PSR and medical groups called for based on the science. From published reports, I am aware that the Detroit area—where I live, my family spends significant time, and most of my patients live—does not comply with the new standards, but is in compliance with the previous standards. I understand that lawsuits have been filed that likely seek to undo the strengthened standards.

10. I am concerned that the Detroit area’s ozone pollution threatens my own health and enjoyment of everyday activities, my family’s health, and that of my patients, and that EPA’s new standards are not protective enough. For the same reasons, I would be even more concerned if EPA’s new standards were made weaker.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on April 12, 2016.



Michael R. Harbut, MD, MPH

1

DECLARATION OF SARA HART

1. I have been a member of the Appalachian Mountain Club for about 10 years. In addition to being a member, I also serve as a hike leader, backpack leader, and volunteer naturalist for the Club.
2. I currently live in Albany, NY. I have lived here since November 2015. Previously, I lived in Spencertown, NY, for two years. Before that, I was on Long Island, NY, for 17 years.
3. I am a park planner for New York State Parks, Recreation and Historic Preservation. My job involves putting together plans for the management, development, and preservation of various state parks throughout my regions: Long Island, the five boroughs of New York City, and the Taconic Region. The Taconic Region runs along the east side of the Hudson River from New York City through the counties of Westchester, Putnam, Dutchess, and Columbia. Part of my job includes routinely visiting any parks where I have projects. Right now, for example, I am working on four parks and I visit those each at least twice a month (and usually more when the weather is warm).
4. I am also an avid hiker and naturalist. I love being in nature and visit at least one state or federal park in the Northeast nearly every weekend. Sometimes I go for day trips and other times I do longer excursions involving backpacking and camping.
5. I understand from reports I have read that the vegetation in many of the parks I visit is vulnerable to damage from ozone pollution. For example, I visit the Delaware Water Gap National Recreational Area about every other year, Roosevelt-Vanderbilt National Historic Site about every other year, Sagamore Hill National Historic Site about once every other year, Cape Cod National Seashore about once every three years, and Gateway

National Recreational Area about once every three years. I have read that all of these parks are at high risk for foliar damage due to ozone pollution.

6. Other parks I visit regularly include the following: Taconic State Park (NY) at least once a month; Thatcher State Park (NY) at least once a month; Mount Greylock State Reservation (MA) five or six times a year; October Mountain State Forest (MA) five or six times a year; Fahnestock State Park (NY) five or six times a year; Mount Washington State Forest (MA) four or five times a year; White Mountains National Forest (NH) about four times a year; Harriman State Park (NY) two or three times a year; Acadia National Park (ME) every other year; and Saratoga National Historic Park every other year. I also go for a walk at work twice a day (during the work week) in the Corning City Preserve in Albany, NY. Lastly, I frequently hike various parts of the Appalachian Trail, usually in NJ, NY, CT, MA, VT, or NH. For example, I am leading three hikes on the Trail this summer (in MA), and I've already led several hikes on it this winter.
7. I am extremely concerned about the impacts of ozone on vegetation and wildlife in the parks I visit. I am particularly concerned that the ongoing stress of exposure to ozone pollution leaves ecosystems in the parks I visit less resilient and less able to adapt to other pressures like climate change or invasive species. I am especially troubled by the reduction of biodiversity that ozone pollution causes. This means less adaptable ecosystems and also means the loss of beautiful vegetation and wildlife that make these parks wonderful.
8. I have also read studies and reports documenting shifts in ecologic and growth cycles due to climate change, and I have observed these effects at the parks I visit. These changes are having major impacts on the health of these parks' ecosystems. The concurrence of

these shifts and environmental stressors – like ozone pollution – puts major pressure on the systems that underlie a thriving park. Reducing ozone pollution levels in the parks I visit would help relieve that pressure and prevent severe harms to those ecosystems.

9. As someone who spends a lot of time outdoors, I also worry about the health effects of air pollution like ozone. I am aware of the ozone pollution in my area because every summer we hear about “ozone action days,” where we are supposed to avoid driving our cars and use public transportation instead. As stated above, I am also aware that ozone pollution is present at and affects many of the parks I visit. I am aware that ozone is dangerous to breathe and harmful for the ecosystems, plants, and trees that I enjoy seeing during the time I spend outdoors. Additionally, part of the value I get from being outside is due to the beauty of these natural places, and ozone-related harms to vegetation’s health and beauty diminish my ability to enjoy these trips.
10. I fully support Appalachian Mountain Club’s efforts to ensure that the national ozone standards are set at levels that fully protect my health and the health of my environment. It is especially important to me that this standard fully protect the health of our national and state parks, which I regularly visit.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 5 2016.



Sara Hart

DECLARATION OF NAHALIEL KANFER

1. I am a Sierra Club member. I've been a member since 2008.
2. I live in the Mt. Adams neighborhood of Cincinnati, right near downtown. I've lived here for nearly two years. My wife and I recently purchased a house in the Mt. Lookout neighborhood of Cincinnati, and we have no plans to move away from Cincinnati.
3. I work as a Deputy Director for Sierra Club's Beyond Coal Campaign, out of our office in the Walnut Hills neighborhood of Cincinnati. I've held that position and similar positions since 2011. In my role, I interact regularly with Sierra Club members and staff and oversee energy-related advocacy and litigation in much of the Midwest and Southeast. Before that, starting in 2008, I worked for the Club in a similar role and as an organizer in Ohio. Through my work, I am familiar with the health and environmental effects of air pollution, including ozone, and air quality problems throughout the Midwest and Southeast, including Cincinnati.
4. I spend significant time outside in the Cincinnati area. Primarily, I run about twice a week for 4-5 miles. There's a beautiful pedestrian bridge at the foot of Mt. Adams that goes to Kentucky. I enjoy running across it and back. Also, I routinely run in Eden Park, near my home. I also enjoy running in Ault Park, near our new home in Mt. Lookout.
5. I also travel a lot for work. So, I spend a lot of time in and around airports, which I'm aware have bad air quality in part because of all the mechanical equipment, like idling diesel engines. I'm in various airports—including the Cincinnati / Northern Kentucky airport—about 8-10 times per month.
6. I'm concerned about my exposure to air pollution. I monitor Cincinnati's air quality. I subscribe to a text message service that notifies me whenever the local air authorities

designate a Bad Air Day. On those days, I don't engage in outdoor activity, even though I would like to. For example, last summer, there were 3-5 times when it was beautiful out and I wanted to go out for a run, but I didn't because there was an air alert. I also avoid refueling my car on days with air quality alerts, which disrupts my day.

7. I'm aware that ozone pollution levels in Cincinnati are higher than allowed under the 2015 ozone standards EPA issued, but currently are complying with the previous standards. I'm also aware that Sierra Club and health and medical groups called for ozone standards stronger than those adopted in 2015, based on evidence linking ozone at levels allowed by the 2015 standards to harmful health impacts. I'm further aware that lawsuits have been filed that will likely seek to weaken the 2015 standards.

8. Based on the information of which I'm aware, I'm concerned that ozone pollution in Cincinnati and other places I regularly spend time threatens my health. It diminishes my enjoyment of my everyday activities and at times prevents me from engaging in such activities altogether. I'm concerned that EPA's 2015 standards are not protective enough. For the same reasons, I'd be even more concerned about threats from ozone to my health and enjoyment if those standards were weakened.

9. I strongly support Sierra Club's efforts to require full compliance with all requirements of the Clean Air Act to limit ozone pollution.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 21, 2016.



Nahaliel Kanfer

DECLARATION OF MARK KRESOWIK

1. I am the Deputy Director for the Eastern Region with Sierra Club's Beyond Coal Campaign. I have worked at the Sierra Club since 2006, first as an organizer in Iowa, working on clean energy issues. From 2008 to 2009, I worked as a national corporate accountability and finance representative for Sierra Club's Beyond Coal Campaign; then, in 2010-2011, as the Northeast Regional Director for the Beyond Coal Campaign. I have held my current position as Deputy Director for the Eastern Region since December 2011.
2. Sierra Club began the Beyond Coal Campaign in 2007. It aims to protect Sierra Club's members and the environment from increased air pollution, including ground-level ozone, created by coal-fired power plants and other industrial sources through public education, advocacy, and litigation. In my current role as Deputy Director of the Beyond Coal Campaign, I support and manage staff and campaigns to achieve these purposes in the eastern region of the United States. To help advance our mission, I coordinate all capacities of the Sierra Club relevant to this work in the Eastern Region—our law program, our communications department, our organizers, and our members, among others. I also work on developing goals and strategies for the Beyond Coal Campaign. I direct significant data-gathering and analysis, including on ambient ozone levels.
3. Though my responsibilities typically focus on the eastern third of the country, I was in charge of Sierra Club's national-level advocacy on ozone from February 2014 through March 2015, including Sierra Club's comments on EPA's proposed air quality standards for ozone. I worked on analysis of ozone monitoring data, including determining what different forms and levels of the standards would mean for various communities throughout the country. I was responsible for educating Sierra Club's members about the effects of ozone and the ozone standards during this time.
4. My position requires me to be familiar with Sierra Club's purpose and mission, its activities related to ozone pollution (among other things), and the nature and scope of its membership. As part of my job, I regularly speak to members of the Club in relation to my work on ozone pollution.
5. Sierra Club is a nonprofit, membership organization founded in 1892 to promote the conservation of natural resources, and the enjoyment and protection of the natural environment. For decades, the Sierra Club has worked to promote a clean and healthy environment for its members, including preserving and improving air quality. Since the passage of the Clean Air Act, Sierra Club has worked through public education, advocacy, and litigation for full and effective implementation of the Clean Air Act's protections.
6. Consistent with its mission, Sierra Club works to ensure that National Ambient Air Quality Standards ("standards") are fully adequate to protect public health and welfare, as the

Clean Air Act requires. This work will be a priority for us for the foreseeable future. For example, along with other environmental and public health groups, we filed litigation that established the deadlines for EPA to complete work on the new, 2015 ozone standards. *Sierra Club, et al. v. EPA*, No. 13-cv-2809 (N.D. Cal. filed June 19, 2013).

7. We also repeatedly participate in the administrative proceedings under which EPA establishes the standards. Along with others, we filed extensive comments urging EPA to establish ozone standards that would comply with the Clean Air Act's health- and welfare-based requirements by providing greater protection than the standards EPA ultimately set. *E.g.*, EPA-HQ-OAR-2008-0699-2720 (comments on what became 2015 ozone standards); EPA-HQ-OAR-2005-0172-12445 (comments on EPA's proposed reconsideration of 2008 ozone standards); EPA-HQ-OAR-2005-0172-4261 (comments on what became 2008 ozone standards).
8. Along with other groups, we have repeatedly advocated for more protective ozone standards than the ones adopted in 2015 (3-year average of the annual fourth-highest daily maximum 8-hour average no higher than 0.070 parts per million ("ppm")), 40 C.F.R. § 50.19(b). As described above, we filed lengthy, detailed comments calling for a health standard with a level no higher than 0.060 ppm and explaining that the fourth-highest form of the standard (along with the 3-year averaging) allows areas to have harmful levels of ozone multiple times per year without ever violating the standard (and thus without ever having to clean up their air). In our comments, we described extensive evidence that ozone causes asthma attacks, hospitalizations, and emergency room visits because of breathing problems, and death at levels below 0.070 ppm. Our comments also called on EPA to set a separate welfare standard designed to protect welfare, taking a cumulative seasonal form and having a level of 7 ppm-hours.
9. Sierra Club also regularly carries out advocacy on behalf of its members on site-specific pollution issues. Depending on our strategies for particular matters, this work often includes participating in air permitting processes (including for prevention of significant deterioration ("PSD") permits) for new or modified large industrial sources and, if appropriate, challenging such permits.
10. As a result of my work, I am familiar with the science on ozone pollution, with EPA's ozone standards, with the Clean Air Act's general framework for cleaning up ozone pollution and its PSD permitting requirements, and with data about ozone levels in areas throughout the country. I am also aware that EPA's own science advisors—the Clean Air Scientific Advisory Committee ("CASAC")—unanimously advised the agency that, with a health standard of the current form set at 0.070 ppm, "there is substantial scientific certainty of a variety of adverse effects." CASAC Consensus Responses 8 (June 26, 2014), EPA-HQ-OAR-2008-0699-0190. I am further aware that both EPA and CASAC strongly

agree that the 2008 standards of 0.075 ppm are not adequate to protect public health and the environment, and EPA itself agrees single exposures to ozone at 0.072 ppm (averaged over 8 hours) can cause adverse health effects. *See, e.g.*, 80 Fed. Reg. 65,292, 65,346, 65,363 (Oct. 26, 2015). I am also aware that leading medical societies, including the American Medical Association, American Thoracic Society, American Academy of Pediatrics, and others, have called for an ozone standard of 0.060 ppm as requisite to protect public health. EPA-HQ-OAR-2008-0699-3863.

11. As noted in the declarations filed in this matter, Sierra Club and the other petitioners have over 1,000,000 members throughout the United States.
12. The declarations show that petitioners' members live, work, and recreate in numerous communities and areas that have harmful levels of ozone. All these areas have ozone pollution levels ("design values") that exceed the level of 0.060 ppm (3-year average of the annual fourth-highest daily maximum 8-hour concentration) that petitioners and leading medical groups advocated was necessary to protect public health. Some have design values that exceed the 0.070 ppm level that EPA found was requisite to protect public health and welfare. Examples include the Baltimore area (most recent¹ ozone design value of 0.075 ppm), the New York City area (0.085 ppm), the Detroit area (0.074 ppm), the Cincinnati area (0.075 ppm), the Palm Springs, CA, area (0.091 ppm), the Providence, RI, area (0.074 ppm), the Bethlehem, PA, area (0.070 ppm), the Oklahoma City area (0.074 ppm), the Tulsa, OK, area (0.074 ppm), the Toledo, OH, area (0.071 ppm), the Port Arthur, TX, area (0.070 ppm), the Shenandoah National Park area (0.065 ppm), and the Albany, NY, area (0.066 ppm). *Compare Declarations, with* http://www3.epa.gov/airtrends/pdfs/Ozone_DesignValues_20122014_FINAL_08_03_15.xlsx tbs.1a, 1b, 4, 5.
13. The declarations further show that petitioners' members live, work, and recreate in numerous communities and areas that regularly have 8-hour average ozone levels in a single day that are at or above the 0.072 ppm level that EPA agrees can cause adverse effects, even if the design value in that area complies with the standard EPA established, which is measured as the 3-year average of the annual fourth-highest daily maximum 8-hour concentration of ozone. These include the Port Arthur area, the Bethlehem area, and the Albany area.² *See* https://www3.epa.gov/airdata/ad_rep_mon.html (select "Ozone" as

¹ Ozone design values are determined on the basis of three years of data. EPA does not typically determine official ozone design values until six to eight months after the end of each year. As of this writing, the most recent EPA posting of design values is for the 2012-14 period. https://www3.epa.gov/airtrends/pdfs/Ozone_DesignValues_20122014_FINAL_08_03_15.xlsx.

² The Washington, DC, area may now fit within this category, as well. A preliminary calculation of the 2015 design value (which will be calculated using ozone data from 2013-2015) is 0.070

pollutant; select relevant years (here, 2012-2014), select relevant city). For example, in the Port Arthur area, these data show that EPA preliminarily reports that the single highest daily 8-hour average ozone level in 2015 was 0.091 ppm. Other monitors in 2015 had highest daily 8-hour average ozone levels of 0.082 ppm and 0.080 ppm, with the second-highest level for both those monitors being 0.076 ppm. The fourth-highest value at two monitors was above 0.072 ppm, as well. In 2014, the single highest daily 8-hour average ozone level in the Port Arthur area was 0.080 ppm; in 2013, it was 0.077 ppm. In 2012, the highest ozone level in the Port Arthur area was 0.112 ppm ozone. These are just examples: other areas and monitors show similar results, as we detailed in our comments, where we addressed monitoring data from 2011-2013, and as also shown in the most recent EPA-published data, cited in footnotes 1 and 2, above.

14. Identification by EPA, CASAC, and leading medical societies of harms associated with exposure to ozone at various levels indicate that petitioners' members who live in the areas discussed in Paragraphs 12 and 13—as well as in other areas with design values and single-day ozone levels at or above levels EPA and CASAC have identified as harmful to people and the environment—are justified in their concerns about the health and welfare threats posed to them and their families by ozone pollution and threats of increased ozone pollution in their communities and the places where they work and enjoy outdoor recreation. They have a strong interest in the full, timely, and effective implementation of Clean Air Act requirements designed to protect them and their families against harmful ozone levels.
15. EPA's failure to adopt stronger national ambient air quality standards to protect public health from ozone, as required by the Clean Air Act, threatens the health and welfare of petitioners' members, including those living, working, and enjoying recreation in the areas discussed above. A stronger standard would substantially reduce the health and welfare harms to those members. It would require greater pollution reductions in such areas, even in those areas violating the standard EPA set. Areas that violate the 0.070 ppm standard will be designated "nonattainment" and will have to reduce their ozone design value, but only to 0.070 ppm. If the standard were more protective, they would have to adopt additional reductions to meet the more protective standard—including, as necessary, reductions necessary to comply with a more protective form of the standard. Areas that do

ppm, based on monitoring data that have not yet been confirmed by EPA. *See* https://www3.epa.gov/airdata/ad_rep_mon.html. Yet in 2015 alone, a monitor in Beltsville, Prince George's County, MD, recorded first- through fourth-highest daily 8-hour ozone average levels of 0.088 ppm, 0.082 ppm, 0.081 ppm, and 0.072 ppm. *Id.* Other monitors in the region also recorded multiple daily 8-hour ozone average levels at or above 0.072 ppm. *Id.* In 2013 and 2014, multiple monitors similarly recorded multiple daily ozone levels at or above 0.072 ppm. *Id.*

not violate the 0.070 ppm standard EPA set but violate a stricter standard would become “nonattainment” areas, and would have to adopt pollution reductions to meet that standard, again, including, as necessary, reductions necessary to comply with a more protective form of the standard.

16. I am aware that, in its rule establishing the 2015 ozone standards, EPA also created a “grandfathering” regulatory exemption for certain new or modified power plants or factories (“sources”) that have the potential to emit very large amounts of ozone-forming pollution. Ozone forms when certain other pollutants react in the atmosphere. The Act’s PSD provisions require that, in areas designated as “attainment” or “unclassifiable” for ozone standards (that is, areas treated as complying with ozone standards), when a proposed new or modified power plant or factory (“source”) has the potential to emit more than 100 or 250 tons per year of those ozone-forming pollutants (“major”), its proponent must demonstrate that the new or modified major source will not cause or contribute to violations of any ozone standard before it can receive a construction permit. In the 2015 ozone standards rule, EPA grandfathered such construction permits by allowing them to issue without their proponent making that showing for the 2015 ozone standards so long as either the permit application was found to be complete on or before October 1, 2015, or the agency reviewing the permit published a public notice of a preliminary determination on the permit or of a draft permit before December 28, 2015. 80 Fed. Reg. at 65.431-34.
17. As the declarations show, petitioners’ members live, work, and recreate in areas where the prevention of significant deterioration provisions apply for ozone-forming pollutants. Such areas include the Port Arthur area, the Tulsa area, the Oklahoma City area, and the Detroit area. *See* <https://www3.epa.gov/airquality/greenbook/hnc.html> (listing areas designated nonattainment under 2008 standards, a list that includes none of these areas) (last updated Feb. 22, 2016). In such areas, as a result of the above-described grandfathering provision, certain proposed new or modified major sources can be constructed without a showing that they will not cause or contribute to air pollution in excess of the 2015 ozone standard, even in areas with ozone pollution levels at or even above that standard. So long as a permit application was filed and found complete any time before October 1, 2015, it is grandfathered. For example, in the Port Arthur area, the permit to construct the Port Arthur Liquid Natural Gas Export Terminal was deemed complete as of April 2015, but the permit was not finalized and issued until February 2016. http://www2.tceq.texas.gov/airperm/index.cfm?fuseaction=airpermits.project_report&proj_id=232615&addn_num_txt=PSDTX1456. As a result, the permit lacks the analysis necessary to show that the source will not cause or contribute to violations of the 2015 ozone standards.
18. Petitioners’ members who live, work, and recreate in areas designated attainment or unclassifiable for ozone have reasonable cause for concern about the impact of additional

ozone-forming pollution in their communities, including from new or modified major sources that may qualify for the grandfathering exemption. In those areas, addition of ozone-forming pollution can tip the area into violation of the standard or exacerbate an existing violation, for example, when there are multiple projects in the area that propose to add such pollution but have not yet been constructed. The additional pollution from the new source will put their health and welfare at further risk.

19. Further, when a permit issues without analysis necessary to show compliance with the 2015 ozone standards, petitioners and their members lose the opportunity to seek to review, comment on, and/or challenge the reviewing agency's analysis, all of which are things the Club often does in addressing major new sources of pollution. For qualifying permits, EPA's grandfathering exemption thus deprives the Club and its members of important procedural opportunities to help them protect members' health and welfare.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 20th, 2016.



Mark Kresowik

DECLARATION OF LAURA MAXWELL

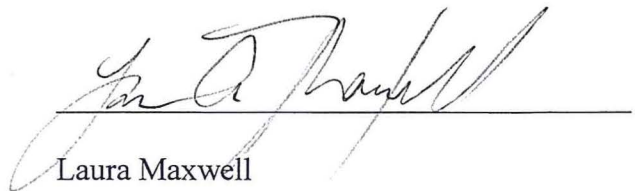
1. I have been a member of Appalachian Mountain Club for over 5 years.
2. I have lived in Providence, Rhode Island for over 30 years.
3. Being active outdoors is very important to me, and is something I do as often as possible.
Being in nature and seeing wild plants and forests is very important to me.
4. I love to garden and am outdoors working in my garden almost every day that it is not too cold out, which means most of the spring, summer, and fall, as well as a few days here and there during the winter. I grow tomatoes, basil, and lots of other herbs, as well as many flowers and trees. Every year the Arbor Day Foundation sends me twigs to plant, and I try to turn them into saplings and plant them. I have grown tulip trees, dogwoods, crabapple trees, and birch, among others. It makes me feel terrible to know that ozone pollution is harming the plants and trees I plant and affects their growth and beauty.
5. I am also an avid hiker. I participate in a fundraising hike every year in New Hampshire where we hike up Mount Washington. I also hike frequently along parts of the Wapack Trail in both Massachusetts and New Hampshire. I also hike Mount Monadnock in New Hampshire at least once a year. I have also been to the Audubon Society's Ipswich River Wildlife Sanctuary, in Massachusetts, twice in the last year and I intend to keep going regularly. You can canoe down the river and watch all the birds that gather in the trees along the banks. This spring or summer I am planning with a friend to hike on Rhode Island's North-South Trail, as well, which runs all through the state and goes through several of the state's forests.
6. When I hike, I love to take photographs of the flowers, plants and trees I see, especially the trees' foliage so that I can identify them in books or on the internet when I get home. It is

very important to me to know that this plant and tree life is healthy. One of my favorite things about hiking is noticing all the things that grow in the wild and observing nature's beauty. I care a lot that the nature I observe and take photographs of is at its healthiest and most beautiful.

7. I enjoy going for a walk near my home every couple of weeks, as well, usually either in Roger Williams Park or along Blackstone Boulevard. These walks are usually about three miles in length, and I also take note of the trees there, both the old ones and the newly planted.
8. I am aware of the ozone pollution in my area because every summer we hear about "ozone action days," where we are supposed to avoid driving our cars and use public transportation instead. I am aware that ozone is dangerous to breathe and harmful for the ecosystems, plants, and trees that I enjoy seeing during the time I spend outdoors.
9. I am concerned that ozone is not only affecting my health but also the health of the plant and tree life in my garden and in the natural places that I love to spend time. I fully support Appalachian Mountain Club's efforts to ensure that our national ozone standards are set at a level fully protective of my health and the health of the parks and other natural places where I like to hike, walk, and take pictures.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13 2016.



Laura Maxwell

DECLARATION OF LANI J. MILLER, MD, FACOG

1. I have been a member of National Parks Conservation Association since May 2015.
2. I am also a Sierra Club member and have been since 2012.
3. I live with my husband in Palm Springs, CA. We regularly visited Palm Springs since 2007, married here in 2009, and have lived here permanently for about 3 years.
4. I spend a significant amount of time outside nearly every day. I love to garden and am an avid desert landscaper. Desert landscaping means landscaping with drought tolerant and desert friendly plants, using responsible irrigation practices. My garden looks absolutely drop dead gorgeous. At the moment I have blossoming and flowering cactus all over my garden, as well as oleanders that look like clouds they're so covered with white flowers. We also have palms, fruitless olive, and Palo Verde. The later are fast growing trees loaded with yellow blossoms which attract a host of native bees and hummingbirds, as well as other pollinators. I am outside working in my garden nearly every day.
5. Both my husband and I like to hike, too. We hike the Santa Rosa and San Jacinto Mountains National Monument. It varies how often I go, but I am there at least once every two weeks. When guests come to visit, which is often, we usually go hiking quite a bit more.
6. I also go to Joshua Tree National Park at least once a month. Joshua Tree is at a higher elevation than Palm Springs, so it is a few degrees cooler than here and we go up there a lot in the summer. I have hiked a lot of places in Joshua Tree, especially the northwestern side, which is readily accessible. I think of Joshua Tree as Palm Spring's backyard National Park. I have learned a lot about desert plants through my interest in desert landscaping and in hiking, and I can tell the vegetation in Joshua Tree is suffering because desert plants have a unique way of dealing with stress – they “shed” parts of themselves, like branches or leaves,

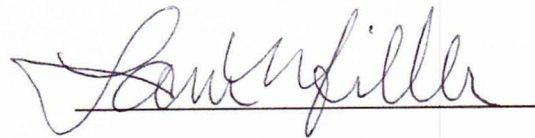
to make themselves smaller which conserves resources and therefore become more tolerant of environmental stress. I see this all the time in Joshua Tree. It is also notable to me that I do not see many new or young Joshua Trees (the namesake of the park) – this species has suffered a lot here and you can tell they are starting to disappear. I see sick and dying trees every time I go, and no longer take visitors to see the trees specifically – we focus on the rock formations now when I show them around, because the trees are sad to look at.

7. I also go to the San Bernardino National Forest about once every two months to hike. Trees are really suffering there, too, especially the pines. As a horticulturalist, I can at least roughly determine if a plant is in poor health from looking at it, and it is very clear to me that many of the trees in the San Bernardino National Forest are sick, and probably dying.
8. One of things I value most when I hike is the majestic beauty of these natural places, and the opportunity to see nature's diversity and vibrancy all around me. The natural desert vegetation is unique and extremely interesting to me, especially the Joshua Trees themselves. I love to take pictures of the vegetation and wildlife when I hike, as well as the iconic landscape. It detracts from my enjoyment when the trees around me appear to be dying and when I can tell the ecosystem is suffering. I also really value the fresh air. It bothers me a lot when the air I am breathing is polluted – and the air is often not as fresh as I would like in places I hike.
9. I am very concerned about ozone harming the ecosystems in the places I hike. I am aware from articles and websites I have read that ozone can damage trees and vegetation, so I am concerned it is contributing to the decline of the ecosystems. I am likewise concerned about the impact of ozone pollution on my garden, and the Coachella Valley where I live.

10. Protecting our national parks and forests is also important to me because it benefits human habitat too – we share our air here with Joshua Tree, for instance. I am concerned about the effects of ozone on my health. The outdoor air near my home and in the parks I visit is often polluted. I can tell because my eyes often burn and the air makes my throat raspy and dry.
11. I fully support the National Parks Conservation Association and Sierra Club's efforts to ensure the Clean Air Act is implemented with fully protective ozone standards that protect my health and the health of the parks and forests I visit.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 19, 2016.

A handwritten signature in black ink, appearing to read "Lani Miller", written over a horizontal line.

Lani Miller

DECLARATION OF GEORGIA MURRAY

1. I am a staff scientist for the Appalachian Mountain Club (AMC), and have been in that position for over fifteen years. I have been working on protecting human health and the environment from ozone pollution for my entire tenure at AMC. I obtained a Bachelor's degree in Biology at Saint Anselm College in 1989 and a Master of Science degree in Earth Sciences from the University of New Hampshire in 1994. From my work and education, I am very familiar with the effects of ozone pollution on human and ecosystem health, and, in particular, with the harms that ozone causes to sensitive trees and other vegetation.
2. Since joining AMC, I have been heavily involved in our advocacy work related to the effects of ozone pollution on trees and other vegetation. I have also studied the derivative impact of these effects on ecosystems as a whole. At AMC, my responsibilities include managing our acid rain and ozone monitoring program in the White Mountain National Forest in collaboration with the USFS and NH DES. I am also responsible for managing the organization's regional and national clean air advocacy work which includes participating in the public process of the NAAQS reviews. I have been doing work for AMC related to EPA's ozone NAAQS since 2004. My work includes following EPA rulemakings related to air pollution affecting national parks and national forests. On behalf of AMC, I read EPA's proposals and the scientific justifications for these proposals that EPA includes in its records. I participate in AMC's advocacy efforts related to these rulemakings, including drafting comments to the agency and preparing for litigation where necessary.
3. I am familiar with the history of EPA's ozone standards. Part of AMC's mission involves advocating to protect the national parks and forests of the Northeastern United States, and so we follow EPA rulemakings related to air quality. AMC has repeatedly argued that EPA

must adopt a separate secondary standard for ozone pollution in a cumulative seasonal form to protect welfare, a form recommended by EPA's Clean Air Scientific Advisory Committee ("CASAC"). Numerous public interest groups, including AMC, filed comments on EPA's 2014 proposed rule arguing for adoption of CASAC's recommended approach on the form of the standard. See EPA-HQ-OAR-2008-0699-2725 (Mar. 17, 2015); EPA-HQ-OAR-2008-0699-2720 (Mar. 17, 2015); EPA-HQ-OAR-2008-0699-0132 (Mar. 24, 2014). These comments explained that a separate, welfare-protective standard using the "W126" index and requiring levels not to exceed 7 ppm-hrs is necessary to protect the ecosystems of many national lands, parks, forests, and refuges from impairment due to ozone pollution. AMC also participated in the 2008 ozone NAAQS rulemaking and filed comments there, as well.

4. As explained in our comments, AMC advocated for a secondary standard of 7 ppm-hrs per growing season based on the evidence of important harms to plants from ozone exposures above that level. Likewise, CASAC recommended a target air quality level of 7 ppm-hrs of ozone exposure to protect against tree biomass loss. This level also provides necessary protection against foliar damage to trees.
5. The impacts of ozone on vegetation include damage to many plant physiological functions, reducing overall productivity, causing stress, disrupting water and carbon cycling functions, foliar damage, and biomass loss. In many instances the impact of these harms can be observed by the naked eye – leaf damage can be visible, or trees can look visibly stressed or sick. The additional stress from ozone pollution also makes species less resilient against other threats they face, including invasive species, disease, and warming temperatures. Another type of injury that has been studied is foliar injury – or damage to trees' foliage. Foliar injury due to ozone has long been used as a bioindicator of pollutant exposure and is a sign of stress

as it signifies cellular death. Furthermore, many of these impacts, especially biomass loss, accumulate over time – for example, growth losses in one year can carry over into the following year. A separate secondary standard using the W126 index is necessary to protect welfare because unlike the health standard, the W126 index measures the cumulative ozone exposure to vegetation over the course of a three-month growing season and thus measures ozone exposure in a way that is biologically relevant to vegetation. The health standard ignores the cumulative impact of ozone pollution on vegetation and ecosystems and cannot reliably be used to protect ecosystems from injury. EPA's data and the recommendations of CASAC in the record reflect this.

6. Declarations filed in this matter show that AMC and other petitioners' members work and recreate in national parks, wildernesses, wildlife refuges, and forests, and other areas affected by cumulative ozone levels above the 7 ppm-hrs level that petitioners advocated, even when averaged over three years (which petitioners do not advocate). Parks are able to rise to these levels while complying with the 0.070 ppm 8-hour level that EPA adopted as its welfare standard in the 2015 ozone rule. In fact, many counties that include all or parts of national parks have cumulative ozone levels above what petitioners contend is required to protect welfare, while still meeting EPA's 0.070 ppm 8-hour standard. These include Pima County, AZ (Saguaro National Park), which has recorded three-year maximum ozone levels as high as 15 ppm-hours while complying with a 0.070 ppm 8-hour standard; Riverside County, CA (Joshua Tree National Park, 13 ppm-hrs); Albemarle County, VA (Shenandoah National Park, 9 ppm-hrs); Madison County, VA (Shenandoah National Park, 11 ppm-hrs); Page County, VA (Shenandoah National Park, 11 ppm-hrs); Blount County, TN (Great Smoky Mountains National Park, 10 ppm-hrs); Hamilton County, NY (Adirondacks National Park, 8

ppm-hrs); Monroe County, PA (Delaware Water Gap National Recreation Area, 8 ppm-hrs); Greenbrier County, WV (Monongahela National Forest, 10 ppm-hrs). *See* EPA, *Ozone W126 Index*, <https://www.epa.gov/air-quality-analysis/ozone-w126-index> (last updated Dec. 16, 2015).

7. Data in EPA's rulemaking record also shows that numerous federal parks around the country have exceeded the 17 ppm/hrs, a level at which CASAC said unacceptable harm to tree growth occurs, while meeting the 0.070 ppm health standard. For example, during one or more periods while meeting a 0.070 ppm eight-hour standard, Grand Canyon has reached a maximum annual level of 21.7 ppm-hrs; Petrified Forest has reached 18.6 ppm-hrs; Saguaro has reached 20.2 ppm-hrs; Mesa Verde has reached 22 ppm-hrs; Canyonlands has reached 23.6 ppm-hrs; Zion has reached 19.8 ppm-hrs; Carlsbad Caverns has reached 26.7 ppm-hrs; Wind Cave has reached 20.6 ppm-hours; Chiricahua Wilderness Area has reached 19.8 ppm-hrs; Superstition Wilderness Area has reached 19.6 ppm-hrs; Maroon Bells-Snowmass Wilderness Area has reached 23 ppm-hrs; Weminuche Wilderness Area has reached 20.8 ppm-hrs; and Bridger Wilderness Area has reached 18.8 ppm-hrs.
8. The scientific literature has also found that a number of parks have species at high risk for foliar injury based on the ozone levels in those parks and the presence of sensitive species. Some of these parks include: Big Thicket National Preserve, which has 17 sensitive species; Cape Cod National Seashore, which has 21 sensitive species; Chesapeake & Ohio Canal National Park, which has 39 sensitive species; Delaware Water Gap National Recreation Area, which has 38 sensitive species; Gateway National Recreation Area, which has 29 sensitive species; Great Smoky Mountains National Park, which has 41 sensitive species; Joshua Tree National Park, which has 7 sensitive species; Rock Creek Park, which has 32

sensitive species; Sagamore Hill National Historic Site, which has 16 sensitive species; Saguaro National Park, which has 13 sensitive species; and Yosemite National Park, which has 12 sensitive species. The secondary standard EPA has adopted does not adequately protect these sites from foliar damage. The National Park Service maintains a list of ozone-sensitive species as well as information on which parks have which species. *See* National Park Service, List of Ozone Sensitive Species (July 8, 2015), *available at* <https://irma.nps.gov/NPSpecies/Reports/Systemwide/List%20of%20Ozone-sensitive%20Species>; National Park Service, *Ozone Sensitive Plant Species, by Park* (Nov. 2006), *available at* http://www.nature.nps.gov/air/permits/ARIS/docs/Ozone_Sensitive_ByPark_3600.pdf.

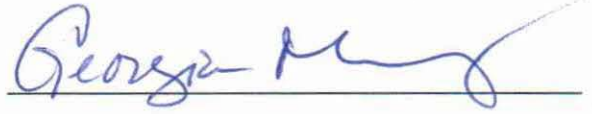
Numerous other parks also have sensitive species according to the Park Service's list. EPA's health standard will not protect against foliar injury, because the level of air quality (70 ppb as an 8-hour average, which EPA equates to 17 ppm-hrs) that EPA based it on is well outside the range that CASAC found effective for reducing foliar injury (less than 10 ppm-hrs).

9. Based on the number of sensitive species at many national parks and forests, the ozone levels these areas routinely attain, and CASAC and the National Park Service's findings, the concerns of AMC members and others regarding ozone damage to these parks are highly justified. Because they visit parks that are adversely affected or threatened by ozone pollution, and which EPA's standard will fail to protect, these declarants have a strong interest in the full, timely, and effective implementation of CAA requirements designed to protect them and their families from ozone levels that harm public welfare.
10. Adopting a separate secondary standard for ozone, particularly at the 7 ppm-hrs level advocated by the petitioners and by CASAC for the protection of tree growth a more

protective level than was presumed adequate by EPA, would materially reduce the harm being caused to the public welfare by ozone damage at national parks and forests, including those routinely visited by AMC members and other declarants in this case. This is true even for parks that already violate the 17 ppm-hrs level that EPA claimed was adequately protected with its 0.070 ppm standard. Although the Clean Air Act requires such “nonattainment” areas to adopt plans to reduce ozone levels, these plans need only include controls sufficient to reduce ozone levels to the existing standard – that is, 0.070 ppm. *See, e.g.,* 42 U.S.C. § 7502(c). Adopting a more protective cumulative standard than the 17 ppm-hrs assumed by EPA, including the 7 ppm-hrs level advocated by petitioners and CASAC, would require these states to adopt stronger plans designed to reduce ozone levels to that more protective level. Adopting a more protective standard would also require adoption and implementation of plans to meet the welfare standard in areas that are in attainment of the 2015 secondary standard (0.070 ppm) but which have ozone levels exceeding the range which CASAC found sufficiently protective of welfare – areas that are not currently required to prepare such plans.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13th, 2016.

A handwritten signature in blue ink, appearing to read "Georgia Murray", is written over a horizontal line.

Georgia Murray

DECLARATION OF JOHN W. PAUL

1. I have been a member of Sierra Club since 2004.
2. I live with my wife in Lumberton, TX. We've lived here since 2008.
3. We live on twenty-one acres of land, the border of which is just a few hundred feet from Big Thicket National Preserve. There is a small strip of private land between my property and the preserve, which I lease so I can walk across it to access Big Thicket directly. I spend a lot of time outdoors on my property, hunting or going for walks. I am outdoors here every day. I also visit Big Thicket at least every week, since it's so close I can walk there. The part of the preserve closest to me is the Pine Island Bayou Unit.
4. Big Thicket is known as the biological cross-roads of North America because it sits at the confluence of many major North American biological influences – south eastern swamps, eastern forests, central plains, and southwest deserts. Big Thicket has incredible biodiversity of flora and fauna and lots of unusual plant life. The scenery is beautiful and I am very grateful to live so close to it.
5. I fish and hunt in the various wildlife refuges just south and west of Port Arthur. I usually visit Texas Point National Wildlife Refuge and McFaddin National Wildlife Refuge at least once a year each . I also typically visit Anahuac National Wildlife Refuge, Murphree State Wildlife Management Area, and Sea Rim State Park at least once every other year each.
6. From news articles that I have read, I am aware that the Port Arthur area is one of most polluted areas in country. The cancer rate is very high there. I am aware that there is a large liquid natural gas (LNG) export facility proposed to be built in Port Arthur. I am concerned it will contribute additional air pollution, including ozone, to this region.

7. I am concerned about the impacts of ozone pollution coming from Port Arthur to where I live as well, because the prevailing winds down there blow to the north and send the air pollution into Beaumont and Lumberton. I'm concerned that I'm getting some of it when I spend time outdoors near my home. I worry about the impact on my health and my wife's health when we spend time outdoors on our property or visit Big Thicket.
8. When I go hunting or fishing I care about the natural beauty around me. I don't like to hunt or fish in areas too near industrialization – you know there's going to be some pollution escaping. I don't like dirty air. I also worry about the impact of air pollution like ozone on my health when I'm outside for prolonged periods of time, particularly if I see flares burning in the distance to remind me of it. I prefer to be in a clean and natural environment, and it diminishes my enjoyment when I know the ecosystem around me is being harmed by pollution like ozone. I am very concerned about the impacts of ozone on the areas where I hunt and fish near Port Arthur.
9. I am also very distressed that ozone may be harming Big Thicket, and impacting the biodiversity there. My property is adjacent to the Preserve and shares many of the same species of flora and fauna. I am concerned that ozone may harm the natural integrity of my property and that any impacts from ozone pollution on Big Thicket would affect my property too, because they are part of the same ecosystem.
10. I fully support Sierra Club's efforts to ensure proper implementation of the Clean Air Act with national ozone standards that protect my health, the health of my property, and the health of the parks and wildlife preserves where I recreate. It is important to me that the new standard be applied to facilities under construction in the Port Arthur area, because additional

ozone pollution around here would harm me and my property, as well as the natural areas around Port Arthur where I recreate.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 19 2016.



John W. Paul

DECLARATION OF CATHY REUSCHER

1. I have been a member of Appalachian Mountain Club (AMC) since 2011. I also work for AMC as a Mid-Atlantic Policy Associate. I have held this position since 2011.
2. I live with my husband in Bethlehem, Pennsylvania. We have lived here since 2008.
3. My job regularly brings me to parks and other natural places – about five or six times a year in total. This includes helping out in activities with local AMC chapter members and accompanying co-workers on fieldwork, like scouting trails. Usually about four of these annual trips are to the Delaware Water Gap National Recreation Area, which I understand from a published study to be especially sensitive to ozone pollution. The rest are usually to local trails near our office in Bethlehem.
4. I love to hike and spend time in nature. I also go to the Delaware Water Gap three or four times a year purely for recreation. My husband and I also go to Jacobsburg State Park eight or nine times a year to hike, the Alleghany National Forest once or twice a year, and parts of the Appalachian Trail a couple of times a year. The parts of the Trail where we usually hike are near South Mountain, Hawk Mountain, Boiling Springs, Bake Oven Knob, Wind Gap, Lehigh Gap, and Mount Minsi. Every couple of years we go to the Shenandoah National Park, too, which I also understand (from the park's website) to be suffering ongoing damage from ozone pollution.
5. I used to run a lot – at least four or five times a week usually. I had to stop running in Bethlehem though because the air quality here in Bethlehem is so bad that my lungs felt like they were burning when I ran – it was really painful. This was especially the case in the summer. Eventually, I started to drive outside of the city to run most of the time, because I just couldn't do it in the city and I was so worried about what it was doing to my health

whenever I tried. This made running a lot more difficult so I couldn't do it as often. Right now I am pregnant, so I am taking a break from running, but I plan to start running again (outside of the city) as soon as I am able to.

6. I also like to walk to work. I used to do this a lot, but I have cut down on it in part because of the air quality. I still walk once every couple of weeks, though.
7. I am pregnant right now, so the health impacts of air pollution are more concerning to me than ever. I am acutely aware of how toxic our air is, after my experiences going for runs in Bethlehem. I worry now even when I walk to work, and this is one of the reasons I walk to work less now than I used to.
8. As someone who loves spending time in nature, I am also very concerned about the impacts of ozone pollution on the ecosystems and vegetation in the parks where I work and recreate. A big part of my enjoyment when I visit these parks comes from looking at the trees, flowers, and vegetation all around me. I often take photos when I'm outside: of the foliage, the flowers, the views from tops of mountains (when I'm hiking), and of the natural beauty all around me.
9. I fully support the efforts of the Appalachian Mountain Club to ensure implementation of the Clean Air Act by way of a fully protective national ozone standard that protects my health and the health and ecosystems of the natural places where I love to recreate.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 6th 2016.



Cathy Reuscher

DECLARATION OF AL SCHNEIDER

1. I have been a member of the Sierra Club since about 1970. I am a life member.
2. I live with my wife about twenty five minutes northwest of Mesa Verde National Park. I moved here with my family about twenty-six years ago to be near the park. My youngest daughter took her first steps there. I am retired now, but before retiring I was an English professor, an Ozark Trail designer with Missouri State Parks, and a backcountry guide.
3. I visit Mesa Verde anywhere from 8 to 20 times per year. I go there for recreational hiking, cross-country skiing, snow shoeing, to visit the Pueblo ruins, and to do volunteer work. I have been helping the Mesa Verde community out for decades, ever since moving here. Among other things, I teach classes on the wildflowers and other park flora and help with park planning work in Mesa Verde. Lastly, when guests come from out of town I often take them to see the park, too. I also maintain a website dedicated to this region's beautiful diversity of wildflowers and other flora, so I often take pictures of the vegetation in the park when I am there.
4. I am very concerned about the air quality where I live and in Mesa Verde. I feel there's certainly been a degradation of air quality since I first moved here. Sometimes you can even smell the pollution in the air. I know from community discussions here that ozone levels have been measured locally by the EPA and that they are high. I am concerned about the impact of air pollution like ozone on my health and the health of my wife, because I am aware that ozone can harm people's respiratory systems.
5. I am also very concerned that ozone pollution is contributing to problems the ecosystem in Mesa Verde has been having. I know that air pollution like ozone is bad for the vegetation here and I am concerned it is adding extra stress to plant life in the park and harming the

ecosystem. Among other things, the trees here have suffered since we first moved to this area, and I am concerned that ozone is contributing to this. I care a great deal about the flora in this park, and it detracts from my enjoyment of the park when I see sick vegetation of any kind here.

6. I fully support Sierra Club's efforts to ensure implementation of the Clean Air Act with national ozone standards that fully protect my health and the health of Mesa Verde National Park.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13 2016.



Al Schneider

DECLARATION OF DAVID SMEDICK

1. I have been a Sierra Club member since 2014.
2. Since 2014, I've lived in Baltimore City. I first lived in the Mount Vernon neighborhood, and since July 2015, I've lived in Upper Fells Point. I'm from the Baltimore area. I grew up in Carroll County, MD. I'm aware that Carroll County has historically had an air pollution problem.
3. I'm the Beyond Coal Campaign and Policy Representative at the Maryland Chapter of the Sierra Club. I've worked here since 2014. My office is in College Park. I do state level energy policy work, both in the administrative and legislative process. I help lead the campaigns the Executive Committee of the Sierra Club's Maryland Chapter sets for the Chapter to pursue. I'm also a co-chair of the policy committee and am on the steering committee of the Maryland Climate Coalition. My work requires me to be familiar with air quality conditions in Maryland, including ozone pollution.
4. I have asthma and have since I was young. I had my first asthma attack when I was a kid playing soccer. Though my asthma's generally well controlled now, I still carry my inhaler, and I pay attention to air quality. I don't want to put myself in a position to have an asthma attack. For me, an asthma attack is a terrifying experience—your heart starts going faster and you can't get the breath that you need. You're taking big, deep breaths, but it doesn't feel like you're getting the air that you need. You can't really move around without making it worse. When you breathe in, it hurts; you feel the constriction in your chest and your throat.
5. I spend a lot of time outside both near where I live and where I work. I bike almost every day to and from the MARC train to commute to College Park from May through December. Just about every day, I walk around the neighborhood and in areas like the Inner

Harbor, Fells Point, Canton, and Harbor East. On the weekends, I'm usually out and about in or just outside the city, doing things like jogging, biking, or hiking in Gunpowder Falls State Park, near Hereford, Maryland. I am currently training for several races during the warmer months, so I go for 6-10 mile runs at least twice a week when I can, usually in Fells Point, Canton, or Harbor East. I also occasionally jog or take a long walk near the office, in College Park.

6. I notice the bad air quality days in the Baltimore-Washington area. I get air quality alerts email, and I can tell when the air is bad, for example, while walking around at work on an alert day. I typically avoid jogging on air quality alert days.

7. From my work, I'm aware that EPA in October 2015 strengthened the clean air standards for ozone, and that the ozone pollution levels in the Baltimore area are above what's allowed under the new standards, but currently comply with the prior standards. I'm also aware that preliminary data on ozone levels in the College Park area show the area may be complying with the new standards EPA set, though it would not comply with more protective standards and ozone levels in the area in 2015 reached levels well above safe levels. I'm also aware from my work that ozone can cause breathing problems and that it's especially dangerous for "vulnerable populations," which include people who have asthma. I'm also aware that Sierra Club and health and medical groups called for ozone standards stronger than those EPA recently adopted, based on scientific evidence linking ozone at levels allowed by those standards to harmful health impacts. I'm further aware that lawsuits have been filed that will likely seek to weaken the new standards.


8. Based on the information I'm aware of, including the fact that I fall into the category of a "vulnerable population," I'm concerned that ozone pollution in the Baltimore and College Park areas threatens my health. It often prevents me from fully engaging in everyday

activities that I would otherwise enjoy. The tools I use to make decisions about what activities to engage in outside will be keyed off the new standard, and those need to be accurate so they match up with what's actually protective. I'm concerned that EPA's new standards are not sufficiently protective of my health and welfare. For the same reasons, I'd be even more concerned about threats from ozone to my health and welfare if those standards were weakened.

9. I strongly support Sierra Club's efforts to require full compliance with all requirements of the Clean Air Act to limit ozone pollution.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 15, 2016.



David Smedick

DECLARATION OF JAMES SPOTTS

1. I have been a member of National Parks Conservation Association for at least the past five years.
2. I have been a member of Sierra Club for about four years, as well.
3. I live in Joshua Tree, California, about four and a half miles from Joshua Tree National Park's western entrance. My wife Claudia and I purchased our home here in 2009 because we love and support Joshua Tree National Park and wanted to live nearby. We drove here every weekend (125 miles one-way) for more than two years until we were able to retire in 2011 and move here full-time. For the past two years we have been travelling frequently throughout the United States. We have a goal to visit as many National Park sites as possible. Nevertheless we are at home seven to eight months during the year.
4. When not travelling, I spend a good deal of time outdoors near our home. We normally have breakfast and lunch outside during the warmer months. We have a yard with a variety of plants, and I regularly water and tend to the plants. We own the adjacent undeveloped lot which is full of desert vegetation which I enjoy. I also put out water for birds, since my wife and I like to watch the birds in our area. Turkey vultures migrate through this area and whole flocks of them stop in our trees overnight sometimes. My wife organizes a lecture series for the Morongo Basin Historical Society, which often results in outings (field trips) related to the lectures. For example, last weekend we went on a trip into the park to look for reptiles. We go on these outings about once every couple of months.

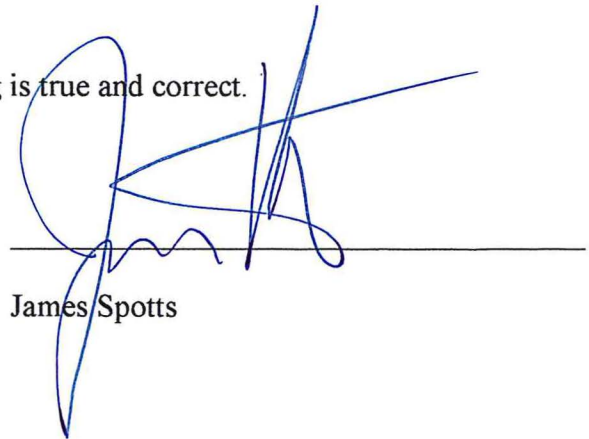
5. My wife and I have been coming to Joshua Tree National Park since about 2000 and we camped there frequently in the past. We currently go hiking in the park at least twice a year, and sometimes more when guests are in town. We also go into the park once every month or so to attend lectures in the lodge at the Black Rock Canyon Campground. In recent years, I have noticed that the Joshua trees in the park have really suffered – they do not look as healthy as in the past.
6. We visit Death Valley National Park on a regular basis, at least once every two years. We visit the Mojave National Preserve frequently – perhaps two or three times a year. We tend to drive through the Mojave Preserve on the way to other sites and we have camped there in the past on NPCA outings.
7. I am very concerned about the impact of air pollution on Joshua Tree National Park and the other parks my wife and I visit, as well as on the plants and trees in our yard at home. I am especially concerned about the survival of the Joshua trees in Joshua Tree National Park. They have been disappearing from the park and I am concerned that ozone is one of the factors contributing to this decline. Nature is very important to me. I care a lot about biodiversity and like to see a variety of plants and animals thriving when I visit Joshua Tree National Park and other parks around the country. I also like to see the plants in my yard thriving. I am concerned that harm to trees will also harm the wildlife in these ecosystems, especially the birds and smaller mammals, by reducing or altering their habitat. When I visit Joshua Tree and other national parks, the whole panorama of the experience is important to me – the air quality, the animals and vegetation that I see, and the beautiful scenery. I love to take photos of the vegetation and wildlife, as well as the landscapes and views. Noticing poor air quality or seeing sick vegetation diminishes the

enjoyment of my visits to Joshua Tree National Park and to other parks that are suffering as well from ozone pollution.

8. I fully support National Parks Conservation Association and Sierra Club in their efforts to see the Clean Air Act implemented with a national ozone standard that fully protects the health and ecosystem of the national parks I visit, especially Joshua Tree National Park. I am definitely concerned that my children and grandchildren will not be able to fully enjoy Joshua Tree National Park and have the same wonderful experiences I've had if we do not solve our pollution problems, in particular ozone.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 17 2016.



James Spotts

DECLARATION OF DON STEUTER

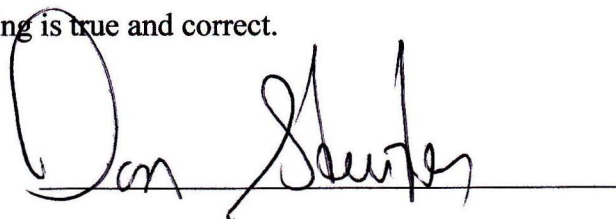
1. I have been a member of the Sierra Club since 1988. I am currently the Conservation Chair of the "Grand Canyon" chapter, which is the Arizona state chapter of the Club.
2. I have lived in Phoenix, Arizona since 1972. Since 1979 I have been in the air conditioning business and have been self employed in the trade since 1991.
3. I enjoy being outdoors, and one of the things I like about my line of work is that I get to spend time outside every day when I am installing or repairing my clients' air conditioning systems. I am also outside once or twice a week gardening in my backyard. Among other things, I often grow kale, tomatoes, lettuce, beets, and radishes.
4. I take occasional trips to the Superstition Wilderness Area to do volunteer conservation work with the Sierra Club. For example, I take an annual trip to the eastern end of Superstition Wilderness to check on a retired grazing allotment there and see how it is recovering ecologically.
5. I also usually take one or two trips each year to areas on the border of the wilderness that are facing or recovering from various environmental threats like mines. For instance, a couple weeks ago I was on the south-eastern portion of the wilderness looking out at an area just outside the wilderness boundary that could be affected by a new copper mine.
6. When I am in the Superstition Mountains for volunteer work like this, I generally take lots of pictures, conduct various types of assessments (for example, looking at riparian health), and then, once I return, often write articles about the area I visited for Sierra Club to use in its advocacy work protecting the Superstition Wilderness.
7. All of these trips also have a recreational component for me – part of why I do this conservation work is because of how much I value and enjoy the natural beauty of the

Superstition Wilderness. I have been visiting this wilderness area for over twenty years, and the health of its ecosystem is incredibly important to me. It concerns me greatly that air pollution like ozone is harming vegetation there and contributing additional stress to an ecosystem that is already sensitive due to mining impacts and other threats.

8. I am also concerned about the impact of ozone on my own health, at home in Phoenix and when I am out on these trips. Doctors have diagnosed me with chronic bronchial asthma, which is kind of like low-level chronic asthma. I am aware from published reports that the Phoenix area already has dangerously high ozone levels, and that ozone is especially dangerous for people with lung disease. I am concerned that the ozone pollution I am exposed to exacerbates this condition and may have other long-term consequences for my health.
9. I fully support Sierra Club's efforts to ensure the Clean Air Act is implemented with national ozone standards that are fully protective of both my health and the health of the Superstition Wilderness Area.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 20 2016.

A handwritten signature in black ink, appearing to read "Don Steuter", written over a horizontal line.

Don Steuter

DECLARATION OF CATHERINE THOMASSON, MD

1. Since 2012, I have served as the Executive Director of Physicians for Social Responsibility (PSR), I am responsible for the overall management and operation of the organization. In that capacity, I am familiar with the organization's structure, function, purpose, and membership.

2. PSR is a non-profit organization based in Washington, D.C., with 21 chapters in the U.S. PSR has been working for more than 50 years to create a healthy world for both present and future generations. PSR works to protect public health and prevent degradation of the environment by giving voice to the values and expertise of medicine and public health. PSR has been working to improve air, water and general environmental quality to improve public health since 1992, when we first launched our environment and health program. In 2007 when new ground-level ozone regulations were proposed and again in 2010, PSR pressed the Environmental Protection Agency (EPA) to adopt the scientific and health-based standard of 60 parts per billion ("ppb"). When EPA released its proposed rule last November, we filed detailed written comments, presented in-person testimony at EPA hearings, and mobilized our members to submit individual comments.

4. PSR is a physician-led organization with members in nearly all 50 states. Many of these members are medical, health care, and public health professionals. PSR has over 35,000 members, including members in areas with ozone levels complying with the 75 ppb level of the 2008 national ambient air quality standard for ozone, but above 70 ppb level that EPA adopted as a new standard in 2015. These places include the cities of Cincinnati and Columbus, OH, Baltimore, MD, San Francisco and Oakland, CA, Providence, RI, Salt Lake City, UT, Baton Rouge, LA, and Detroit, MI. In all these areas, ozone levels are above the scientific and health-based standard with a 60 ppb level that we have repeatedly urged EPA to adopt.

5. PSR members living in the above-named and other areas have a strong interest in full, timely, and effective implementation of the Clean Air Act requirements designed to protect them from unhealthy levels of pollution in the air they breathe. EPA's decision to adopt stronger ozone standards provides important protection for these and other PSR members. EPA's failure to

adopt even stronger ozone standards that are health and research-based denies these and other PSR members and supporters the protections guaranteed under the Clean Air Act. The health and welfare of such members would be threatened by any weakening of the standards EPA adopted for ozone, and would benefit from strengthening of those standards.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 18, 2016.


Catherine Thomasson, MD

DECLARATION OF MARK ZAKUTANSKY

1. I have been a member of Appalachian Mountain Club (AMC) for seven and a half years. I am also AMC's Mid-Atlantic Policy Manager. Previously, I was AMC's Pennsylvania Highlands Coordination. As a member, I also volunteer to lead paddling trips.
2. I live with my wife in Albrightsville, Pennsylvania, and work in Bethlehem.
3. My job involves overseeing AMC's conservation policy work in our Mid-Atlantic region, which includes Pennsylvania, New Jersey, New York, Maryland, Connecticut, and Delaware. I help set and implement our conservation policy at the local, state, and national levels. I also oversee conservation and recreational programs like trail building and trail development, and I work on conservation related programs for our members – for example, I am a frequent speaker on value-added conservation hikes, which means hikes where I educate hikers about conservation topics as we move along the route so it's both educational and recreational. As a result, my job gets me into the outdoors pretty frequently. I usually conduct site visits to places where we're planning an educational or conservation program or value-added hike about six days a month. I also participate in organizational staff gatherings or meetings held outdoors, including hikes and camping trips, on average about once a month.
4. Spending time in the outdoors is a big part of my life outside of work, as well. I am an avid paddler, and I love to hike. I travel a lot – mostly within the United States – to places where I can paddle and hike. Some of the places I visit regularly for these activities are the following: Monocacy Park (PA), about ten days a month (it's very close to my office); Lehigh Gorge State Park (PA), about four days a month; Hickory Run State Park (PA), about four days a month; the Delaware Water Gap National Recreational Area (PA/NJ), about two days a month; and the Delaware Canal State Park (PA), about two days a month. I also visit parts of

the Appalachian Trail in PA and NJ (near where I live) about four days a month; Adirondack Park (NY), about six days a year; Catskill Park (NY), about six days a year; Great Smoky Mountain National Park (NC and TN), about six days a year; White Mountain National Forest (NH), about four days a year; Ohiopyle State Park (PA), about four days a year; Gauley River National Recreation Area (WV), about four days a year; New River Gorge (WV), about four days a year; and Little River Canyon National Preserve (AL), about one day a year. I expect to continue taking these trips in the foreseeable future.

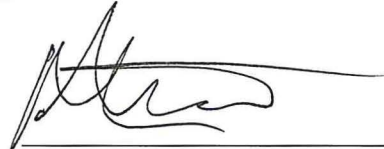
5. Additionally, my wife and I have a large garden on our property and spend an average of four days a month outside tending to it. We rotate the crops every year to keep the soil healthy, but some of the things we grow are tomatoes, peppers, herbs, potatoes, corn, carrots, green beans, kale, lettuces, and radishes.
6. I am very concerned about the health effects of ozone pollution. My office is in the Lehigh Valley metropolitan area and on days where the air quality is bad I really feel it. I notice a shortness of breath, coughing, and dryness in my mouth and throat. I am aware of ozone pollution because we get air quality alerts telling us to avoid strenuous physical exercise outdoors on certain days, especially in the summer. I intentionally try to restrict the amount of time I spend outdoors on these days. Our whole office tries to do this, and so we hold fewer activities outside and try to have all of our meetings indoors on those days.
7. I am also extremely concerned about the impacts of ozone pollution on the state and national parks where I hike and paddle. I travel long distances to visit outdoor places for recreation, and the value I get from these trips is informed by the entire experience. It is often the plant and animal species I see that make the experience most memorable. My friends make fun of me because I'm always the person paying more attention to the ecosystem around me than

the actual river I'm paddling down. I can't help it, though – I'm an amateur naturalist and I love observing the natural world in its natural state. Because of this, I am deeply concerned about the impact of ozone pollution on the health and wellbeing of these species and ecosystems. When ozone damages the vegetation and hurts the ecosystems of these parks, it diminishes my enjoyment of these trips.

8. I fully support the efforts of the Appalachian Mountain Club to ensure implementation of the Clean Air Action by way of fully protective national ozone standards that protect my health and the health and ecosystems of the natural places where I love to recreate.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 5, 2016.



Mark Zakutansky

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Chapter 85. Air Pollution Prevention and Control (Refs & Annos)

Subchapter I. Programs and Activities

Part A. Air Quality and Emissions Limitations (Refs & Annos)

42 U.S.C.A. § 7408

§ 7408. Air quality criteria and control techniques

Effective: November 10, 1998

Currentness

(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 NO₂ 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, 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.¹

(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--

(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.


CREDIT(S)

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

[Notes of Decisions \(15\)](#)

Footnotes

1 So in original. The period probably should be a semicolon.
42 U.S.C.A. § 7408, 42 USCA § 7408
Current through P.L. 114-115 approved 12-28-2015

 KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control (Refs & Annos)
Subchapter I. Programs and Activities
Part A. Air Quality and Emissions Limitations (Refs & Annos)

42 U.S.C.A. § 7409

§ 7409. National primary and secondary ambient air quality standards

Currentness

(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 NO₂ 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.

CREDIT(S)

(July 14, 1955, c. 360, Title I, § 109, as added Dec. 31, 1970, Pub.L. 91-604, § 4(a), 84 Stat. 1679; amended Aug. 7, 1977, [Pub.L. 95-95, Title I, § 106](#), 91 Stat. 691.)

[Notes of Decisions \(82\)](#)

42 U.S.C.A. § 7409, 42 USCA § 7409

Current through P.L. 114-115 approved 12-28-2015



KeyCite Yellow Flag - Negative Treatment

Proposed Legislation

United States Code Annotated

Title 42. The Public Health and Welfare

Chapter 85. Air Pollution Prevention and Control (Refs & Annos)

Subchapter I. Programs and Activities

Part A. Air Quality and Emissions Limitations (Refs & Annos)

42 U.S.C.A. § 7410

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

Currentness

(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,

(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and

(iii) correlation of such reports by the State agency with any emission limitations or standards established pursuant to this chapter, which reports shall be available at reasonable times for public inspection;

(G) provide for authority comparable to that in [section 7603](#) of this title and adequate contingency plans to implement such authority;

(H) provide for revision of such plan--

(i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of attaining such standard, and

(ii) except as provided in paragraph (3)(C), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air quality standard which it implements or to otherwise comply with any additional requirements established under this chapter;

(I) in the case of a plan or plan revision for an area designated as a nonattainment area, meet the applicable requirements of part D of this subchapter (relating to nonattainment areas);

(J) meet the applicable requirements of [section 7421](#) of this title (relating to consultation), [section 7427](#) of this title (relating to public notification), and part C of this subchapter (relating to prevention of significant deterioration of air quality and visibility protection);

(K) provide for--

(i) the performance of such air quality modeling as the Administrator may prescribe for the purpose of predicting the effect on ambient air quality of any emissions of any air pollutant for which the Administrator has established a national ambient air quality standard, and

(ii) the submission, upon request, of data related to such air quality modeling to the Administrator;

(L) require the owner or operator of each major stationary source to pay to the permitting authority, as a condition of any permit required under this chapter, a fee sufficient to cover--

(i) the reasonable costs of reviewing and acting upon any application for such a permit, and

(ii) if the owner or operator receives a permit for such source, the reasonable costs of implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action),

until such fee requirement is superseded with respect to such sources by the Administrator's approval of a fee program under subchapter V of this chapter; and

(M) provide for consultation and participation by local political subdivisions affected by the plan.

(3)(A) Repealed. Pub.L. 101-549, Title I, § 101(d)(1), Nov. 15, 1990, 104 Stat. 2409

(B) As soon as practicable, the Administrator shall, consistent with the purposes of this chapter and the Energy Supply and Environmental Coordination Act of 1974 [15 U.S.C.A. § 791 et seq.], review each State's applicable implementation plans and report to the State on whether such plans can be revised in relation to fuel burning stationary sources (or persons supplying fuel to such sources) without interfering with the attainment and maintenance of any national ambient air quality standard within the period permitted in this section. If the Administrator determines that any such plan can be revised, he shall notify the State that a plan revision may be submitted by the State. Any plan revision which is submitted by the State shall, after public notice and opportunity for public hearing, be approved by the Administrator if the revision relates only to fuel burning stationary sources (or persons supplying fuel to such sources), and the plan as revised complies with paragraph (2) of this subsection. The Administrator shall approve or disapprove any revision no later than three months after its submission.

(C) Neither the State, in the case of a plan (or portion thereof) approved under this subsection, nor the Administrator, in the case of a plan (or portion thereof) promulgated under subsection (c) of this section, shall be required to revise an applicable implementation plan because one or more exemptions under section 7418 of this title (relating to Federal facilities), enforcement orders under section 7413(d) of this title, suspensions under subsection (f) or (g) of this section (relating to temporary energy or economic authority), orders under section 7419 of this title (relating to primary nonferrous smelters), or extensions of compliance in decrees entered under section 7413(e) of this title (relating to iron- and steel-producing operations) have been granted, if such plan would have met the requirements of this section if no such exemptions, orders, or extensions had been granted.

(4) Repealed. Pub.L. 101-549, Title I, § 101(d)(2), Nov. 15, 1990, 104 Stat. 2409

(5)(A)(i) Any State may include in a State implementation plan, but the Administrator may not require as a condition of approval of such plan under this section, any indirect source review program. The Administrator may approve and enforce, as part of an applicable implementation plan, an indirect source review program which the State chooses to adopt and submit as part of its plan.

(ii) Except as provided in subparagraph (B), no plan promulgated by the Administrator shall include any indirect source review program for any air quality control region, or portion thereof.

(iii) Any State may revise an applicable implementation plan approved under this subsection to suspend or revoke any such program included in such plan, provided that such plan meets the requirements of this section.

(B) The Administrator shall have the authority to promulgate, implement and enforce regulations under subsection (c) of this section respecting indirect source review programs which apply only to federally assisted highways, airports, and other major federally assisted indirect sources and federally owned or operated indirect sources.

(C) For purposes of this paragraph, the term "indirect source" means a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution. Such term includes parking lots, parking garages, and other facilities subject to any measure for management of parking supply (within the meaning of subsection (c)(2)(D)(ii) of this section), including regulation of existing off-street parking but such term does not include new or existing on-street parking. Direct emissions sources or facilities at, within, or associated with, any indirect source shall not be deemed indirect sources for the purpose of this paragraph.

(D) For purposes of this paragraph the term “indirect source review program” means the facility-by-facility review of indirect sources of air pollution, including such measures as are necessary to assure, or assist in assuring, that a new or modified indirect source will not attract mobile sources of air pollution, the emissions from which would cause or contribute to air pollution concentrations--

(i) exceeding any national primary ambient air quality standard for a mobile source-related air pollutant after the primary standard attainment date, or

(ii) preventing maintenance of any such standard after such date.

(E) For purposes of this paragraph and paragraph (2)(B), the term “transportation control measure” does not include any measure which is an “indirect source review program”.

(6) No State plan shall be treated as meeting the requirements of this section unless such plan provides that in the case of any source which uses a supplemental, or intermittent control system for purposes of meeting the requirements of an order under [section 7413\(d\)](#) of this title or [section 7419](#) of this title (relating to primary nonferrous smelter orders), the owner or operator of such source may not temporarily reduce the pay of any employee by reason of the use of such supplemental or intermittent or other dispersion dependent control system.

(b) Extension of period for submission of plans

The Administrator may, wherever he determines necessary, extend the period for submission of any plan or portion thereof which implements a national secondary ambient air quality standard for a period not to exceed 18 months from the date otherwise required for submission of such plan.

(c) Preparation and publication by Administrator of proposed regulations setting forth implementation plan; transportation regulations study and report; parking surcharge; suspension authority; plan implementation

(1) The Administrator shall promulgate a Federal implementation plan at any time within 2 years after the Administrator--

(A) finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the minimum criteria established under subsection (k)(1)(A) of this section, or

(B) disapproves a State implementation plan submission in whole or in part,

unless the State corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan.

(2)(A) Repealed. [Pub.L. 101-549, Title I, § 101\(d\)\(3\)\(A\)](#), Nov. 15, 1990, 104 Stat. 2409

(B) No parking surcharge regulation may be required by the Administrator under paragraph (1) of this subsection as a part of an applicable implementation plan. All parking surcharge regulations previously required by the Administrator shall be void upon June 22, 1974. This subparagraph shall not prevent the Administrator from approving parking surcharges if they are adopted and submitted by a State as part of an applicable implementation plan. The Administrator may not condition approval of any implementation plan submitted by a State on such plan's including a parking surcharge regulation.

(C) Repealed. Pub.L. 101-549, Title I, § 101(d)(3)(B), Nov. 15, 1990, 104 Stat. 2409

(D) For purposes of this paragraph--

(i) The term “parking surcharge regulation” means a regulation imposing or requiring the imposition of any tax, surcharge, fee, or other charge on parking spaces, or any other area used for the temporary storage of motor vehicles.

(ii) The term “management of parking supply” shall include any requirement providing that any new facility containing a given number of parking spaces shall receive a permit or other prior approval, issuance of which is to be conditioned on air quality considerations.

(iii) The term “preferential bus/carpool lane” shall include any requirement for the setting aside of one or more lanes of a street or highway on a permanent or temporary basis for the exclusive use of buses or carpools, or both.

(E) No standard, plan, or requirement, relating to management of parking supply or preferential bus/carpool lanes shall be promulgated after June 22, 1974, by the Administrator pursuant to this section, unless such promulgation has been subjected to at least one public hearing which has been held in the area affected and for which reasonable notice has been given in such area. If substantial changes are made following public hearings, one or more additional hearings shall be held in such area after such notice.

(3) Upon application of the chief executive officer of any general purpose unit of local government, if the Administrator determines that such unit has adequate authority under State or local law, the Administrator may delegate to such unit the authority to implement and enforce within the jurisdiction of such unit any part of a plan promulgated under this subsection. Nothing in this paragraph shall prevent the Administrator from implementing or enforcing any applicable provision of a plan promulgated under this subsection.

(4) Repealed. Pub.L. 101-549, Title I, § 101(d)(3)(C), Nov. 15, 1990, 104 Stat. 2409

(5)(A) Any measure in an applicable implementation plan which requires a toll or other charge for the use of a bridge located entirely within one city shall be eliminated from such plan by the Administrator upon application by the Governor of the State, which application shall include a certification by the Governor that he will revise such plan in accordance with subparagraph (B).

(B) In the case of any applicable implementation plan with respect to which a measure has been eliminated under subparagraph (A), such plan shall, not later than one year after August 7, 1977, be revised to include comprehensive measures to:

(i) establish, expand, or improve public transportation measures to meet basic transportation needs, as expeditiously as is practicable; and

(ii) implement transportation control measures necessary to attain and maintain national ambient air quality standards,

and such revised plan shall, for the purpose of implementing such comprehensive public transportation measures, include requirements to use (insofar as is necessary) Federal grants, State or local funds, or any combination of such grants and funds as may be consistent with the terms of the legislation providing such grants and funds. Such measures shall, as a substitute for the tolls or charges eliminated under subparagraph (A), provide for emissions reductions equivalent to the reductions which may reasonably be expected to be achieved through the use of the tolls or charges eliminated.

(C) Any revision of an implementation plan for purposes of meeting the requirements of subparagraph (B) shall be submitted in coordination with any plan revision required under part D of this subchapter.

(d), (e) Repealed. Pub.L. 101-549, Title I, § 101(d)(4), (5), Nov. 15, 1990, 104 Stat. 2409

(f) National or regional energy emergencies; determination by President

(1) Upon application by the owner or operator of a fuel burning stationary source, and after notice and opportunity for public hearing, the Governor of the State in which such source is located may petition the President to determine that a national or regional energy emergency exists of such severity that--

(A) a temporary suspension of any part of the applicable implementation plan or of any requirement under [section 7651j](#) of this title (concerning excess emissions penalties or offsets) may be necessary, and

(B) other means of responding to the energy emergency may be inadequate.

Such determination shall not be delegable by the President to any other person. If the President determines that a national or regional energy emergency of such severity exists, a temporary emergency suspension of any part of an applicable implementation plan or of any requirement under [section 7651j](#) of this title (concerning excess emissions penalties or offsets) adopted by the State may be issued by the Governor of any State covered by the President's determination under the condition specified in paragraph (2) and may take effect immediately.

(2) A temporary emergency suspension under this subsection shall be issued to a source only if the Governor of such State finds that--

(A) there exists in the vicinity of such source a temporary energy emergency involving high levels of unemployment or loss of necessary energy supplies for residential dwellings; and

(B) such unemployment or loss can be totally or partially alleviated by such emergency suspension.

Not more than one such suspension may be issued for any source on the basis of the same set of circumstances or on the basis of the same emergency.

(3) A temporary emergency suspension issued by a Governor under this subsection shall remain in effect for a maximum of four months or such lesser period as may be specified in a disapproval order of the Administrator, if any. The Administrator may disapprove such suspension if he determines that it does not meet the requirements of paragraph (2).

(4) This subsection shall not apply in the case of a plan provision or requirement promulgated by the Administrator under subsection (c) of this section, but in any such case the President may grant a temporary emergency suspension for a four month period of any such provision or requirement if he makes the determinations and findings specified in paragraphs (1) and (2).

(5) The Governor may include in any temporary emergency suspension issued under this subsection a provision delaying for a period identical to the period of such suspension any compliance schedule (or increment of progress) to which such source is subject under [section 1857c-10](#) of this title, as in effect before August 7, 1977, or [section 7413\(d\)](#) of this title, upon a finding that such source is unable to comply with such schedule (or increment) solely because of the conditions on the basis of which a suspension was issued under this subsection.

(g) Governor's authority to issue temporary emergency suspensions

(1) In the case of any State which has adopted and submitted to the Administrator a proposed plan revision which the State determines--

(A) meets the requirements of this section, and

(B) is necessary (i) to prevent the closing for one year or more of any source of air pollution, and (ii) to prevent substantial increases in unemployment which would result from such closing, and

which the Administrator has not approved or disapproved under this section within 12 months of submission of the proposed plan revision, the Governor may issue a temporary emergency suspension of the part of the applicable implementation plan for such State which is proposed to be revised with respect to such source. The determination under subparagraph (B) may not be made with respect to a source which would close without regard to whether or not the proposed plan revision is approved.

(2) A temporary emergency suspension issued by a Governor under this subsection shall remain in effect for a maximum of four months or such lesser period as may be specified in a disapproval order of the Administrator. The Administrator may disapprove such suspension if he determines that it does not meet the requirements of this subsection.

(3) The Governor may include in any temporary emergency suspension issued under this subsection a provision delaying for a period identical to the period of such suspension any compliance schedule (or increment of progress) to which such source is subject under [section 1857c-10](#) of this title as in effect before August 7, 1977, or under [section 7413\(d\)](#) of this title upon a finding that such source is unable to comply with such schedule (or increment) solely because of the conditions on the basis of which a suspension was issued under this subsection.

(h) Publication of comprehensive document for each State setting forth requirements of applicable implementation plan

(1) Not later than 5 years after November 15, 1990, and every 3 years thereafter, the Administrator shall assemble and publish a comprehensive document for each State setting forth all requirements of the applicable implementation plan for such State and shall publish notice in the Federal Register of the availability of such documents.

(2) The Administrator may promulgate such regulations as may be reasonably necessary to carry out the purpose of this subsection.

(i) Modification of requirements prohibited

Except for a primary nonferrous smelter order under [section 7419](#) of this title, a suspension under subsection (f) or (g) of this section (relating to emergency suspensions), an exemption under [section 7418](#) of this title (relating to certain Federal facilities), an order under [section 7413\(d\)](#) of this title (relating to compliance orders), a plan promulgation under subsection (c) of this section, or a plan revision under subsection (a)(3) of this section, no order, suspension, plan revision, or other action modifying any requirement of an applicable implementation plan may be taken with respect to any stationary source by the State or by the Administrator.

(j) Technological systems of continuous emission reduction on new or modified stationary sources; compliance with performance standards

As a condition for issuance of any permit required under this subchapter, the owner or operator of each new or modified stationary source which is required to obtain such a permit must show to the satisfaction of the permitting authority that the technological system of continuous emission reduction which is to be used at such source will enable it to comply with the standards of performance which are to apply to such source and that the construction or modification and operation of such source will be in compliance with all other requirements of this chapter.

(k) Environmental Protection Agency action on plan submissions**(1) Completeness of plan submissions****(A) Completeness criteria**

Within 9 months after November 15, 1990, the Administrator shall promulgate minimum criteria that any plan submission must meet before the Administrator is required to act on such submission under this subsection. The criteria shall be limited to the information necessary to enable the Administrator to determine whether the plan submission complies with the provisions of this chapter.

(B) Completeness finding

Within 60 days of the Administrator's receipt of a plan or plan revision, but no later than 6 months after the date, if any, by which a State is required to submit the plan or revision, the Administrator shall determine whether the minimum criteria established pursuant to subparagraph (A) have been met. Any plan or plan revision that a State submits to the Administrator,

and that has not been determined by the Administrator (by the date 6 months after receipt of the submission) to have failed to meet the minimum criteria established pursuant to subparagraph (A), shall on that date be deemed by operation of law to meet such minimum criteria.

(C) Effect of finding of incompleteness

Where the Administrator determines that a plan submission (or part thereof) does not meet the minimum criteria established pursuant to subparagraph (A), the State shall be treated as not having made the submission (or, in the Administrator's discretion, part thereof).

(2) Deadline for action

Within 12 months of a determination by the Administrator (or a determination deemed by operation of law) under paragraph (1) that a State has submitted a plan or plan revision (or, in the Administrator's discretion, part thereof) that meets the minimum criteria established pursuant to paragraph (1), if applicable (or, if those criteria are not applicable, within 12 months of submission of the plan or revision), the Administrator shall act on the submission in accordance with paragraph (3).

(3) Full and partial approval and disapproval

In the case of any submittal on which the Administrator is required to act under paragraph (2), the Administrator shall approve such submittal as a whole if it meets all of the applicable requirements of this chapter. If a portion of the plan revision meets all the applicable requirements of this chapter, the Administrator may approve the plan revision in part and disapprove the plan revision in part. The plan revision shall not be treated as meeting the requirements of this chapter until the Administrator approves the entire plan revision as complying with the applicable requirements of this chapter.

(4) Conditional approval

The Administrator may approve a plan revision based on a commitment of the State to adopt specific enforceable measures by a date certain, but not later than 1 year after the date of approval of the plan revision. Any such conditional approval shall be treated as a disapproval if the State fails to comply with such commitment.

(5) Calls for plan revisions

Whenever the Administrator finds that the applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant national ambient air quality standard, to mitigate adequately the interstate pollutant transport described in [section 7506a](#) of this title or [section 7511c](#) of this title, or to otherwise comply with any requirement of this chapter, the Administrator shall require the State to revise the plan as necessary to correct such inadequacies. The Administrator shall notify the State of the inadequacies, and may establish reasonable deadlines (not to exceed 18 months after the date of such notice) for the submission of such plan revisions. Such findings and notice shall be public. Any finding under this paragraph shall, to the extent the Administrator deems appropriate, subject the State to the requirements of this chapter to which the State was subject when it developed and submitted the plan for which such finding was made, except that the Administrator may adjust any dates applicable under such requirements as appropriate (except that the Administrator may not adjust any attainment date prescribed under part D of this subchapter, unless such date has elapsed).

(6) Corrections

Whenever the Administrator determines that the Administrator's action approving, disapproving, or promulgating any plan or plan revision (or part thereof), area designation, redesignation, classification, or reclassification was in error, the Administrator may in the same manner as the approval, disapproval, or promulgation revise such action as appropriate without requiring any further submission from the State. Such determination and the basis thereof shall be provided to the State and public.

(l) Plan revisions

Each revision to an implementation plan submitted by a State under this chapter shall be adopted by such State after reasonable notice and public hearing. The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in [section 7501](#) of this title), or any other applicable requirement of this chapter.

(m) Sanctions

The Administrator may apply any of the sanctions listed in [section 7509\(b\)](#) of this title at any time (or at any time after) the Administrator makes a finding, disapproval, or determination under paragraphs (1) through (4), respectively, of [section 7509\(a\)](#) of this title in relation to any plan or plan item (as that term is defined by the Administrator) required under this chapter, with respect to any portion of the State the Administrator determines reasonable and appropriate, for the purpose of ensuring that the requirements of this chapter relating to such plan or plan item are met. The Administrator shall, by rule, establish criteria for exercising his authority under the previous sentence with respect to any deficiency referred to in [section 7509\(a\)](#) of this title to ensure that, during the 24-month period following the finding, disapproval, or determination referred to in [section 7509\(a\)](#) of this title, such sanctions are not applied on a statewide basis where one or more political subdivisions covered by the applicable implementation plan are principally responsible for such deficiency.

(n) Savings clauses

(1) Existing plan provisions

Any provision of any applicable implementation plan that was approved or promulgated by the Administrator pursuant to this section as in effect before November 15, 1990, shall remain in effect as part of such applicable implementation plan, except to the extent that a revision to such provision is approved or promulgated by the Administrator pursuant to this chapter.

(2) Attainment dates

For any area not designated nonattainment, any plan or plan revision submitted or required to be submitted by a State--

(A) in response to the promulgation or revision of a national primary ambient air quality standard in effect on November 15, 1990, or

(B) in response to a finding of substantial inadequacy under subsection (a)(2) of this section (as in effect immediately before November 15, 1990),

shall provide for attainment of the national primary ambient air quality standards within 3 years of November 15, 1990, or within 5 years of issuance of such finding of substantial inadequacy, whichever is later.

(3) Retention of construction moratorium in certain areas

In the case of an area to which, immediately before November 15, 1990, the prohibition on construction or modification of major stationary sources prescribed in subsection (a)(2)(I) of this section (as in effect immediately before November 15, 1990) applied by virtue of a finding of the Administrator that the State containing such area had not submitted an implementation plan meeting the requirements of [section 7502\(b\)\(6\)](#) of this title (relating to establishment of a permit program) (as in effect immediately before November 15, 1990) or 7502(a)(1) of this title (to the extent such requirements relate to provision for attainment of the primary national ambient air quality standard for sulfur oxides by December 31, 1982) as in effect immediately before November 15, 1990, no major stationary source of the relevant air pollutant or pollutants shall be constructed or modified in such area until the Administrator finds that the plan for such area meets the applicable requirements of [section 7502\(c\)\(5\)](#) of this title (relating to permit programs) or subpart 5 of part D of this subchapter (relating to attainment of the primary national ambient air quality standard for sulfur dioxide), respectively.

(o) Indian tribes

If an Indian tribe submits an implementation plan to the Administrator pursuant to [section 7601\(d\)](#) of this title, the plan shall be reviewed in accordance with the provisions for review set forth in this section for State plans, except as otherwise provided by regulation promulgated pursuant to [section 7601\(d\)\(2\)](#) of this title. When such plan becomes effective in accordance with the regulations promulgated under [section 7601\(d\)](#) of this title, the plan shall become applicable to all areas (except as expressly provided otherwise in the plan) located within the exterior boundaries of the reservation, notwithstanding the issuance of any patent and including rights-of-way running through the reservation.

(p) Reports

Any State shall submit, according to such schedule as the Administrator may prescribe, such reports as the Administrator may require relating to emission reductions, vehicle miles traveled, congestion levels, and any other information the Administrator may deem necessary to assess the development¹ effectiveness, need for revision, or implementation of any plan or plan revision required under this chapter.

CREDIT(S)

(July 14, 1955, c. 360, Title I, § 110, as added Dec. 31, 1970, Pub.L. 91-604, § 4(a), 84 Stat. 1680; amended June 22, 1974, Pub.L. 93-319, § 4, 88 Stat. 256; S.Res. 4, Feb. 4, 1977; Aug. 7, 1977, Pub.L. 95-95, Title I, §§ 107, 108, 91 Stat. 691, 693; Nov. 16, 1977, Pub.L. 95-190, § 14(a)(1)-(6), 91 Stat. 1399; July 17, 1981, Pub.L. 97-23, § 3, 95 Stat. 142; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 101(b)-(d), 102(h), 107(c), 108(d), Title IV, § 412, 104 Stat. 2404-2408, 2422, 2464, 2466, 2634.)

Notes of Decisions (363)

Footnotes

¹ So in original. Probably should be followed by a comma.

42 U.S.C.A. § 7410, 42 USCA § 7410

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Title 42. The Public Health and Welfare

Chapter 85. Air Pollution Prevention and Control (Refs & Annos)

Subchapter I. Programs and Activities

Part C. Prevention of Significant Deterioration of Air Quality

Subpart I. Clean Air (Refs & Annos)

42 U.S.C.A. § 7471

§ 7471. Plan requirements

Currentness

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.

CREDIT(S)

(July 14, 1955, c. 360, Title I, § 161, as added Aug. 7, 1977, [Pub.L. 95-95, Title I, § 127\(a\)](#), 91 Stat. 731; amended Nov. 15, 1990, [Pub.L. 101-549, Title I, § 110\(1\)](#), 104 Stat. 2470.)

Notes of Decisions (2)

42 U.S.C.A. § 7471, 42 USCA § 7471

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Subpart I. Clean Air (Refs & Annos)

42 U.S.C.A. § 7472

§ 7472. Initial classifications

Currentness

(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.

CREDIT(S)

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

42 U.S.C.A. § 7472, 42 USCA § 7472

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Subpart I. Clean Air (Refs & Annos)

42 U.S.C.A. § 7475

§ 7475. Preconstruction requirements

Currentness

(a) Major emitting facilities on which construction is commenced

No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless--

(1) a permit has been issued for such proposed facility in accordance with this part setting forth emission limitations for such facility which conform to the requirements of this part;

(2) the proposed permit has been subject to a review in accordance with this section, the required analysis has been conducted in accordance with regulations promulgated by the Administrator, and a public hearing has been held with opportunity for interested persons including representatives of the Administrator to appear and submit written or oral presentations on the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations;

(3) the owner or operator of such facility demonstrates, as required pursuant to [section 7410\(j\)](#) of this title, that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region, or (C) any other applicable emission standard or standard of performance under this chapter;

(4) the proposed facility is subject to the best available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility;

(5) the provisions of subsection (d) of this section with respect to protection of class I areas have been complied with for such facility;

(6) there has been an analysis of any air quality impacts projected for the area as a result of growth associated with such facility;

(7) the person who owns or operates, or proposes to own or operate, a major emitting facility for which a permit is required under this part agrees to conduct such monitoring as may be necessary to determine the effect which emissions from any such facility may have, or is having, on air quality in any area which may be affected by emissions from such source; and

(8) in the case of a source which proposes to construct in a class III area, emissions from which would cause or contribute to exceeding the maximum allowable increments applicable in a class II area and where no standard under [section 7411](#) of this title has been promulgated subsequent to August 7, 1977, for such source category, the Administrator has approved the determination of best available technology as set forth in the permit.

(b) Exception

The demonstration pertaining to maximum allowable increases required under subsection (a)(3) of this section shall not apply to maximum allowable increases for class II areas in the case of an expansion or modification of a major emitting facility which is in existence on August 7, 1977, whose allowable emissions of air pollutants, after compliance with subsection (a)(4) of this section, will be less than fifty tons per year and for which the owner or operator of such facility demonstrates that emissions of particulate matter and sulfur oxides will not cause or contribute to ambient air quality levels in excess of the national secondary ambient air quality standard for either of such pollutants.

(c) Permit applications

Any completed permit application under [section 7410](#) of this title for a major emitting facility in any area to which this part applies shall be granted or denied not later than one year after the date of filing of such completed application.

(d) Action taken on permit applications; notice; adverse impact on air quality related values; variance; emission limitations

(1) Each State shall transmit to the Administrator a copy of each permit application relating to a major emitting facility received by such State and provide notice to the Administrator of every action related to the consideration of such permit.

(2)(A) The Administrator shall provide notice of the permit application to the Federal Land Manager and the Federal official charged with direct responsibility for management of any lands within a class I area which may be affected by emissions from the proposed facility.

(B) The Federal Land Manager and the Federal official charged with direct responsibility for management of such lands shall have an affirmative responsibility to protect the air quality related values (including visibility) of any such lands within a class I area and to consider, in consultation with the Administrator, whether a proposed major emitting facility will have an adverse impact on such values.

(C)(i) In any case where the Federal official charged with direct responsibility for management of any lands within a class I area or the Federal Land Manager of such lands, or the Administrator, or the Governor of an adjacent State containing such a class I area files a notice alleging that emissions from a proposed major emitting facility may cause or contribute to a change in the air quality in such area and identifying the potential adverse impact of such change, a permit shall not be issued unless

the owner or operator of such facility demonstrates that emissions of particulate matter and sulfur dioxide will not cause or contribute to concentrations which exceed the maximum allowable increases for a class I area.

(ii) In any case where the Federal Land Manager demonstrates to the satisfaction of the State that the emissions from such facility will have an adverse impact on the air quality-related values (including visibility) of such lands, notwithstanding the fact that the change in air quality resulting from emissions from such facility will not cause or contribute to concentrations which exceed the maximum allowable increases for a class I area, a permit shall not be issued.

(iii) In any case where the owner or operator of such facility demonstrates to the satisfaction of the Federal Land Manager, and the Federal Land Manager so certifies, that the emissions from such facility will have no adverse impact on the air quality-related values of such lands (including visibility), notwithstanding the fact that the change in air quality resulting from emissions from such facility will cause or contribute to concentrations which exceed the maximum allowable increases for class I areas, the State may issue a permit.

(iv) In the case of a permit issued pursuant to clause (iii), such facility shall comply with such emission limitations under such permit as may be necessary to assure that emissions of sulfur oxides and particulates from such facility will not cause or contribute to concentrations of such pollutant which exceed the following maximum allowable increases over the baseline concentration for such pollutants:

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.....325

(D)(i) In any case where the owner or operator of a proposed major emitting facility who has been denied a certification under subparagraph (C)(iii) demonstrates to the satisfaction of the Governor, after notice and public hearing, and the Governor finds, that the facility cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for periods of twenty-four hours or less applicable to any class I area and, in the case of Federal mandatory class I areas, that a variance under this clause will not adversely affect the air quality related values of the area (including visibility), the Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may grant a variance from such maximum allowable increase. If such variance is granted, a permit may be issued to such source pursuant to the requirements of this subparagraph.

(ii) In any case in which the Governor recommends a variance under this subparagraph in which the Federal Land Manager does not concur, the recommendations of the Governor and the Federal Land Manager shall be transmitted to the President.

The President may approve the Governor's recommendation if he finds that such variance is in the national interest. No Presidential finding shall be reviewable in any court. The variance shall take effect if the President approves the Governor's recommendations. The President shall approve or disapprove such recommendation within ninety days after his receipt of the recommendations of the Governor and the Federal Land Manager.

(iii) In the case of a permit issued pursuant to this subparagraph, such facility shall comply with such emission limitations under such permit as may be necessary to assure that emissions of sulfur oxides from such facility will not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which exceed the following maximum allowable increases for such areas over the baseline concentration for such pollutant and to assure that such emissions will not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of 24 hours or less on more than 18 days during any annual period:

MAXIMUM ALLOWABLE INCREASE

[In micrograms per cubic meter]

Period of exposure	Low terrain areas	High terrain areas
24-hr maximum.....	36	62
3-hr maximum.....	130	221

(iv) For purposes of clause (iii), the term "high terrain area" means with respect to any facility, any area having an elevation of 900 feet or more above the base of the stack of such facility, and the term "low terrain area" means any area other than a high terrain area.

(e) Analysis; continuous air quality monitoring data; regulations; model adjustments

(1) The review provided for in subsection (a) of this section shall be preceded by an analysis in accordance with regulations of the Administrator, promulgated under this subsection, which may be conducted by the State (or any general purpose unit of local government) or by the major emitting facility applying for such permit, of the ambient air quality at the proposed site and in areas which may be affected by emissions from such facility for each pollutant subject to regulation under this chapter which will be emitted from such facility.

(2) Effective one year after August 7, 1977, the analysis required by this subsection shall include continuous air quality monitoring data gathered for purposes of determining whether emissions from such facility will exceed the maximum allowable increases or the maximum allowable concentration permitted under this part. Such data shall be gathered over a period of one calendar year preceding the date of application for a permit under this part unless the State, in accordance with regulations promulgated by the Administrator, determines that a complete and adequate analysis for such purposes may be accomplished in a shorter period. The results of such analysis shall be available at the time of the public hearing on the application for such permit.

(3) The Administrator shall within six months after August 7, 1977, promulgate regulations respecting the analysis required under this subsection which regulations--

(A) shall not require the use of any automatic or uniform buffer zone or zones,

(B) shall require an analysis of the ambient air quality, climate and meteorology, terrain, soils and vegetation, and visibility at the site of the proposed major emitting facility and in the area potentially affected by the emissions from such facility for each pollutant regulated under this chapter which will be emitted from, or which results from the construction or operation of, such facility, the size and nature of the proposed facility, the degree of continuous emission reduction which could be achieved by such facility, and such other factors as may be relevant in determining the effect of emissions from a proposed facility on any air quality control region,

(C) shall require the results of such analysis shall be available at the time of the public hearing on the application for such permit, and

(D) shall specify with reasonable particularity each air quality model or models to be used under specified sets of conditions for purposes of this part.

Any model or models designated under such regulations may be adjusted upon a determination, after notice and opportunity for public hearing, by the Administrator that such adjustment is necessary to take into account unique terrain or meteorological characteristics of an area potentially affected by emissions from a source applying for a permit required under this part.

CREDIT(S)

(July 14, 1955, c. 360, Title I, § 165, as added Aug. 7, 1977, Pub.L. 95-95, Title I, § 127(a), 91 Stat. 735; amended Nov. 16, 1977, Pub.L. 95-190, § 14(a)(44)-(51), 91 Stat. 1402.)

[Notes of Decisions \(57\)](#)

42 U.S.C.A. § 7475, 42 USCA § 7475

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Chapter 85. Air Pollution Prevention and Control (Refs & Annos)

Subchapter I. Programs and Activities

Part C. Prevention of Significant Deterioration of Air Quality

Subpart I. Clean Air (Refs & Annos)

42 U.S.C.A. § 7478

§ 7478. Period before plan approval

Currentness

(a) Existing regulations to remain in effect

Until such time as an applicable implementation plan is in effect for any area, which plan meets the requirements of this part to prevent significant deterioration of air quality with respect to any air pollutant, applicable regulations under this chapter prior to August 7, 1977, shall remain in effect to prevent significant deterioration of air quality in any such area for any such pollutant except as otherwise provided in subsection (b) of this section.

(b) Regulations deemed amended; construction commenced after June 1, 1975

If any regulation in effect prior to August 7, 1977, to prevent significant deterioration of air quality would be inconsistent with the requirements of [section 7472\(a\)](#), [section 7473\(b\)](#) or [section 7474\(a\)](#) of this title, then such regulations shall be deemed amended so as to conform with such requirements. In the case of a facility on which construction was commenced (in accordance with the definition of “commenced” in [section 7479\(2\)](#) of this title) after June 1, 1975, and prior to August 7, 1977, the review and permitting of such facility shall be in accordance with the regulations for the prevention of significant deterioration in effect prior to August 7, 1977.

CREDIT(S)

(July 14, 1955, c. 360, Title I, § 168, as added Aug. 7, 1977, [Pub.L. 95-95, Title I, § 127\(a\)](#), 91 Stat. 740; amended Nov. 16, 1977, [Pub.L. 95-190, § 14\(a\)\(52\)](#), 91 Stat. 1402.)


[Notes of Decisions \(1\)](#)

42 U.S.C.A. § 7478, 42 USCA § 7478

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Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control (Refs & Annos)
Subchapter I. Programs and Activities
Part D. Plan Requirements for Nonattainment Areas
Subpart 1. Nonattainment Areas in General (Refs & Annos)

42 U.S.C.A. § 7502

§ 7502. Nonattainment plan provisions in general

Currentness

(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.

CREDIT(S)

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

[Notes of Decisions \(51\)](#)

42 U.S.C.A. § 7502, 42 USCA § 7502
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Proposed Legislation

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Chapter 85. Air Pollution Prevention and Control (Refs & Annos)

Subchapter III. General Provisions

42 U.S.C.A. § 7602

§ 7602. Definitions

Currentness

When used in this chapter--

(a) The term “Administrator” means the Administrator of the Environmental Protection Agency.

(b) The term “air pollution control agency” means any of the following:

(1) A single State agency designated by the Governor of that State as the official State air pollution control agency for purposes of this chapter.

(2) An agency established by two or more States and having substantial powers or duties pertaining to the prevention and control of air pollution.

(3) A city, county, or other local government health authority, or, in the case of any city, county, or other local government in which there is an agency other than the health authority charged with responsibility for enforcing ordinances or laws relating to the prevention and control of air pollution, such other agency.

(4) An agency of two or more municipalities located in the same State or in different States and having substantial powers or duties pertaining to the prevention and control of air pollution.

(5) An agency of an Indian tribe.

(c) The term “interstate air pollution control agency” means--

(1) an air pollution control agency established by two or more States, or

(2) an air pollution control agency of two or more municipalities located in different States.

(d) The term “State” means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the Northern Mariana Islands.

(e) The term “person” includes an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent, or employee thereof.

(f) The term “municipality” means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law.

(g) The term “air pollutant” means any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term “air pollutant” is used.

(h) All language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

(i) The term “Federal land manager” means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

(j) Except as otherwise expressly provided, the terms “major stationary source” and “major emitting facility” mean any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant (including any major emitting facility or source of fugitive emissions of any such pollutant, as determined by rule by the Administrator).

(k) The terms “emission limitation” and “emission standard” mean a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter.¹

(l) The term “standard of performance” means a requirement of continuous emission reduction, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction.

(m) The term “means of emission limitation” means a system of continuous emission reduction (including the use of specific technology or fuels with specified pollution characteristics).

(n) The term “primary standard attainment date” means the date specified in the applicable implementation plan for the attainment of a national primary ambient air quality standard for any air pollutant.

(o) The term “delayed compliance order” means an order issued by the State or by the Administrator to an existing stationary source, postponing the date required under an applicable implementation plan for compliance by such source with any requirement of such plan.

(p) The term “schedule and timetable of compliance” means a schedule of required measures including an enforceable sequence of actions or operations leading to compliance with an emission limitation, other limitation, prohibition, or standard.

(q) For purposes of this chapter, the term “applicable implementation plan” means the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under [section 7410](#) of this title, or promulgated under [section 7410\(c\)](#) of this title, or promulgated or approved pursuant to regulations promulgated under [section 7601\(d\)](#) of this title and which implements the relevant requirements of this chapter.

(r) **Indian tribe.**--The term “Indian tribe” means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village, which is Federally recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

(s) **VOC.**--The term “VOC” means volatile organic compound, as defined by the Administrator.

(t) **PM-10.**--The term “PM-10” means particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers, as measured by such method as the Administrator may determine.

(u) **NAAQS and CTG.**--The term “NAAQS” means national ambient air quality standard. The term “CTG” means a Control Technique Guideline published by the Administrator under [section 7408](#) of this title.

(v) **NO_x.**--The term “NO_x” means oxides of nitrogen.

(w) **CO.**--The term “CO” means carbon monoxide.

(x) **Small source.**--The term “small source” means a source that emits less than 100 tons of regulated pollutants per year, or any class of persons that the Administrator determines, through regulation, generally lack technical ability or knowledge regarding control of air pollution.

(y) **Federal implementation plan.**--The term “Federal implementation plan” means a plan (or portion thereof) promulgated by the Administrator to fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a State implementation plan, and which includes enforceable emission limitations or other control measures, means or techniques (including economic incentives, such as marketable permits or auctions of emissions allowances), and provides for attainment of the relevant national ambient air quality standard.

(z) Stationary source.--The term “stationary source” means generally any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in [section 7550](#) of this title.

CREDIT(S)

(July 14, 1955, c. 360, Title III, § 302, formerly § 9, as added Dec. 17, 1963, Pub.L. 88-206, § 1, 77 Stat. 400, renumbered Oct. 20, 1965, Pub.L. 89-272, Title I, § 101(4), 79 Stat. 992; amended Nov. 21, 1967, Pub.L. 90-148, § 2, 81 Stat. 504; Dec. 31, 1970, Pub.L. 91-604, § 15(a)(1), (c)(1), 84 Stat. 1710, 1713; Aug. 7, 1977, [Pub.L. 95-95, Title II, § 218\(c\), Title III, § 301](#), 91 Stat. 761, 769; Nov. 16, 1977, [Pub.L. 95-190](#), § 14(a)(76), 91 Stat. 1404; Nov. 15, 1990, [Pub.L. 101-549, Title I, §§ 101\(d\)\(4\)](#), 107(a), (b), 108(j), 109(b), Title III, § 302(e), Title VII, § 709, 104 Stat. 2409, 2464, 2468, 2470, 2574, 2684.)

[Notes of Decisions \(11\)](#)

Footnotes

1 So in original.

42 U.S.C.A. § 7602, 42 USCA § 7602

Current through P.L. 114-115 approved 12-28-2015

United States Code Annotated

Title 42. The Public Health and Welfare

Chapter 85. Air Pollution Prevention and Control (Refs & Annos)

Subchapter III. General Provisions

42 U.S.C.A. § 7607

§ 7607. Administrative proceedings and judicial review

Currentness

(a) Administrative subpoenas; confidentiality; witnesses

In connection with any determination under [section 7410\(f\)](#) of this title, or for purposes of obtaining information under [section 7521\(b\)\(4\)](#) or [7545\(c\)\(3\)](#) of this title, any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the ¹ chapter (including but not limited to [section 7413](#), [section 7414](#), [section 7420](#), [section 7429](#), [section 7477](#), [section 7524](#), [section 7525](#), [section 7542](#), [section 7603](#), or [section 7606](#) of this title), ² the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of [section 1905 of Title 18](#), except that such paper, book, document, or information may be disclosed 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 subpoena served upon any person under this subparagraph ³, 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, ² 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\(b\)\(5\)](#) 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, 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 ⁴ 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,

(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 Title 5, the Administrator in promulgating any regulation under this chapter, including a regulation subject to a deadline, shall ensure a reasonable period for public participation of at least 30 days, except as otherwise expressly provided in section ⁵ 7407(d), 7502(a), 7511(a) and (b), and 7512(a) and (b) of this title.

CREDIT(S)

(July 14, 1955, c. 360, Title III, § 307, as added Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1707; amended Nov. 18, 1971, Pub.L. 92-157, Title III, § 302(a), 85 Stat. 464; June 22, 1974, Pub.L. 93-319, § 6(c), 88 Stat. 259; Aug. 7, 1977, Pub.L. 95-95, Title III, §§ 303(d), 305(a), (c), (f)-(h), 91 Stat. 772, 776, 777; Nov. 16, 1977, Pub.L. 95-190, § 14(a)(79), (80), 91 Stat. 1404; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 108(p), 110(5), Title III, § 302(g), (h), Title VII, §§ 702(c), 703, 706, 707(h), 710(b), 104 Stat. 2469, 2470, 2574, 2681-2684.)

[Notes of Decisions \(338\)](#)

Footnotes

- 1 So in original. Probably should be “this”.
- 2 So in original.
- 3 So in original. Probably should be “subsection.”.
- 4 So in original. The word “to” probably should not appear.
- 5 So in original. Probably should be “sections”.

42 U.S.C.A. § 7607, 42 USCA § 7607

Current through P.L. 114-115 approved 12-28-2015

REGULATIONS

Code of Federal Regulations

Title 40. Protection of Environment

Chapter I. Environmental Protection Agency (Refs & Annos)

Subchapter C. Air Programs

Part 50. National Primary and Secondary Ambient Air Quality Standards (Refs & Annos)

40 C.F.R. § 50.10

§ 50.10 National 8-hour primary and secondary ambient air quality standards for ozone.

Effective: April 6, 2015

[Currentness](#)

(a) The level of the national 8-hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on appendix D to this part and designated in accordance with part 53 of this chapter, is 0.08 parts per million (ppm), daily maximum 8-hour average.

(b) The 8-hour primary and secondary ozone ambient air quality standards are met at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.08 ppm, as determined in accordance with appendix I to this part.

(c) Until the effective date of the final Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements Rule (final SIP Requirements Rule) to be codified at [40 CFR 51.1100 et seq.](#), the 1997 ozone NAAQS set forth in this section will continue in effect, notwithstanding the promulgation of the 2008 ozone NAAQS under [§ 50.15](#). The 1997 ozone NAAQS set forth in this section will no longer apply upon the effective date of the final SIP Requirements Rule. For purposes of the anti-backsliding requirements of [§ 51.1105](#), [§ 51.165](#) and Appendix S to part 51, the area designations and classifications with respect to the revoked 1997 ozone NAAQS are codified in 40 CFR part 81.

Credits

[[62 FR 38894](#), July 18, 1997; [77 FR 30170](#), May 21, 2012; [80 FR 12312](#), March 6, 2015]

SOURCE: [36 FR 22384](#), Nov. 25, 1971; [50 FR 25544](#), June 19, 1985; [63 FR 7274](#), Feb. 12, 1998 unless otherwise noted., unless otherwise noted.

AUTHORITY: [42 U.S.C. 7401](#), et seq.

[Notes of Decisions \(136\)](#)

Current through April 15, 2016; [81 FR 22196](#).



KeyCite Yellow Flag - Negative Treatment

Unconstitutional or Preempted **Prior Version Held Invalid** [Utility Air Regulatory Group v. E.P.A.](#), U.S., June 23, 2014



KeyCite Yellow Flag - Negative Treatment Proposed Regulation

[Code of Federal Regulations](#)

[Title 40. Protection of Environment](#)

[Chapter I. Environmental Protection Agency \(Refs & Annos\)](#)

[Subchapter C. Air Programs](#)

[Part 51. Requirements for Preparation, Adoption, and Submittal of Implementation Plans \(Refs & Annos\)](#)

[Subpart I. Review of New Sources and Modifications \(Refs & Annos\)](#)

40 C.F.R. § 51.166

§ 51.166 Prevention of significant deterioration of air quality.

Effective: December 28, 2015

[Currentness](#)

(a)(1) Plan requirements. In accordance with the policy of section 101(b)(1) of the Act and the purposes of section 160 of the Act, each applicable State Implementation Plan and each applicable Tribal Implementation Plan shall contain emission limitations and such other measures as may be necessary to prevent significant deterioration of air quality.

(2) Plan revisions. If a State Implementation Plan revision would result in increased air quality deterioration over any baseline concentration, the plan revision shall include a demonstration that it will not cause or contribute to a violation of the applicable increment(s). If a plan revision proposing less restrictive requirements was submitted after August 7, 1977 but on or before any applicable baseline date and was pending action by the Administrator on that date, no such demonstration is necessary with respect to the area for which a baseline date would be established before final action is taken on the plan revision. Instead, the assessment described in paragraph (a)(4) of this section, shall review the expected impact to the applicable increment(s).

(3) Required plan revision. If the State or the Administrator determines that a plan is substantially inadequate to prevent significant deterioration or that an applicable increment is being violated, the plan shall be revised to correct the inadequacy or the violation. The plan shall be revised within 60 days of such a finding by a State or within 60 days following notification by the Administrator, or by such later date as prescribed by the Administrator after consultation with the State.

(4) Plan assessment. The State shall review the adequacy of a plan on a periodic basis and within 60 days of such time as information becomes available that an applicable increment is being violated.

(5) Public participation. Any State action taken under this paragraph shall be subject to the opportunity for public hearing in accordance with procedures equivalent to those established in [§ 51.102](#).

(6) Amendments.

(i) Any State required to revise its implementation plan by reason of an amendment to this section, with the exception of amendments to add new maximum allowable increases or other measures pursuant to section 166(a) of the Act, shall adopt and submit such plan revision to the Administrator for approval no later than 3 years after such amendment is published in the Federal Register. With regard to a revision to an implementation plan by reason of an amendment to paragraph (c) of this section to add maximum allowable increases or other measures, the State shall submit such plan revision to the Administrator for approval within 21 months after such amendment is published in the Federal Register.

(ii) Any revision to an implementation plan that would amend the provisions for the prevention of significant air quality deterioration in the plan shall specify when and as to what sources and modifications the revision is to take effect.

(iii) Any revision to an implementation plan that an amendment to this section required shall take effect no later than the date of its approval and may operate prospectively.

(7) Applicability. Each plan shall contain procedures that incorporate the requirements in paragraphs (a)(7)(i) through (vi) of this section.

(i) The requirements of this section apply to the construction of any new major stationary source (as defined in paragraph (b) (1) of this section) or any project at an existing major stationary source in an area designated as attainment or unclassifiable under sections 107(d)(1)(A)(ii) or (iii) of the Act.

(ii) The requirements of paragraphs (j) through (r) of this section apply to the construction of any new major stationary source or the major modification of any existing major stationary source, except as this section otherwise provides.

(iii) No new major stationary source or major modification to which the requirements of paragraphs (j) through (r)(5) of this section apply shall begin actual construction without a permit that states that the major stationary source or major modification will meet those requirements.

(iv) Each plan shall use the specific provisions of paragraphs (a)(7)(iv)(a) through (f) of this section. Deviations from these provisions will be approved only if the State specifically demonstrates that the submitted provisions are more stringent than or at least as stringent in all respects as the corresponding provisions in paragraphs (a)(7)(iv)(a) through (f) of this section.

(a) Except as otherwise provided in paragraphs (a)(7)(v) and (vi) of this section, and consistent with the definition of major modification contained in paragraph (b)(2) of this section, a project is a major modification for a regulated NSR pollutant if it causes two types of emissions increases—a significant emissions increase (as defined in paragraph (b)(39) of this section), and a significant net emissions increase (as defined in paragraphs (b)(3) and (b)(23) of this section). The project is not a major modification if it does not cause a significant emissions increase. If the project causes a significant emissions increase, then the project is a major modification only if it also results in a significant net emissions increase.

(b) The procedure for calculating (before beginning actual construction) whether a significant emissions increase (i.e., the first step of the process) will occur depends upon the type of emissions units being modified, according to paragraphs (a)(7)(iv)(c) through (f) of this section. The procedure for calculating (before beginning actual

construction) whether a significant net emissions increase will occur at the major stationary source (i.e., the second step of the process) is contained in the definition in paragraph (b)(3) of this section. Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.

(c) Actual-to-projected-actual applicability test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in paragraph (b)(40) of this section) and the baseline actual emissions (as defined in paragraphs (b)(47)(i) and (ii) of this section) for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(d) Actual-to-potential test for projects that only involve construction of a new emissions unit(s). A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in paragraph (b)(4) of this section) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in paragraph (b)(47)(iii) of this section) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(e) [Reserved]

(f) Hybrid test for projects that involve multiple types of emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in paragraphs (a)(7)(iv)(c) through (d) of this section as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(v) The plan shall require that for any major stationary source for a PAL for a regulated NSR pollutant, the major stationary source shall comply with requirements under paragraph (w) of this section.

(vi) [Reserved]

(b) Definitions. All State plans shall use the following definitions for the purposes of this section. Deviations from the following wording will be approved only if the State specifically demonstrates that the submitted definition is more stringent, or at least as stringent, in all respects as the corresponding definitions below:

(1)(i) Major stationary source means:

(a) Any of the following stationary sources of air pollutants which emits, or has the potential to emit, 100 tons per year or more of any regulated NSR pollutant: Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants (with thermal dryers), primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants,

secondary metal production plants, chemical process plants (which does not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140), fossil-fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants, and charcoal production plants;

(b) Notwithstanding the stationary source size specified in paragraph (b)(1)(i)(a) of this section, any stationary source which emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant; or

(c) Any physical change that would occur at a stationary source not otherwise qualifying under paragraph (b)(1) of this section, as a major stationary source if the change would constitute a major stationary source by itself.

(ii) A major source that is major for volatile organic compounds or NO_x shall be considered major for ozone.

(iii) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:

(a) Coal cleaning plants (with thermal dryers);

(b) Kraft pulp mills;

(c) Portland cement plants;

(d) Primary zinc smelters;

(e) Iron and steel mills;

(f) Primary aluminum ore reduction plants;

(g) Primary copper smelters;

(h) Municipal incinerators capable of charging more than 250 tons of refuse per day;

(i) Hydrofluoric, sulfuric, or nitric acid plants;

(j) Petroleum refineries;

(k) Lime plants;

- (l) Phosphate rock processing plants;
- (m) Coke oven batteries;
- (n) Sulfur recovery plants;
- (o) Carbon black plants (furnace process);
- (p) Primary lead smelters;
- (q) Fuel conversion plants;
- (r) Sintering plants;
- (s) Secondary metal production plants;
- (t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (w) Taconite ore processing plants;
- (x) Glass fiber processing plants;
- (y) Charcoal production plants;
- (z) Fossil fuel-fired steam electric plants of more that 250 million British thermal units per hour heat input;
- (aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

(2)(i) Major modification means any physical change in or change in the method of operation of a major stationary source that would result in: a significant emissions increase (as defined in paragraph (b)(39) of this section) of a regulated NSR pollutant (as defined in paragraph (b)(49) of this section); and a significant net emissions increase of that pollutant from the major stationary source.

(ii) Any significant emissions increase (as defined at paragraph (b)(39) of this section) from any emissions units or net emissions increase (as defined in paragraph (b)(3) of this section) at a major stationary source that is significant for volatile organic compounds or NO_X shall be considered significant for ozone.

(iii) A physical change or change in the method of operation shall not include:

(a) Routine maintenance, repair and replacement. Routine maintenance, repair and replacement shall include, but not be limited to, any activity(s) that meets the requirements of the equipment replacement provisions contained in paragraph (y) of this section;

Note to paragraph (b)(2)(iii)(a): On December 24, 2003, the second sentence of this paragraph (b)(2)(iii)(a) is stayed indefinitely by court order. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(b) Use of an alternative fuel or raw material by reason of any order under section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

(c) Use of an alternative fuel by reason of an order or rule under section 125 of the Act;

(d) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;

(e) Use of an alternative fuel or raw material by a stationary source which:

(1) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975 pursuant to [40 CFR 52.21](#) or under regulations approved pursuant to 40 CFR subpart I or § 51.166; or

(2) The source is approved to use under any permit issued under [40 CFR 52.21](#) or under regulations approved pursuant to 40 CFR 51.166;

(f) An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to [40 CFR 52.21](#) or under regulations approved pursuant to 40 CFR subpart I or § 51.166.

(g) Any change in ownership at a stationary source.

(h) [Reserved]

(i) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(1) The State implementation plan for the State in which the project is located; and

(2) Other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(j) The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.

(k) The reactivation of a very clean coal-fired electric utility steam generating unit.

(iv) This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under paragraph (w) of this section for a PAL for that pollutant. Instead, the definition at paragraph (w)(2)(viii) of this section shall apply.

<Text of subsection (b)(2)(v) stayed effective March 30, 2011.>

(v) Fugitive emissions shall not be included in determining for any of the purposes of this section whether a physical change in or change in the method of operation of a major stationary source is a major modification, unless the source belongs to one of the source categories listed in paragraph (b)(1)(iii) of this section.

(3)(i) Net emissions increase means, with respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero:

(a) The increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph (a)(7)(iv) of this section; and

(b) Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this paragraph (b)(3)(i)(b) shall be determined as provided in paragraph (b)(47), except that paragraphs (b)(47)(i)(c) and (b)(47)(ii)(d) of this section shall not apply.

(ii) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs within a reasonable period (to be specified by the State) before the date that the increase from the particular change occurs.

(iii) An increase or decrease in actual emissions is creditable only if:

(a) It occurs within a reasonable period (to be specified by the reviewing authority); and

(b) The reviewing authority has not relied on it in issuing a permit for the source under regulations approved pursuant to this section, which permit is in effect when the increase in actual emissions from the particular change occurs; and

(c) The increase or decrease in emissions did not occur at a Clean Unit, except as provided in paragraphs (t)(8) and (u)(10) of this section.

<Text of subsection (b)(3)(iii)(d) stayed effective March 30, 2011.>

(d) As it pertains to an increase or decrease in fugitive emissions (to the extent quantifiable), it occurs at an emissions unit that is part of one of the source categories listed in paragraph (b)(1)(iii) of this section or it occurs at an emission unit that is located at a major stationary source that belongs to one of the listed source categories. Fugitive emission increases or decreases are not included for those emissions units located at a facility whose primary activity is not represented by one of the source categories listed in paragraph (b)(1)(iii) of this section and that are not, by themselves, part of a listed source category.

(iv) An increase or decrease in actual emissions of sulfur dioxide, particulate matter, or nitrogen oxides that occurs before the applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available.

(v) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(vi) A decrease in actual emissions is creditable only to the extent that:

(a) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(b) It is enforceable as a practical matter at and after the time that actual construction on the particular change begins;

(c) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and

(d) [Reserved]

(vii) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.

(viii) Paragraph (b)(21)(ii) of this section shall not apply for determining creditable increases and decreases.

(4) Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(5) Stationary source means any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.

(6) Building, structure, facility, or installation means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group (i.e., which have the same two-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0066 and 003-005-00176-0, respectively).

(7) Emissions unit means any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant and includes an electric utility steam generating unit as defined in paragraph (b)(30) of this section. For purposes of this section, there are two types of emissions units as described in paragraphs (b)(7)(i) and (ii) of this section.

(i) A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.

(ii) An existing emissions unit is any emissions unit that does not meet the requirements in paragraph (b)(7)(i) of this section. A replacement unit, as defined in paragraph (b)(32) of this section, is an existing emissions unit.

(8) Construction means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in emissions.

(9) Commence as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:

(i) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

(ii) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(10) Necessary preconstruction approvals or permits means those permits or approvals required under Federal air quality control laws and regulations and those air quality control laws and regulations which are part of the applicable State Implementation Plan.

(11) Begin actual construction means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operation this term refers to those on-site activities, other than preparatory activities, which mark the initiation of the change.

(12) Best available control technology means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each a regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the reviewing authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combination techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61. If the reviewing authority determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

(13)(i) Baseline concentration means that ambient concentration level that exists in the baseline area at the time of the applicable minor source baseline date. A baseline concentration is determined for each pollutant for which a minor source baseline date is established and shall include:

(a) The actual emissions, as defined in paragraph (b)(21) of this section, representative of sources in existence on the applicable minor source baseline date, except as provided in paragraph (b)(13)(ii) of this section;

(b) The allowable emissions of major stationary sources that commenced construction before the major source baseline date, but were not in operation by the applicable minor source baseline date.

(ii) The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):

(a) Actual emissions, as defined in paragraph (b)(21) of this section, from any major stationary source on which construction commenced after the major source baseline date; and

(b) Actual emissions increases and decreases, as defined in paragraph (b)(21) of this section, at any stationary source occurring after the minor source baseline date.

(14)(i) Major source baseline date means:

(a) In the case of PM₁₀ and sulfur dioxide, January 6, 1975;

(b) In the case of nitrogen dioxide, February 8, 1988; and

(c) In the case of PM_{2.5}, October 20, 2010.

(ii) Minor source baseline date means the earliest date after the trigger date on which a major stationary source or a major modification subject to [40 CFR 52.21](#) or to regulations approved pursuant to 40 CFR 51.166 submits a complete application under the relevant regulations. The trigger date is:

(a) In the case of PM₁₀ and sulfur dioxide, August 7, 1977;

(b) In the case of nitrogen dioxide, February 8, 1988; and

(c) In the case of PM_{2.5}, October 20, 2011.

(iii) The baseline date is established for each pollutant for which increments or other equivalent measures have been established if:

(a) The area in which the proposed source or modification would construct is designated as attainment or unclassifiable under section 107(d)(1)(A)(ii) or (iii) of the Act for the pollutant on the date of its complete application under [40 CFR 52.21](#) or under regulations approved pursuant to 40 CFR 51.166; and

(b) In the case of a major stationary source, the pollutant would be emitted in significant amounts, or, in the case of a major modification, there would be a significant net emissions increase of the pollutant.

(iv) Any minor source baseline date established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM-10 increments, except that the reviewing authority may rescind any such minor source baseline date where it can be shown, to the satisfaction of the reviewing authority, that the emissions

increase from the major stationary source, or the net emissions increase from the major modification, responsible for triggering that date did not result in a significant amount of PM-10 emissions.

(15)(i) Baseline area means any intrastate area (and every part thereof) designated as attainment or unclassifiable under section 107(d)(1)(A)(ii) or (iii) of the Act in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact for the pollutant for which the baseline date is established, as follows: Equal to or greater than $1 \mu\text{g}/\text{m}^3$ (annual average) for SO_2 , NO_2 , or PM_{10} ; or equal or greater than $0.3 \mu\text{g}/\text{m}^3$ (annual average) for $\text{PM}_{2.5}$.

(ii) Area redesignations under section 107(d)(1)(A)(ii) or (iii) of the Act cannot intersect or be smaller than the area of impact of any major stationary source or major modification which:

(a) Establishes a minor source baseline date; or

(b) Is subject to [40 CFR 52.21](#) or under regulations approved pursuant to 40 CFR 51.166, and would be constructed in the same State as the State proposing the redesignation.

(iii) Any baseline area established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM-10 increments, except that such baseline area shall not remain in effect if the permit authority rescinds the corresponding minor source baseline date in accordance with paragraph (b)(14)(iv) of this section.

(16) Allowable emissions means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

(i) The applicable standards as set forth in 40 CFR parts 60 and 61;

(ii) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or

(iii) The emissions rate specified as a federally enforceable permit condition.

(17) Federally enforceable means all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, any permit requirements established pursuant to [40 CFR 52.21](#) or under regulations approved pursuant to 40 CFR part 51, subpart I, including operating permits issued under an EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program.

(18) Secondary emissions means emissions which occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purposes of this section, secondary emissions must be specific, well defined, quantifiable, and impact the same general

areas the stationary source modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

(19) Innovative control technology means any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or nonair quality environmental impacts.

(20) Fugitive emissions means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(21)(i) Actual emissions means the actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with paragraphs (b)(21)(ii) through (iv) of this section, except that this definition shall not apply for calculating whether a significant emissions increase has occurred, or for establishing a PAL under paragraph (w) of this section. Instead, paragraphs (b)(40) and (b)(47) of this section shall apply for those purposes.

(ii) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(iii) The reviewing authority may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

(iv) For any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

(22) Complete means, in reference to an application for a permit, that the application contains all the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the reviewing authority from requesting or accepting any additional information.

(23)(i) Significant means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant and Emissions Rate

Carbon monoxide: 100 tons per year (tpy)

Nitrogen oxides: 40 tpy

Sulfur dioxide: 40 tpy

Particulate matter: 25 tpy of particulate matter emissions. 15 tpy of PM₁₀ emissions

PM_{2.5}: 10 tpy of direct PM_{2.5} emissions; 40 tpy of sulfur dioxide emissions; 40 tpy of nitrogen oxide emissions unless demonstrated not to be a PM_{2.5} precursor under paragraph (b)(49) of this section

Ozone: 40 tpy of volatile organic compounds or nitrogen oxides

Lead: 0.6 tpy

Fluorides: 3 tpy

Sulfuric acid mist: 7 tpy

Hydrogen sulfide (H₂S): 10 tpy

Total reduced sulfur (including H₂S): 10 tpy

Reduced sulfur compounds (including H₂S): 10 tpy

Municipal waste combustor organics (measured as total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans):
3.2 x 10⁻⁶ megagrams per year (3.5 x 10⁻⁶ tons per year)

Municipal waste combustor metals (measured as particulate matter): 14 megagrams per year (15 tons per year)

Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year)

Municipal solid waste landfill emissions (measured as nonmethane organic compounds): 45 megagrams per year (50 tons per year)

(ii) Significant means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that paragraph (b)(23)(i) of this section, does not list, any emissions rate.

(iii) Notwithstanding paragraph (b)(23)(i) of this section, significant means any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within 10 kilometers of a Class I area, and have an impact on such area equal to or greater than 1 µg/m³ (24-hour average).

(24) Federal Land Manager means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

(25) High terrain means any area having an elevation 900 feet or more above the base of the stack of a source.

(26) Low terrain means any area other than high terrain.

(27) Indian Reservation means any federally recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.

(28) Indian Governing Body means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(29) Volatile organic compounds (VOC) is as defined in § 51.100(s) of this part.

(30) Electric utility steam generating unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(31) [Reserved]

(32) Replacement unit means an emissions unit for which all the criteria listed in paragraphs (b)(32)(i) through (iv) of this section are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.

(i) The emissions unit is a reconstructed unit within the meaning of § 60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit.

(ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.

(iii) The replacement does not change the basic design parameter(s) (as discussed in paragraph (y)(2) of this section) of the process unit.

(iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.

(33) Clean coal technology means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

(34) Clean coal technology demonstration project means a project using funds appropriated under the heading “Department of Energy—Clean Coal Technology”, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

(35) Temporary clean coal technology demonstration project means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during and after the project is terminated.

(36)(i) Repowering means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.

(ii) Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

(iii) The reviewing authority shall give expedited consideration to permit applications for any source that satisfies the requirements of this subsection and is granted an extension under section 409 of the Clean Air Act.

(37) Reactivation of a very clean coal-fired electric utility steam generating unit means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(i) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

(ii) Was equipped prior to shutdown with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(iii) Is equipped with low-NO_x burners prior to the time of commencement of operations following reactivation; and

(iv) Is otherwise in compliance with the requirements of the Clean Air Act.

(38) Pollution prevention means any activity that through process changes, product reformulation or redesign, or substitution of less polluting raw materials, eliminates or reduces the release of air pollutants (including fugitive emissions)

and other pollutants to the environment prior to recycling, treatment, or disposal; it does not mean recycling (other than certain “in-process recycling” practices), energy recovery, treatment, or disposal.

(39) Significant emissions increase means, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in paragraph (b)(23) of this section) for that pollutant.

(40)(i) Projected actual emissions means the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant, and full utilization of the unit would result in a significant emissions increase, or a significant net emissions increase at the major stationary source.

(ii) In determining the projected actual emissions under paragraph (b)(40)(i) of this section (before beginning actual construction), the owner or operator of the major stationary source:

(a) Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under the approved plan; and

(b) Shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions; and

(c) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under paragraph (b)(47) of this section and that are also unrelated to the particular project, including any increased utilization due to product demand growth; or,

(d) In lieu of using the method set out in paragraphs (b)(40)(ii)(a) through (c) of this section, may elect to use the emissions unit's potential to emit, in tons per year, as defined under paragraph (b)(4) of this section.

(41) [Reserved]

(42) Prevention of Significant Deterioration Program (PSD) program means a major source preconstruction permit program that has been approved by the Administrator and incorporated into the plan to implement the requirements of this section, or the program in § 52.21 of this chapter. Any permit issued under such a program is a major NSR permit.

(43) Continuous emissions monitoring system (CEMS) means all of the equipment that may be required to meet the data acquisition and availability requirements of this section, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.

(44) Predictive emissions monitoring system (PEMS) means all of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O² or CO² concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.

(45) Continuous parameter monitoring system (CPMS) means all of the equipment necessary to meet the data acquisition and availability requirements of this section, to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O² or CO² concentrations), and to record average operational parameter value(s) on a continuous basis.

(46) Continuous emissions rate monitoring system (CERMS) means the total equipment required for the determination and recording of the pollutant mass emissions rate (in terms of mass per unit of time).

(47) Baseline actual emissions means the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance with paragraphs (b)(47)(i) through (iv) of this section.

(i) For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the project. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

(a) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

(b) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.

(c) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used For each regulated NSR pollutant.

(d) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraph (b)(47)(i)(b) of this section.

(ii) For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the reviewing

authority for a permit required either under this section or under a plan approved by the Administrator, whichever is earlier, except that the 10-year period shall not include any period earlier than November 15, 1990.

(a) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

(b) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.

(c) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period. However, if an emission limitation is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under part 63 of this chapter, the baseline actual emissions need only be adjusted if the State has taken credit for such emissions reductions in an attainment demonstration or maintenance plan consistent with the requirements of § 51.165(a)(3)(ii)(G).

(d) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used For each regulated NSR pollutant.

(e) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraphs (b)(47)(ii)(b) and (c) of this section.

(iii) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit.

(iv) For a PAL for a stationary source, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in paragraph (b)(47)(i) of this section, for other existing emissions units in accordance with the procedures contained in paragraph (b)(47)(ii) of this section, and for a new emissions unit in accordance with the procedures contained in paragraph (b)(47)(iii) of this section.

(48) Subject to regulation means, for any air pollutant, that the pollutant is subject to either a provision in the Clean Air Act, or a nationally-applicable regulation codified by the Administrator in subchapter C of this chapter, that requires actual control of the quantity of emissions of that pollutant, and that such a control requirement has taken effect and is operative to control, limit or restrict the quantity of emissions of that pollutant released from the regulated activity. Except that:

(i) Greenhouse gases (GHGs), the air pollutant defined in § 86.1818-12(a) of this chapter as the aggregate group of six greenhouse gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, shall not be subject to regulation except as provided in paragraphs (b)(48)(iv) through (v) of this section.

(ii) For purposes of paragraphs (b)(48)(iii) through (v) of this section, the term tpy CO₂ equivalent emissions (CO₂e) shall represent an amount of GHGs emitted, and shall be computed as follows:

(a) Multiplying the mass amount of emissions (tpy), for each of the six greenhouse gases in the pollutant GHGs, by the gas's associated global warming potential published at Table A-1 to subpart A of part 98 of this chapter—Global Warming Potentials. For purposes of this paragraph (b)(48)(ii)(a), prior to July 21, 2014, the mass of the greenhouse gas carbon dioxide shall not include carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms (including products, by-products, residues and waste from agriculture, forestry and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic material).

(b) Sum the resultant value from paragraph (b)(48)(ii)(a) of this section for each gas to compute a tpy CO₂e.

(iii) The term emissions increase as used in paragraphs (b)(48)(iv) through (v) of this section shall mean that both a significant emissions increase (as calculated using the procedures in (a)(7)(iv) of this section) and a significant net emissions increase (as defined in paragraphs (b)(3) and (b)(23) of this section) occur. For the pollutant GHGs, an emissions increase shall be based on tpy CO₂e, and shall be calculated assuming the pollutant GHGs is a regulated NSR pollutant, and “significant” is defined as 75,000 tpy CO₂e instead of applying the value in paragraph (b)(23)(ii) of this section.

(iv) Beginning January 2, 2011, the pollutant GHGs is subject to regulation if:

(a) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs, and also will emit or will have the potential to emit 75,000 tpy CO₂e or more; or

(b) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO₂e or more; and,

(49) Regulated NSR pollutant, for purposes of this section, means the following:

(i) Any pollutant for which a national ambient air quality standard has been promulgated. This includes, but is not limited to, the following:

(a) PM_{2.5} emissions and PM₁₀ emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. On or after January 1, 2011, such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM_{2.5}

and PM₁₀ in PSD permits. Compliance with emissions limitations for PM_{2.5} and PM₁₀ issued prior to this date shall not be based on condensable particulate matter unless required by the terms and conditions of the permit or the applicable implementation plan. Applicability determinations made prior to this date without accounting for condensable particulate matter shall not be considered in violation of this section unless the applicable implementation plan required condensable particulate matter to be included;

(b) Any pollutant identified under this paragraph (b)(49)(i)(b) as a constituent or precursor to a pollutant for which a national ambient air quality standard has been promulgated. Precursors identified by the Administrator for purposes of NSR are the following:

(1) Volatile organic compounds and nitrogen oxides are precursors to ozone in all attainment and unclassifiable areas.

(2) Sulfur dioxide is a precursor to PM_{2.5} in all attainment and unclassifiable areas.

(3) Nitrogen oxides are presumed to be precursors to PM_{2.5} in all attainment and unclassifiable areas, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of nitrogen oxides from sources in a specific area are not a significant contributor to that area's ambient PM_{2.5} concentrations.

(4) Volatile organic compounds are presumed not to be precursors to PM_{2.5} in any attainment or unclassifiable area, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of volatile organic compounds from sources in a specific area are a significant contributor to that area's ambient PM_{2.5} concentrations.

(ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act;

(iii) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act;

(iv) Any pollutant that otherwise is subject to regulation under the Act as defined in paragraph (b)(48) of this section.

(v) Notwithstanding paragraphs (b)(49)(i) through (iv) of this section, the term regulated NSR pollutant shall not include any or all hazardous air pollutants either listed in section 112 of the Act, or added to the list pursuant to section 112(b)(2) of the Act, and which have not been delisted pursuant to section 112(b)(3) of the Act, unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.

(50) Reviewing authority means the State air pollution control agency, local agency, other State agency, Indian tribe, or other agency authorized by the Administrator to carry out a permit program under § 51.165 and this section, or the Administrator in the case of EPA-implemented permit programs under § 52.21 of this chapter.

(51) Project means a physical change in, or change in method of operation of, an existing major stationary source.

(52) Lowest achievable emission rate (LAER) is as defined in § 51.165(a)(1)(xiii).

(53)(i) In general, process unit means any collection of structures and/or equipment that processes, assembles, applies, blends, or otherwise uses material inputs to produce or store an intermediate or a completed product. A single stationary source may contain more than one process unit, and a process unit may contain more than one emissions unit.

(ii) Pollution control equipment is not part of the process unit, unless it serves a dual function as both process and control equipment. Administrative and warehousing facilities are not part of the process unit.

(iii) For replacement cost purposes, components shared between two or more process units are proportionately allocated based on capacity.

(iv) The following list identifies the process units at specific categories of stationary sources.

(a) For a steam electric generating facility, the process unit consists of those portions of the plant that contribute directly to the production of electricity. For example, at a pulverized coal-fired facility, the process unit would generally be the combination of those systems from the coal receiving equipment through the emission stack (excluding post-combustion pollution controls), including the coal handling equipment, pulverizers or coal crushers, feedwater heaters, ash handling, boiler, burners, turbine-generator set, condenser, cooling tower, water treatment system, air preheaters, and operating control systems. Each separate generating unit is a separate process unit.

(b) For a petroleum refinery, there are several categories of process units: those that separate and/or distill petroleum feedstocks; those that change molecular structures; petroleum treating processes; auxiliary facilities, such as steam generators and hydrogen production units; and those that load, unload, blend or store intermediate or completed products.

(c) For an incinerator, the process unit would consist of components from the feed pit or refuse pit to the stack, including conveyors, combustion devices, heat exchangers and steam generators, quench tanks, and fans.

Note to paragraph (b)(53): By a court order on December 24, 2003, this paragraph (b)(53) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(54) Functionally equivalent component means a component that serves the same purpose as the replaced component.

Note to paragraph (b)(54): By a court order on December 24, 2003, this paragraph (b)(54) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(55) Fixed capital cost means the capital needed to provide all the depreciable components. "Depreciable components" refers to all components of fixed capital cost and is calculated by subtracting land and working capital from the total capital investment, as defined in paragraph (b)(56) of this section.

Note to paragraph (b)(55): By a court order on December 24, 2003, this paragraph (b)(55) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(56) Total capital investment means the sum of the following: all costs required to purchase needed process equipment (purchased equipment costs); the costs of labor and materials for installing that equipment (direct installation costs); the costs of site preparation and buildings; other costs such as engineering, construction and field expenses, fees to contractors, startup and performance tests, and contingencies (indirect installation costs); land for the process equipment; and working capital for the process equipment.

Note to paragraph (b)(56): By a court order on December 24, 2003, this paragraph (b)(56) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(c) Ambient air increments and other measures.

(1) The plan shall contain emission limitations and such other measures as may be necessary to assure that in areas designated as Class I, II, or III, increases in pollutant concentrations over the baseline concentration shall be limited to the following:

Pollutant	Maximum allowable increase (micrograms per cubic meter)
Class I Area	
PM _{2.5} :	
Annual arithmetic mean.....	1
24-hr maximum.....	2
PM ₁₀ :	
Annual arithmetic mean.....	4
24-hr maximum.....	8
Sulfur dioxide:	
Annual arithmetic mean.....	2
24-hr maximum.....	5
3-hr maximum.....	25
Nitrogen dioxide:	

Annual arithmetic mean..... 2.5

Class II Area

PM_{2.5}:

Annual arithmetic mean..... 4

24-hr maximum..... 9

PM₁₀:

Annual arithmetic mean..... 17

24-hr maximum..... 30

Sulfur dioxide:

Annual arithmetic mean..... 20

24-hr maximum..... 91

3-hr maximum..... 512

Nitrogen dioxide:

Annual arithmetic mean..... 25

Class III Area

PM_{2.5}:

Annual arithmetic mean..... 8

24-hr maximum..... 18

PM₁₀:

Annual arithmetic mean..... 34

24-hr maximum..... 60

Sulfur dioxide:

Annual arithmetic mean..... 40

24-hr maximum..... 182

3-hr maximum..... 700

Nitrogen dioxide:

Annual arithmetic mean..... 50

For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

(2) Where the State can demonstrate that it has alternative measures in its plan other than maximum allowable increases as defined under paragraph (c)(1) of this section, that satisfy the requirements in sections 166(c) and 166(d) of the Clean Air Act for a regulated NSR pollutant for which the Administrator has established maximum allowable increases pursuant to section 166(a) of the Act, the requirements for maximum allowable increases for that pollutant under paragraph (c)(1) of this section shall not apply upon approval of the plan by the Administrator. The following regulated NSR pollutants are eligible for such treatment:

(i) Nitrogen dioxide.

(ii) PM_{2.5}.

(d) Ambient air ceilings. The plan shall provide that no concentration of a pollutant shall exceed:

(1) The concentration permitted under the national secondary ambient air quality standard, or

(2) The concentration permitted under the national primary ambient air quality standard, whichever concentration is lowest for the pollutant for a period of exposure.

(e) Restrictions on area classifications. The plan shall provide that—

(1) All of the following areas which were in existence on August 7, 1977, shall be Class I areas and may not be redesignated:

(i) International parks,

(ii) National wilderness areas which exceed 5,000 acres in size,

(iii) National memorial parks which exceed 5,000 acres in size, and

(iv) National parks which exceed 6,000 acres in size.

(2) Areas which were redesignated as Class I under regulations promulgated before August 7, 1977, shall remain Class I, but may be redesignated as provided in this section.

(3) Any other area, unless otherwise specified in the legislation creating such an area, is initially designated Class II, but may be redesignated as provided in this section.

(4) The following areas may be redesignated only as Class I or II:

(i) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and

(ii) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.

(f) Exclusions from increment consumption.

(1) The plan may provide that the following concentrations shall be excluded in determining compliance with a maximum allowable increase:

(i) Concentrations attributable to the increase in emissions from stationary sources which have converted from the use of petroleum products, natural gas, or both by reason of an order in effect under section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) over the emissions from such sources before the effective date of such an order;

(ii) Concentrations attributable to the increase in emissions from sources which have converted from using natural gas by reason of natural gas curtailment plan in effect pursuant to the Federal Power Act over the emissions from such sources before the effective date of such plan;

(iii) Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary emission-related activities of new or modified sources;

(iv) The increase in concentrations attributable to new sources outside the United States over the concentrations attributable to existing sources which are included in the baseline concentration; and

(v) Concentrations attributable to the temporary increase in emissions of sulfur dioxide, particulate matter, or nitrogen oxides from stationary sources which are affected by plan revisions approved by the Administrator as meeting the criteria specified in paragraph (f)(4) of this section.

(2) If the plan provides that the concentrations to which paragraph (f)(1)(i) or (ii) of this section, refers shall be excluded, it shall also provide that no exclusion of such concentrations shall apply more than five years after the effective date of the order to which paragraph (f)(1)(i) of this section, refers or the plan to which paragraph (f)(1)(ii) of this section, refers, whichever is applicable. If both such order and plan are applicable, no such exclusion shall apply more than five years after the later of such effective dates.

(3) [Reserved]

(4) For purposes of excluding concentrations pursuant to paragraph (f)(1)(v) of this section, the Administrator may approve a plan revision that:

(i) Specifies the time over which the temporary emissions increase of sulfur dioxide, particulate matter, or nitrogen oxides would occur. Such time is not to exceed 2 years in duration unless a longer time is approved by the Administrator.

(ii) Specifies that the time period for excluding certain contributions in accordance with paragraph (f)(4)(i) of this section, is not renewable;

(iii) Allows no emissions increase from a stationary source which would:

(a) Impact a Class I area or an area where an applicable increment is known to be violated; or

(b) Cause or contribute to the violation of a national ambient air quality standard;

(iv) Requires limitations to be in effect the end of the time period specified in accordance with paragraph (f)(4)(i) of this section, which would ensure that the emissions levels from stationary sources affected by the plan revision would not exceed those levels occurring from such sources before the plan revision was approved.

(g) Redesignation.

(1) The plan shall provide that all areas of the State (except as otherwise provided under paragraph (e) of this section) shall be designated either Class I, Class II, or Class III. Any designation other than Class II shall be subject to the redesignation procedures of this paragraph. Redesignation (except as otherwise precluded by paragraph (e) of this section) may be proposed by the respective States or Indian Governing Bodies, as provided below, subject to approval by the Administrator as a revision to the applicable State implementation plan.

(2) The plan may provide that the State may submit to the Administrator a proposal to redesignate areas of the State Class I or Class II: *Provided, That:*

(i) At least one public hearing has been held in accordance with procedures established in § 51.102.

(ii) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation were notified at least 30 days prior to the public hearing;

(iii) A discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic, social, and energy effects of the proposed redesignation, was prepared and made available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contained appropriate notification of the availability of such discussion;

(iv) Prior to the issuance of notice respecting the redesignation of an area that includes any Federal lands, the State has provided written notice to the appropriate Federal Land Manager and afforded adequate opportunity (not in excess of

60 days) to confer with the State respecting the redesignation and to submit written comments and recommendations. In redesignating any area with respect to which any Federal Land Manager had submitted written comments and recommendations, the State shall have published a list of any inconsistency between such redesignation and such comments and recommendations (together with the reasons for making such redesignation against the recommendation of the Federal Land Manager); and

(v) The State has proposed the redesignation after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.

(3) The plan may provide that any area other than an area to which paragraph (e) of this section refers may be redesignated as Class III if—

(i) The redesignation would meet the requirements of provisions established in accordance with paragraph (g)(2) of this section;

(ii) The redesignation, except any established by an Indian Governing Body, has been specifically approved by the Governor of the State, after consultation with the appropriate committees of the legislature, if it is in session, or with the leadership of the legislature, if it is not in session (unless State law provides that such redesignation must be specifically approved by State legislation) and if general purpose units of local government representing a majority of the residents of the area to be redesignated enact legislation (including resolutions where appropriate) concurring in the redesignation;

(iii) The redesignation would not cause, or contribute to, a concentration of any air pollutant which would exceed any maximum allowable increase permitted under the classification of any other area or any national ambient air quality standard; and

(iv) Any permit application for any major stationary source or major modification subject to provisions established in accordance with paragraph (l) of this section which could receive a permit only if the area in question were redesignated as Class III, and any material submitted as part of that application, were available, insofar as was practicable, for public inspection prior to any public hearing on redesignation of any area as Class III.

(4) The plan shall provide that lands within the exterior boundaries of Indian Reservations may be redesignated only by the appropriate Indian Governing Body. The appropriate Indian Governing Body may submit to the Administrator a proposal to redesignate areas Class I, Class II, or Class III: *Provided*, That:

(i) The Indian Governing Body has followed procedures equivalent to those required of a State under paragraphs (g)(2), (3)(iii), and (3)(iv) of this section; and

(ii) Such redesignation is proposed after consultation with the State(s) in which the Indian Reservation is located and which border the Indian Reservation.

(5) The Administrator shall disapprove, within 90 days of submission, a proposed redesignation of any area only if he finds, after notice and opportunity for public hearing, that such redesignation does not meet the procedural requirements

of this section or is inconsistent with paragraph (e) of this section. If any such disapproval occurs, the classification of the area shall be that which was in effect prior to the redesignation which was disapproved.

(6) If the Administrator disapproves any proposed area designation, the State or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the Administrator.

(h) Stack heights. The plan shall provide, as a minimum, that the degree of emission limitation required for control of any air pollutant under the plan shall not be affected in any manner by—

(1) So much of a stack height, not in existence before December 31, 1970, as exceeds good engineering practice, or

(2) Any other dispersion technique not implemented before then.

(i) Exemptions.

(1) The plan may provide that requirements equivalent to those contained in paragraphs (j) through (r) of this section do not apply to a particular major stationary source or major modification if:

(i) The major stationary source would be a nonprofit health or nonprofit educational institution or a major modification that would occur at such an institution; or

(ii) The source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and such source does not belong to any of the following categories:

(a) Coal cleaning plants (with thermal dryers);

(b) Kraft pulp mills;

(c) Portland cement plants;

(d) Primary zinc smelters;

(e) Iron and steel mills;

(f) Primary aluminum ore reduction plants;

(g) Primary copper smelters;

- (h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
- (i) Hydrofluoric, sulfuric, or nitric acid plants;
- (j) Petroleum refineries;
- (k) Lime plants;
- (l) Phosphate rock processing plants;
- (m) Coke oven batteries;
- (n) Sulfur recovery plants;
- (o) Carbon black plants (furnace process);
- (p) Primary lead smelters;
- (q) Fuel conversion plants;
- (r) Sintering plants;
- (s) Secondary metal production plants;
- (t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (w) Taconite ore processing plants;
- (x) Glass fiber processing plants;

- (y) Charcoal production plants;
 - (z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
 - (aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act; or
 - (iii) The source or modification is a portable stationary source which has previously received a permit under requirements equivalent to those contained in paragraphs (j) through (r) of this section, if:
 - (a) The source proposes to relocate and emissions of the source at the new location would be temporary; and
 - (b) The emissions from the source would not exceed its allowable emissions; and
 - (c) The emissions from the source would impact no Class I area and no area where an applicable increment is known to be violated; and
 - (d) Reasonable notice is given to the reviewing authority prior to the relocation identifying the proposed new location and the probable duration of operation at the new location. Such notice shall be given to the reviewing authority not less than 10 days in advance of the proposed relocation unless a different time duration is previously approved by the reviewing authority.
- (2) The plan may provide that requirements equivalent to those contained in paragraphs (j) through (r) of this section do not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment under section 107 of the Act. Nonattainment designations for revoked NAAQS, as contained in part 81 of this chapter, shall not be viewed as current designations under section 107 of the Act for purposes of determining the applicability of requirements equivalent to those contained in paragraphs (j) through (r) of this section to a major stationary source or major modification after the revocation of that NAAQS is effective.
- (3) The plan may provide that requirements equivalent to those contained in paragraphs (k), (m), and (o) of this section do not apply to a proposed major stationary source or major modification with respect to a particular pollutant, if the allowable emissions of that pollutant from a new source, or the net emissions increase of that pollutant from a modification, would be temporary and impact no Class I area and no area where an applicable increment is known to be violated.
- (4) The plan may provide that requirements equivalent to those contained in paragraphs (k), (m), and (o) of this section as they relate to any maximum allowable increase for a Class II area do not apply to a modification of a major stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each a regulated NSR pollutant from the modification after the application of best available control technology would be less than 50 tons per year.

(5) The plan may provide that the reviewing authority may exempt a proposed major stationary source or major modification from the requirements of paragraph (m) of this section, with respect to monitoring for a particular pollutant, if:

(i) The emissions increase of the pollutant from a new stationary source or the net emissions increase of the pollutant from a modification would cause, in any area, air quality impacts less than the following amounts:

(a) Carbon monoxide— $575 \mu\text{g}/\text{m}^3$, 8-hour average;

(b) Nitrogen dioxide— $14 \mu\text{g}/\text{m}^3$, annual average;

(c) $\text{PM}_{2.5}$ — $0 \mu\text{g}/\text{m}^3$;

Note to paragraph (i)(5)(i)(c): In accordance with *Sierra Club v. EPA*, 706 F.3d 428 (D.C. Cir. 2013), no exemption is available with regard to $\text{PM}_{2.5}$.

(d) PM_{10} — $10 \mu\text{g}/\text{m}^3$, 24-hour average;

(e) Sulfur dioxide— $13 \mu\text{g}/\text{m}^3$, 24-hour average;

(f) Ozone;¹

(g) Lead— $0.1 \mu\text{g}/\text{m}^3$, 3-month average.

(h) Fluorides— $0.25 \mu\text{g}/\text{m}^3$, 24-hour average;

(i) Total reduced sulfur— $10 \mu\text{g}/\text{m}^3$, 1-hour average

(j) Hydrogen sulfide— $0.2 \mu\text{g}/\text{m}^3$, 1-hour average;

(k) Reduced sulfur compounds— $10 \mu\text{g}/\text{m}^3$, 1-hour average; or

(ii) The concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations listed in paragraph (i)(5)(i) of this section; or

(iii) The pollutant is not listed in paragraph (i)(5)(i) of this section.

(6) If EPA approves a plan revision under 40 CFR 51.166 as in effect before August 7, 1980, any subsequent revision which meets the requirements of this section may contain transition provisions which parallel the transition provisions of 40 CFR 52.21(i)(9), (i)(10) and (m)(1)(v) as in effect on that date, which provisions relate to requirements for best available control technology and air quality analyses. Any such subsequent revision may not contain any transition provision which in the context of the revision would operate any less stringently than would its counterpart in 40 CFR 52.21.

(7) If EPA approves a plan revision under § 51.166 as in effect [before July 31, 1987], any subsequent revision which meets the requirements of this section may contain transition provisions which parallel the transition provisions of § 52.21 (i)(11), and (m)(1) (vii) and (viii) of this chapter as in effect on that date, these provisions being related to monitoring requirements for particulate matter. Any such subsequent revision may not contain any transition provision which in the context of the revision would operate any less stringently than would its counterpart in § 52.21 of this chapter.

(8) The plan may provide that the permitting requirements equivalent to those contained in paragraph (k)(1)(ii) of this section do not apply to a stationary source or modification with respect to any maximum allowable increase for nitrogen oxides if the owner or operator of the source or modification submitted an application for a permit under the applicable permit program approved or promulgated under the Act before the provisions embodying the maximum allowable increase took effect as part of the plan and the permitting authority subsequently determined that the application as submitted before that date was complete.

(9) The plan may provide that the permitting requirements equivalent to those contained in paragraph (k)(1)(ii) of this section shall not apply to a stationary source or modification with respect to any maximum allowable increase for PM-10 if (i) the owner or operator of the source or modification submitted an application for a permit under the applicable permit program approved under the Act before the provisions embodying the maximum allowable increases for PM-10 took effect as part of the plan, and (ii) the permitting authority subsequently determined that the application as submitted before that date was complete. Instead, the applicable requirements equivalent to paragraph (k)(1)(ii) shall apply with respect to the maximum allowable increases for TSP as in effect on the date the application was submitted.

(10) The plan may provide that the requirements of paragraph (k)(1) of this section shall not apply to a stationary source or modification with respect to the national ambient air quality standards for PM_{2.5} in effect on March 18, 2013 if:

(i) The reviewing authority has determined a permit application subject to this section to be complete on or before December 14, 2012. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for PM_{2.5} in effect at the time the reviewing authority determined the permit application to be complete; or

(ii) The reviewing authority has first published before March 18, 2013 a public notice of a preliminary determination for the permit application subject to this section. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for PM_{2.5} in effect at the time of first publication of a public notice on the preliminary determination.

(11) The plan may provide that the requirements of paragraph (k)(1) of this section shall not apply to a permit application for a stationary source or modification with respect to the revised national ambient air quality standards for ozone published on October 26, 2015 if:

(i) The reviewing authority has determined the permit application subject to this section to be complete on or before October 1, 2015. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for ozone in effect at the time the reviewing authority determined the permit application to be complete; or

(ii) The reviewing authority has first published before December 28, 2015 a public notice of a preliminary determination or draft permit for the permit application subject to this section. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for ozone in effect at the time of first publication of a public notice of the preliminary determination or draft permit.

(j) Control technology review. The plan shall provide that:

(1) A major stationary source or major modification shall meet each applicable emissions limitation under the State Implementation Plan and each applicable emission standards and standard of performance under 40 CFR parts 60 and 61.

(2) A new major stationary source shall apply best available control technology for each a regulated NSR pollutant that it would have the potential to emit in significant amounts.

(3) A major modification shall apply best available control technology for each a regulated NSR pollutant for which it would be a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.

(4) For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the least reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source.

(k) Source impact analysis—

(1) Required demonstration. The plan shall provide that the owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reduction (including secondary emissions), would not cause or contribute to air pollution in violation of:

(i) Any national ambient air quality standard in any air quality control region; or

(ii) Any applicable maximum allowable increase over the baseline concentration in any area.

(2) [Reserved by 78 FR 73702]

(l) Air quality models. The plan shall provide for procedures which specify that—

(1) All applications of air quality modeling involved in this subpart shall be based on the applicable models, data bases, and other requirements specified in appendix W of this part (Guideline on Air Quality Models).

(2) Where an air quality model specified in appendix W of this part (Guideline on Air Quality Models) is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis for a specific State program. Written approval of the Administrator must be obtained for any modification or substitution. In addition, use of a modified or substituted model must be subject to notice and opportunity for public comment under procedures set forth in § 51.102.

(m) Air quality analysis.

(1) Preapplication analysis.

(i) The plan shall provide that any application for a permit under regulations approved pursuant to this section shall contain an analysis of ambient air quality in the area that the major stationary source or major modification would affect for each of the following pollutants:

(a) For the source, each pollutant that it would have the potential to emit in a significant amount;

(b) For the modification, each pollutant for which it would result in a significant net emissions increase.

(ii) The plan shall provide that, with respect to any such pollutant for which no National Ambient Air Quality Standard exists, the analysis shall contain such air quality monitoring data as the reviewing authority determines is necessary to assess ambient air quality for that pollutant in any area that the emissions of that pollutant would affect.

(iii) The plan shall provide that with respect to any such pollutant (other than nonmethane hydrocarbons) for which such a standard does exist, the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any maximum allowable increase.

(iv) The plan shall provide that, in general, the continuous air monitoring data that is required shall have been gathered over a period of one year and shall represent the year preceding receipt of the application, except that, if the reviewing authority determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that is required shall have been gathered over at least that shorter period.

(v) The plan may provide that the owner or operator of a proposed major stationary source or major modification of volatile organic compounds who satisfies all conditions of 40 CFR part 51 appendix S, section IV may provide postapproval monitoring data for ozone in lieu of providing preconstruction data as required under paragraph (m)(1) of this section.

(2) Post-construction monitoring. The plan shall provide that the owner or operator of a major stationary source or major modification shall, after construction of the stationary source or modification, conduct such ambient monitoring as the reviewing authority determines is necessary to determine the effect emissions from the stationary source or modification may have, or are having, on air quality in any area.

(3) Operation of monitoring stations. The plan shall provide that the owner or operator of a major stationary source or major modification shall meet the requirements of appendix B to part 58 of this chapter during the operation of monitoring stations for purposes of satisfying paragraph (m) of this section.

(n) Source information.

(1) The plan shall provide that the owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or make any determination required under procedures established in accordance with this section.

(2) The plan may provide that such information shall include:

(i) A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;

(ii) A detailed schedule for construction of the source or modification;

(iii) A detailed description as to what system of continuous emission reduction is planned by the source or modification, emission estimates, and any other information as necessary to determine that best available control technology as applicable would be applied;

(3) The plan shall provide that upon request of the State, the owner or operator shall also provide information on:

(i) The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and

(ii) The air quality impacts and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the source or modification would affect.

(o) Additional impact analyses. The plan shall provide that—

(1) The owner or operator shall provide an analysis of the impairment to visibility, soils, and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial, and other growth associated with

the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.

(2) The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the source or modification.

(p) Sources impacting Federal Class I areas—additional requirements—

(1) Notice to EPA. The plan shall provide that the reviewing authority shall transmit to the Administrator a copy of each permit application relating to a major stationary source or major modification and provide notice to the Administrator of every action related to the consideration of such permit.

(2) Federal Land Manager. The Federal Land Manager and the Federal official charged with direct responsibility for management of Class I lands have an affirmative responsibility to protect the air quality related values (including visibility) of any such lands and to consider, in consultation with the Administrator, whether a proposed source or modification would have an adverse impact on such values.

(3) Denial—impact on air quality related values. The plan shall provide a mechanism whereby a Federal Land Manager of any such lands may present to the State, after the reviewing authority's preliminary determination required under procedures developed in accordance with paragraph (r) of this section, a demonstration that the emissions from the proposed source or modification would have an adverse impact on the air quality-related values (including visibility) of any Federal mandatory Class I lands, notwithstanding that the change in air quality resulting from emissions from such source or modification would not cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the State concurs with such demonstration, the reviewing authority shall not issue the permit.

(4) Class I Variances. The plan may provide that the owner or operator of a proposed source or modification may demonstrate to the Federal Land Manager that the emissions from such source would have no adverse impact on the air quality related values of such lands (including visibility), notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Federal land manager concurs with such demonstration and so certifies to the State, the reviewing authority may: *Provided*, That applicable requirements are otherwise met, issue the permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide, PM_{2.5}, PM₁₀, and nitrogen oxides would not exceed the following maximum allowable increases over minor source baseline concentration for such pollutants:

Pollutant	Maximum allowable increase (micrograms per cubic meter)
PM _{2.5} :	
Annual arithmetic mean.....	4

24-hr maximum.....	9
PM ₁₀ :	
Annual arithmetic mean.....	17
24-hr maximum.....	30
Sulfur dioxide:	
Annual arithmetic mean.....	20
24-hr maximum.....	91
3-hr maximum.....	325
Nitrogen dioxide:	
Annual arithmetic mean.....	25

(5) Sulfur dioxide variance by Governor with Federal Land Manager's concurrence. The plan may provide that—

(i) The owner or operator of a proposed source or modification which cannot be approved under procedures developed pursuant to paragraph (q)(4) of this section may demonstrate to the Governor that the source or modification cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for periods of twenty-four hours or less applicable to any Class I area and, in the case of Federal mandatory Class I areas, that a variance under this clause would not adversely affect the air quality related values of the area (including visibility);

(ii) The Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may grant, after notice and an opportunity for a public hearing, a variance from such maximum allowable increase; and

(iii) If such variance is granted, the reviewing authority may issue a permit to such source or modification in accordance with provisions developed pursuant to paragraph (q)(7) of this section: *Provided*, That the applicable requirements of the plan are otherwise met.

(6) Variance by the Governor with the President's concurrence. The plan may provide that—

(i) The recommendations of the Governor and the Federal Land Manager shall be transferred to the President in any case where the Governor recommends a variance in which the Federal Land Manager does not concur;

(ii) The President may approve the Governor's recommendation if he finds that such variance is in the national interest; and

(iii) If such a variance is approved, the reviewing authority may issue a permit in accordance with provisions developed pursuant to the requirements of paragraph (q)(7) of this section: *Provided*, That the applicable requirements of the plan are otherwise met.

(7) Emission limitations for Presidential or gubernatorial variance. The plan shall provide that in the case of a permit issued under procedures developed pursuant to paragraph (q)(5) or (6) of this section, the source or modification shall comply with emission limitations as may be necessary to assure that emissions of sulfur dioxide from the source or modification would not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which would exceed the following maximum allowable increases over the baseline concentration and to assure that such emissions would not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of 24 hours or less for more than 18 days, not necessarily consecutive, during any annual period:

MAXIMUM ALLOWABLE INCREASE

[Micrograms per cubic meter]

Period of exposure	Terrain areas	
	Low	High
24-hr maximum.....	36	62
3-hr maximum.....	130	221

(q) Public participation. The plan shall provide that—

(1) The reviewing authority shall notify all applicants within a specified time period as to the completeness of the application or any deficiency in the application or information submitted. In the event of such a deficiency, the date of receipt of the application shall be the date on which the reviewing authority received all required information.

(2) Within one year after receipt of a complete application, the reviewing authority shall:

(i) Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.

(ii) Make available in at least one location in each region in which the proposed source would be constructed a copy of all materials the applicant submitted, a copy of the preliminary determination, and a copy or summary of other materials, if any, considered in making the preliminary determination.

(iii) Notify the public, by advertisement in a newspaper of general circulation in each region in which the proposed source would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and of the opportunity for comment at a public hearing as well as written public comment.

(iv) Send a copy of the notice of public comment to the applicant, the Administrator and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: Any other State or local air pollution control agencies, the chief executives of the city and county where the source would be located; any comprehensive regional

land use planning agency, and any State, Federal Land Manager, or Indian Governing body whose lands may be affected by emissions from the source or modification.

(v) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source, alternatives to it, the control technology required, and other appropriate considerations.

(vi) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. The reviewing authority shall make all comments available for public inspection in the same locations where the reviewing authority made available preconstruction information relating to the proposed source or modification.

(vii) Make a final determination whether construction should be approved, approved with conditions, or disapproved.

(viii) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the reviewing authority made available preconstruction information and public comments relating to the source.

(r) Source obligation.

(1) The plan shall include enforceable procedures to provide that approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the plan and any other requirements under local, State or Federal law.

(2) The plan shall provide that at such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of paragraphs (j) through (s) of this section shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(3) to (5) [Reserved]

(6) Each plan shall provide that, except as otherwise provided in paragraph (r)(6)(vi) of this section, the following specific provisions apply with respect to any regulated NSR pollutant emitted from projects at existing emissions units at a major stationary source (other than projects at a source with a PAL) in circumstances where there is a reasonable possibility, within the meaning of paragraph (r)(6)(vi) of this section, that a project that is not a part of a major modification may result in a significant emissions increase of such pollutant, and the owner or operator elects to use the method specified in paragraphs (b)(40)(ii)(a) through (c) of this section for calculating projected actual emissions. Deviations from these provisions will be approved only if the State specifically demonstrates that the submitted provisions are more stringent than or at least as stringent in all respects as the corresponding provisions in paragraphs (r)(6)(i) through (vi) of this section.

(i) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

(a) A description of the project;

(b) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and

(c) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (b)(40)(ii)(c) of this section and an explanation for why such amount was excluded, and any netting calculations, if applicable.

(ii) If the emissions unit is an existing electric utility steam generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in paragraph (r)(6)(i) of this section to the reviewing authority. Nothing in this paragraph (r)(6)(ii) shall be construed to require the owner or operator of such a unit to obtain any determination from the reviewing authority before beginning actual construction.

(iii) The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in paragraph (r)(6)(i)(b) of this section; and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.

(iv) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the reviewing authority within 60 days after the end of each year during which records must be generated under paragraph (r)(6)(iii) of this section setting out the unit's annual emissions during the calendar year that preceded submission of the report.

(v) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the reviewing authority if the annual emissions, in tons per year, from the project identified in paragraph (r)(6)(i) of this section, exceed the baseline actual emissions (as documented and maintained pursuant to paragraph (r)(6)(i)(c) of this section) by a significant amount (as defined in paragraph (b)(23) of this section) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to paragraph (r)(6)(i)(c) of this section. Such report shall be submitted to the reviewing authority within 60 days after the end of such year. The report shall contain the following:

(a) The name, address and telephone number of the major stationary source;

(b) The annual emissions as calculated pursuant to paragraph (r)(6)(iii) of this section; and

(c) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

(vi) A “reasonable possibility” under paragraph (r)(6) of this section occurs when the owner or operator calculates the project to result in either:

(a) A projected actual emissions increase of at least 50 percent of the amount that is a “significant emissions increase,” as defined under paragraph (b)(39) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant; or

(b) A projected actual emissions increase that, added to the amount of emissions excluded under paragraph (b)(40)(ii)(c), sums to at least 50 percent of the amount that is a “significant emissions increase,” as defined under paragraph (b)(39) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant. For a project for which a reasonable possibility occurs only within the meaning of paragraph (r)(6)(vi)(b) of this section, and not also within the meaning of paragraph (a)(6)(vi)(a) of this section, then provisions (a)(6)(ii) through (v) do not apply to the project.

(7) Each plan shall provide that the owner or operator of the source shall make the information required to be documented and maintained pursuant to paragraph (r)(6) of this section available for review upon request for inspection by the reviewing authority or the general public pursuant to the requirements contained in § 70.4(b)(3)(viii) of this chapter.

(s) Innovative control technology.

(1) The plan may provide that an owner or operator of a proposed major stationary source or major modification may request the reviewing authority to approve a system of innovative control technology.

(2) The plan may provide that the reviewing authority may, with the consent of the Governor(s) of other affected State(s), determine that the source or modification may employ a system of innovative control technology, if:

(i) The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function;

(ii) The owner or operator agrees to achieve a level of continuous emissions reduction equivalent to that which would have been required under paragraph (j)(2) of this section, by a date specified by the reviewing authority. Such date shall not be later than 4 years from the time of startup or 7 years from permit issuance;

(iii) The source or modification would meet the requirements equivalent to those in paragraphs (j) and (k) of this section, based on the emissions rate that the stationary source employing the system of innovative control technology would be required to meet on the date specified by the reviewing authority;

(iv) The source or modification would not before the date specified by the reviewing authority:

(a) Cause or contribute to any violation of an applicable national ambient air quality standard; or

(b) Impact any area where an applicable increment is known to be violated;

(v) All other applicable requirements including those for public participation have been met.

(vi) The provisions of paragraph (p) of this section (relating to Class I areas) have been satisfied with respect to all periods during the life of the source or modification.

(3) The plan shall provide that the reviewing authority shall withdraw any approval to employ a system of innovative control technology made under this section, if:

(i) The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or

(ii) The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare, or safety; or

(iii) The reviewing authority decides at any time that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare, or safety.

(4) The plan may provide that if a source or modification fails to meet the required level of continuous emissions reduction within the specified time period, or if the approval is withdrawn in accordance with paragraph (s)(3) of this section, the reviewing authority may allow the source or modification up to an additional 3 years to meet the requirement for the application of best available control technology through use of a demonstrated system of control.

(t) to (v) [Reserved]

(w) Actuals PALs. The plan shall provide for PALs according to the provisions in paragraphs (w)(1) through (15) of this section.

(1) Applicability.

(i) The reviewing authority may approve the use of an actuals PAL for any existing major stationary source if the PAL meets the requirements in paragraphs (w)(1) through (15) of this section. The term "PAL" shall mean "actuals PAL" throughout paragraph (w) of this section.

(ii) Any physical change in or change in the method of operation of a major stationary source that maintains its total source-wide emissions below the PAL level, meets the requirements in paragraphs (w)(1) through (15) of this section, and complies with the PAL permit:

(a) Is not a major modification for the PAL pollutant;

(b) Does not have to be approved through the plan's major NSR program; and

(c) Is not subject to the provisions in paragraph (r)(2) of this section (restrictions on relaxing enforceable emission limitations that the major stationary source used to avoid applicability of the major NSR program).

(iii) Except as provided under paragraph (w)(1)(ii)(c) of this section, a major stationary source shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.

(2) Definitions. The plan shall use the definitions in paragraphs (w)(2)(i) through (xi) of this section for the purpose of developing and implementing regulations that authorize the use of actuals PALs consistent with paragraphs (w)(1) through (15) of this section. When a term is not defined in these paragraphs, it shall have the meaning given in paragraph (b) of this section or in the Act.

(i) Actuals PAL for a major stationary source means a PAL based on the baseline actual emissions (as defined in paragraph (b)(47) of this section) of all emissions units (as defined in paragraph (b)(7) of this section) at the source, that emit or have the potential to emit the PAL pollutant.

(ii) Allowable emissions means "allowable emissions" as defined in paragraph (b)(16) of this section, except as this definition is modified according to paragraphs (w)(2)(ii)(a) and (b) of this section.

(a) The allowable emissions for any emissions unit shall be calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.

(b) An emissions unit's potential to emit shall be determined using the definition in paragraph (b)(4) of this section, except that the words "or enforceable as a practical matter" should be added after "federally enforceable."

(iii) Small emissions unit means an emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant, as defined in paragraph (b)(23) of this section or in the Act, whichever is lower.

(iv) Major emissions unit means:

(a) Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant in an attainment area; or

(b) Any emissions unit that emits or has the potential to emit the PAL pollutant in an amount that is equal to or greater than the major source threshold for the PAL pollutant as defined by the Act for nonattainment areas. For example, in accordance with the definition of major stationary source in section 182(c) of the Act, an emissions unit would be a major emissions unit for VOC if the emissions unit is located in a serious ozone nonattainment area and it emits or has the potential to emit 50 or more tons of VOC per year.

(v) Plantwide applicability limitation (PAL) means an emission limitation expressed in tons per year, for a pollutant at a major stationary source, that is enforceable as a practical matter and established source-wide in accordance with paragraphs (w)(1) through (15) of this section.

(vi) PAL effective date generally means the date of issuance of the PAL permit. However, the PAL effective date for an increased PAL is the date any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

(vii) PAL effective period means the period beginning with the PAL effective date and ending 10 years later.

(viii) PAL major modification means, notwithstanding paragraphs (b)(2) and (b)(3) of this section (the definitions for major modification and net emissions increase), any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.

(ix) PAL permit means the major NSR permit, the minor NSR permit, or the State operating permit under a program that is approved into the plan, or the title V permit issued by the reviewing authority that establishes a PAL for a major stationary source.

(x) PAL pollutant means the pollutant for which a PAL is established at a major stationary source.

(xi) Significant emissions unit means an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in paragraph (b)(23) of this section or in the Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit as defined in paragraph (w)(2)(iv) of this section.

(3) Permit application requirements. As part of a permit application requesting a PAL, the owner or operator of a major stationary source shall submit the following information in paragraphs (w)(3)(i) through (iii) of this section to the reviewing authority for approval.

(i) A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations, or work practices apply to each unit.

(ii) Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup, shutdown, and malfunction.

(iii) The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (w)(13)(i) of this section.

(4) General requirements for establishing PALs.

(i) The plan allows the reviewing authority to establish a PAL at a major stationary source, provided that at a minimum, the requirements in paragraphs (w)(4)(i)(a) through (g) of this section are met.

(a) The PAL shall impose an annual emission limitation in tons per year, that is enforceable as a practical matter, for the entire major stationary source. For each month during the PAL effective period after the first 12 months of establishing a PAL, the major stationary source owner or operator shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL (a 12-month average, rolled monthly). For each month during the first 11 months from the PAL effective date, the major stationary source owner or operator shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.

(b) The PAL shall be established in a PAL permit that meets the public participation requirements in paragraph (w)(5) of this section.

(c) The PAL permit shall contain all the requirements of paragraph (w)(7) of this section.

(d) The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major stationary source.

(e) Each PAL shall regulate emissions of only one pollutant.

(f) Each PAL shall have a PAL effective period of 10 years.

(g) The owner or operator of the major stationary source with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in paragraphs (w)(12) through (14) of this section for each emissions unit under the PAL through the PAL effective period.

(ii) At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant that occur during the PAL effective period creditable as decreases for purposes of offsets under § 51.165(a)(3)(ii) of this chapter unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.

(5) Public participation requirements for PALs. PALs for existing major stationary sources shall be established, renewed, or increased, through a procedure that is consistent with §§ 51.160 and 51.161 of this chapter. This includes the requirement that the reviewing authority provide the public with notice of the proposed approval of a PAL permit and at least a 30-day period for submittal of public comment. The reviewing authority must address all material comments before taking final action on the permit.

(6) Setting the 10-year actuals PAL level.

(i) Except as provided in paragraph (w)(6)(ii) of this section, the plan shall provide that the actuals PAL level for a major stationary source shall be established as the sum of the baseline actual emissions (as defined in paragraph (b)(47) of this section) of the PAL pollutant for each emissions unit at the source; plus an amount equal to the applicable significant level for the PAL pollutant under paragraph (b)(23) of this section or under the Act, whichever is lower. When establishing the actuals PAL level, for a PAL pollutant, only one consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions units. However, a different consecutive 24-month period may be used for each different PAL pollutant. Emissions associated with units that were permanently shut down after this 24-month period must be subtracted from the PAL level. The reviewing authority shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the reviewing authority is aware of prior to issuance of the PAL permit. For instance, if the source owner or operator will be required to reduce emissions from industrial boilers in half from baseline emissions of 60 ppm NO_X to a new rule limit of 30 ppm, then the permit shall contain a future effective PAL level that is equal to the current PAL level reduced by half of the original baseline emissions of such unit(s).

(ii) For newly constructed units (which do not include modifications to existing units) on which actual construction began after the 24-month period, in lieu of adding the baseline actual emissions as specified in paragraph (w)(6)(i) of this section, the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

(7) Contents of the PAL permit. The plan shall require that the PAL permit contain, at a minimum, the information in paragraphs (w)(7)(i) through (x) of this section.

(i) The PAL pollutant and the applicable source-wide emission limitation in tons per year.

(ii) The PAL permit effective date and the expiration date of the PAL (PAL effective period).

(iii) Specification in the PAL permit that if a major stationary source owner or operator applies to renew a PAL in accordance with paragraph (w)(10) of this section before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the reviewing authority.

(iv) A requirement that emission calculations for compliance purposes include emissions from startups, shutdowns and malfunctions.

(v) A requirement that, once the PAL expires, the major stationary source is subject to the requirements of paragraph (w)(9) of this section.

(vi) The calculation procedures that the major stationary source owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (w)(3)(i) of this section.

(vii) A requirement that the major stationary source owner or operator monitor all emissions units in accordance with the provisions under paragraph (w)(13) of this section.

(viii) A requirement to retain the records required under paragraph (w)(13) of this section on site. Such records may be retained in an electronic format.

(ix) A requirement to submit the reports required under paragraph (w)(14) of this section by the required deadlines.

(x) Any other requirements that the reviewing authority deems necessary to implement and enforce the PAL.

(8) PAL effective period and reopening of the PAL permit. The plan shall require the information in paragraphs (w)(8)(i) and (ii) of this section.

(i) PAL effective period. The reviewing authority shall specify a PAL effective period of 10 years.

(ii) Reopening of the PAL permit.

(a) During the PAL effective period, the plan shall require the reviewing authority to reopen the PAL permit to:

(1) Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL;

(2) Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under § 51.165(a)(3)(ii) of this chapter; and

(3) Revise the PAL to reflect an increase in the PAL as provided under paragraph (w)(11) of this section.

(b) The plan shall provide the reviewing authority discretion to reopen the PAL permit for the following:

(1) Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date;

(2) Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and that the State may impose on the major stationary source under the plan; and

(3) Reduce the PAL if the reviewing authority determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an AQRV that has been

identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.

(c) Except for the permit reopening in paragraph (w)(8)(ii)(a)(1) of this section for the correction of typographical/calculation errors that do not increase the PAL level, all reopenings shall be carried out in accordance with the public participation requirements of paragraph (w)(5) of this section.

(9) Expiration of a PAL. Any PAL that is not renewed in accordance with the procedures in paragraph (w)(10) of this section shall expire at the end of the PAL effective period, and the requirements in paragraphs (w)(9)(i) through (v) of this section shall apply.

(i) Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the procedures in paragraphs (w)(9)(i)(a) and (b) of this section.

(a) Within the time frame specified for PAL renewals in paragraph (w)(10)(ii) of this section, the major stationary source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the reviewing authority) by distributing the PAL allowable emissions for the major stationary source among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under paragraph (w)(10)(v) of this section, such distribution shall be made as if the PAL had been adjusted.

(b) The reviewing authority shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the reviewing authority determines is appropriate.

(ii) Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The reviewing authority may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS or CPMS to demonstrate compliance with the allowable emission limitation.

(iii) Until the reviewing authority issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under paragraph (w)(9)(i)(b) of this section, the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.

(iv) Any physical change or change in the method of operation at the major stationary source will be subject to major NSR requirements if such change meets the definition of major modification in paragraph (b)(2) of this section.

(v) The major stationary source owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to paragraph (r)(2) of this section, but were eliminated by the PAL in accordance with the provisions in paragraph (w)(1)(ii)(c) of this section.

(10) Renewal of a PAL.

(i) The reviewing authority shall follow the procedures specified in paragraph (w)(5) of this section in approving any request to renew a PAL for a major stationary source, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the reviewing authority.

(ii) Application deadline. The plan shall require that a major stationary source owner or operator shall submit a timely application to the reviewing authority to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.

(iii) Application requirements. The application to renew a PAL permit shall contain the information required in paragraphs (w)(10)(iii) (a) through (d) of this section.

(a) The information required in paragraphs (w)(3)(i) through (iii) of this section.

(b) A proposed PAL level.

(c) The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).

(d) Any other information the owner or operator wishes the reviewing authority to consider in determining the appropriate level for renewing the PAL.

(iv) PAL adjustment. In determining whether and how to adjust the PAL, the reviewing authority shall consider the options outlined in paragraphs (w)(10)(iv) (a) and (b) of this section. However, in no case may any such adjustment fail to comply with paragraph (w)(10)(iv)(c) of this section.

(a) If the emissions level calculated in accordance with paragraph (w)(6) of this section is equal to or greater than 80 percent of the PAL level, the reviewing authority may renew the PAL at the same level without considering the factors set forth in paragraph (w)(10)(iv)(b) of this section; or

(b) The reviewing authority may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the reviewing authority in its written rationale.

(c) Notwithstanding paragraphs (w)(10)(iv) (a) and (b) of this section:

(1) If the potential to emit of the major stationary source is less than the PAL, the reviewing authority shall adjust the PAL to a level no greater than the potential to emit of the source; and

(2) The reviewing authority shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source has complied with the provisions of paragraph (w)(11) of this section (increasing a PAL).

(v) If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the reviewing authority has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or title V permit renewal, whichever occurs first.

(11) Increasing a PAL during the PAL effective period.

(i) The plan shall require that the reviewing authority may increase a PAL emission limitation only if the major stationary source complies with the provisions in paragraphs (w)(11)(i) (a) through (d) of this section.

(a) The owner or operator of the major stationary source shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL.

(b) As part of this application, the major stationary source owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s), exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.

(c) The owner or operator obtains a major NSR permit for all emissions unit(s) identified in paragraph (w)(11)(i)(a) of this section, regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the major NSR process (for example, BACT), even though they have also become subject to the PAL or continue to be subject to the PAL.

(d) The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

(ii) The reviewing authority shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with paragraph (w)(11)(i)(b) of this section), plus the sum of the baseline actual emissions of the small emissions units.

(iii) The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of paragraph (w)(5) of this section.

(12) Monitoring requirements for PALs—

(i) General requirements.

(a) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.

(b) The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in paragraphs (w)(12)(ii) (a) through (d) of this section and must be approved by the reviewing authority.

(c) Notwithstanding paragraph (w)(12)(i)(b) of this section, you may also employ an alternative monitoring approach that meets paragraph (w)(12)(i)(a) of this section if approved by the reviewing authority.

(d) Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.

(ii) Minimum performance requirements for approved monitoring approaches. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in paragraphs (w)(12)(iii) through (ix) of this section:

(a) Mass balance calculations for activities using coatings or solvents;

(b) CEMS;

(c) CPMS or PEMS; and

(d) Emission factors.

(iii) Mass balance calculations. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:

(a) Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;

- (b) Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and

- (c) Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the reviewing authority determines there is site-specific data or a site-specific monitoring program to support another content within the range.

- (iv) CEMS. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - (a) CEMS must comply with applicable Performance Specifications found in [40 CFR part 60, appendix B](#); and

 - (b) CEMS must sample, analyze, and record data at least every 15 minutes while the emissions unit is operating.

- (v) CPMS or PEMS. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - (a) The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and

 - (b) Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the reviewing authority, while the emissions unit is operating.

- (vi) Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
 - (a) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;

 - (b) The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and

 - (c) If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the reviewing authority determines that testing is not required.

- (vii) A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.

(viii) Notwithstanding the requirements in paragraphs (w)(12)(iii) through (vii) of this section, where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the reviewing authority shall, at the time of permit issuance:

(a) Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or

(b) Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.

(ix) Re-validation. All data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the reviewing authority. Such testing must occur at least once every 5 years after issuance of the PAL.

(13) Recordkeeping requirements.

(i) The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of paragraph (w) of this section and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record.

(ii) The PAL permit shall require an owner or operator to retain a copy of the following records, for the duration of the PAL effective period plus 5 years:

(a) A copy of the PAL permit application and any applications for revisions to the PAL; and

(b) Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

(14) Reporting and notification requirements. The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the reviewing authority in accordance with the applicable title V operating permit program. The reports shall meet the requirements in paragraphs (w)(14)(i) through (iii) of this section.

(i) Semi-annual report. The semi-annual report shall be submitted to the reviewing authority within 30 days of the end of each reporting period. This report shall contain the information required in paragraphs (w)(14)(i)(a) through (g) of this section.

(a) The identification of owner and operator and the permit number.

(b) Total annual emissions (tons/year) based on a 12-month rolling total for each month in the reporting period recorded pursuant to paragraph (w)(13)(i) of this section.

- (c) All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.
 - (d) A list of any emissions units modified or added to the major stationary source during the preceding 6-month period.
 - (e) The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.
 - (f) A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by paragraph (w)(12)(vii) of this section.
 - (g) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.
- (ii) Deviation report. The major stationary source owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to § 70.6(a)(3)(iii)(B) of this chapter shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed by the applicable program implementing § 70.6(a)(3)(iii)(B) of this chapter. The reports shall contain the following information:
- (a) The identification of owner and operator and the permit number;
 - (b) The PAL requirement that experienced the deviation or that was exceeded;
 - (c) Emissions resulting from the deviation or the exceedance; and
 - (d) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.
- (iii) Re-validation results. The owner or operator shall submit to the reviewing authority the results of any re-validation test or method within three months after completion of such test or method.
- (15) Transition requirements.
- (i) No reviewing authority may issue a PAL that does not comply with the requirements in paragraphs (w)(1) through (15) of this section after the Administrator has approved regulations incorporating these requirements into a plan.

(ii) The reviewing authority may supersede any PAL which was established prior to the date of approval of the plan by the Administrator with a PAL that complies with the requirements of paragraphs (w)(1) through (15) of this section.

(x) If any provision of this section, or the application of such provision to any person or circumstance, is held invalid, the remainder of this section, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

(y) Equipment replacement provision. Without regard to other considerations, routine maintenance, repair and replacement includes, but is not limited to, the replacement of any component of a process unit with an identical or functionally equivalent component(s), and maintenance and repair activities that are part of the replacement activity, provided that all of the requirements in paragraphs (y)(1) through (3) of this section are met.

(1) Capital Cost threshold for Equipment Replacement.

(i) For an electric utility steam generating unit, as defined in § 51.166(b)(30), the fixed capital cost of the replacement component(s) plus the cost of any associated maintenance and repair activities that are part of the replacement shall not exceed 20 percent of the replacement value of the process unit, at the time the equipment is replaced. For a process unit that is not an electric utility steam generating unit the fixed capital cost of the replacement component(s) plus the cost of any associated maintenance and repair activities that are part of the replacement shall not exceed 20 percent of the replacement value of the process unit, at the time the equipment is replaced.

(ii) In determining the replacement value of the process unit; and, except as otherwise allowed under paragraph (y)(1)(iii) of this section, the owner or operator shall determine the replacement value of the process unit on an estimate of the fixed capital cost of constructing a new process unit, or on the current appraised value of the process unit.

(iii) As an alternative to paragraph (y)(1)(ii) of this section for determining the replacement value of a process unit, an owner or operator may choose to use insurance value (where the insurance value covers only complete replacement), investment value adjusted for inflation, or another accounting procedure if such procedure is based on Generally Accepted Accounting Principles, provided that the owner or operator sends a notice to the reviewing authority. The first time that an owner or operator submits such a notice for a particular process unit, the notice may be submitted at any time, but any subsequent notice for that process unit may be submitted only at the beginning of the process unit's fiscal year. Unless the owner or operator submits a notice to the reviewing authority, then paragraph (y)(1)(ii) of this section will be used to establish the replacement value of the process unit. Once the owner or operator submits a notice to use an alternative accounting procedure, the owner or operator must continue to use that procedure for the entire fiscal year for that process unit. In subsequent fiscal years, the owner or operator must continue to use this selected procedure unless and until the owner or operator sends another notice to the reviewing authority selecting another procedure consistent with this paragraph or paragraph (y)(1)(ii) of this section at the beginning of such fiscal year.

(2) Basic design parameters. The replacement does not change the basic design parameter(s) of the process unit to which the activity pertains.

(i) Except as provided in paragraph (y)(2)(iii) of this section, for a process unit at a steam electric generating facility, the owner or operator may select as its basic design parameters either maximum hourly heat input and maximum hourly

fuel consumption rate or maximum hourly electric output rate and maximum steam flow rate. When establishing fuel consumption specifications in terms of weight or volume, the minimum fuel quality based on British Thermal Units content shall be used for determining the basic design parameter(s) for a coal-fired electric utility steam generating unit.

(ii) Except as provided in paragraph (y)(2)(iii) of this section, the basic design parameter(s) for any process unit that is not at a steam electric generating facility are maximum rate of fuel or heat input, maximum rate of material input, or maximum rate of product output. Combustion process units will typically use maximum rate of fuel input. For sources having multiple end products and raw materials, the owner or operator should consider the primary product or primary raw material when selecting a basic design parameter.

(iii) If the owner or operator believes the basic design parameter(s) in paragraphs (y)(2)(i) and (ii) of this section is not appropriate for a specific industry or type of process unit, the owner or operator may propose to the reviewing authority an alternative basic design parameter(s) for the source's process unit(s). If the reviewing authority approves of the use of an alternative basic design parameter(s), the reviewing authority shall issue a permit that is legally enforceable that records such basic design parameter(s) and requires the owner or operator to comply with such parameter(s).

(iv) The owner or operator shall use credible information, such as results of historic maximum capability tests, design information from the manufacturer, or engineering calculations, in establishing the magnitude of the basic design parameter(s) specified in paragraphs (y)(2)(i) and (ii) of this section.

(v) If design information is not available for a process unit, then the owner or operator shall determine the process unit's basic design parameter(s) using the maximum value achieved by the process unit in the five-year period immediately preceding the planned activity.

(vi) Efficiency of a process unit is not a basic design parameter.

(3) The replacement activity shall not cause the process unit to exceed any emission limitation, or operational limitation that has the effect of constraining emissions, that applies to the process unit and that is legally enforceable.

Note to paragraph (y): By a court order on December 24, 2003, this paragraph (y) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(Authority: Secs. 101(b)(1), 110, 160–169, 171–178, and 301(a), Clean Air Act, as amended ([42 U.S.C. 7401\(b\)\(1\)](#), [7410](#), [7470–7479](#), [7501–7508](#), and [7601\(a\)](#)); sec. 129(a), Clean Air Act Amendments of 1977 ([Pub.L. 95–95](#), [91 Stat. 685](#) (Aug. 7, 1977)))

Credits

[[43 FR 26382](#), June 19, 1978; [43 FR 40010](#), Sept. 8, 1978, as amended at [44 FR 27569](#), May 10, 1979; [45 FR 52729](#), Aug. 7, 1980; [47 FR 27560](#), June 25, 1982; [49 FR 43209](#), Oct. 26, 1984; [51 FR 40661](#), [40675](#), Nov. 7, 1986; [52 FR 24713](#), July 1, 1987; [52 FR 29386](#), Aug. 7, 1987; [53 FR 40670](#), Oct. 17, 1988; [54 FR 27285](#), [27299](#), June 28, 1989; [56 FR 5506](#), Feb. 11, 1991; [57 FR 3946](#), Feb. 3, 1992; [57 FR 32335](#), July 21, 1992; [58 FR 31636](#), June 3, 1993; [58 FR 38822](#), July 20, 1993; [60 FR 40468](#), Aug. 9, 1995; [61 FR 9918](#), March 12, 1996; [61 FR 41840](#), Aug. 12, 1996; [67 FR 80259](#), [80260](#), Dec. 31, 2002; [68 FR 61278](#),

Oct. 27, 2003; [68 FR 63028](#), Nov. 7, 2003; [69 FR 40275](#), July 1, 2004; [70 FR 59618](#), Oct. 12, 2005; [70 FR 71699](#), Nov. 29, 2005; [72 FR 24077](#), May 1, 2007; [72 FR 32528](#), June 13, 2007; [72 FR 72616](#), Dec. 21, 2007; [73 FR 28347](#), May 16, 2008; [73 FR 77897](#), Dec. 19, 2008; [74 FR 50116](#), Sept. 30, 2009; [74 FR 65695](#), Dec. 11, 2009; [75 FR 16016](#), March 31, 2010; [75 FR 31606](#), June 3, 2010; [75 FR 64902](#), Oct. 20, 2010; [76 FR 17553](#), March 30, 2011; [76 FR 18870](#), April 6, 2011; [76 FR 43507](#), July 20, 2011; [77 FR 65118](#), Oct. 25, 2012; [78 FR 3281](#), Jan. 15, 2013; [78 FR 73702](#), Dec. 9, 2013; [80 FR 12318](#), March 6, 2015; [80 FR 50203](#), Aug. 19, 2015; [80 FR 65460](#), Oct. 26, 2015]

SOURCE: [36 FR 22398](#), Nov. 25, 1971; [51 FR 40669](#), Nov. 7, 1986; [52 FR 24712](#), July 1, 1987; [55 FR 14249](#), April 17, 1990; [56 FR 42219](#), Aug. 26, 1991; [57 FR 32334](#), July 21, 1992; [57 FR 52987](#), Nov. 5, 1992; [58 FR 38821](#), July 20, 1993; [60 FR 40100](#), Aug. 7, 1995; [62 FR 8328](#), Feb. 24, 1997; [62 FR 43801](#), Aug. 15, 1997; [62 FR 44903](#), Aug. 25, 1997; [63 FR 24433](#), May 4, 1998; [64 FR 35763](#), July 1, 1999; [65 FR 45532](#), July 24, 2000; [72 FR 28613](#), May 22, 2007, unless otherwise noted.

AUTHORITY: [23 U.S.C. 101](#); [42 U.S.C. 7401-7671q](#).

[Notes of Decisions \(80\)](#)


Current through April 15, 2016; [81 FR 22196](#).

Footnotes

- 1 No de minimis air quality level is provided for ozone. However, any net emissions increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of air quality data.

 KeyCite Yellow Flag - Negative Treatment

Unconstitutional or Preempted **Prior Version Held Invalid** [Utility Air Regulatory Group v. E.P.A.](#), U.S., June 23, 2014

 KeyCite Yellow Flag - Negative Treatment Proposed Regulation

[Code of Federal Regulations](#)

[Title 40. Protection of Environment](#)

[Chapter I. Environmental Protection Agency \(Refs & Annos\)](#)

[Subchapter C. Air Programs](#)

[Part 52. Approval and Promulgation of Implementation Plans \(Refs & Annos\)](#)

[Subpart A. General Provisions \(Refs & Annos\)](#)

40 C.F.R. § 52.21

§ 52.21 Prevention of significant deterioration of air quality.

Effective: December 28, 2015

[Currentness](#)

(a)(1) Plan disapproval. The provisions of this section are applicable to any State implementation plan which has been disapproved with respect to prevention of significant deterioration of air quality in any portion of any State where the existing air quality is better than the national ambient air quality standards. Specific disapprovals are listed where applicable, in subparts B through DDD and FFF of this part. The provisions of this section have been incorporated by reference into the applicable implementation plans for various States, as provided in subparts B through DDD and FFF of this part. Where this section is so incorporated, the provisions shall also be applicable to all lands owned by the Federal Government and Indian Reservations located in such State. No disapproval with respect to a State's failure to prevent significant deterioration of air quality shall invalidate or otherwise affect the obligations of States, emission sources, or other persons with respect to all portions of plans approved or promulgated under this part.

(2) Applicability procedures.

(i) The requirements of this section apply to the construction of any new major stationary source (as defined in paragraph (b) (1) of this section) or any project at an existing major stationary source in an area designated as attainment or unclassifiable under sections 107(d)(1)(A)(ii) or (iii) of the Act.

(ii) The requirements of paragraphs (j) through (r) of this section apply to the construction of any new major stationary source or the major modification of any existing major stationary source, except as this section otherwise provides.

(iii) No new major stationary source or major modification to which the requirements of paragraphs (j) through (r)(5) of this section apply shall begin actual construction without a permit that states that the major stationary source or major modification will meet those requirements. The Administrator has authority to issue any such permit.

(iv) The requirements of the program will be applied in accordance with the principles set out in paragraphs (a)(2)(iv) (a) through (f) of this section.

(a) Except as otherwise provided in paragraphs (a)(2)(v) and (vi) of this section, and consistent with the definition of major modification contained in paragraph (b)(2) of this section, a project is a major modification for a regulated NSR pollutant if it causes two types of emissions increases—a significant emissions increase (as defined in paragraph (b)(40) of this section), and a significant net emissions increase (as defined in paragraphs (b)(3) and (b)(23) of this section). The project is not a major modification if it does not cause a significant emissions increase. If the project causes a significant emissions increase, then the project is a major modification only if it also results in a significant net emissions increase.

(b) The procedure for calculating (before beginning actual construction) whether a significant emissions increase (i.e., the first step of the process) will occur depends upon the type of emissions units being modified, according to paragraphs (a)(2)(iv)(c) through (f) of this section. The procedure for calculating (before beginning actual construction) whether a significant net emissions increase will occur at the major stationary source (i.e., the second step of the process) is contained in the definition in paragraph (b)(3) of this section. Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.

(c) Actual-to-projected-actual applicability test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in paragraph (b)(41) of this section) and the baseline actual emissions (as defined in paragraphs (b)(48)(i) and (ii) of this section), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(d) Actual-to-potential test for projects that only involve construction of a new emissions unit(s). A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in paragraph (b)(4) of this section) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in paragraph (b)(48)(iii) of this section) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(e) [Reserved]

(f) Hybrid test for projects that involve multiple types of emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in paragraphs (a)(2)(iv)(c) through (d) of this section as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(v) For any major stationary source for a PAL for a regulated NSR pollutant, the major stationary source shall comply with the requirements under paragraph (aa) of this section.

(vi) [Reserved]

(b) Definitions. For the purposes of this section:

(1)(i) Major stationary source means:

(a) Any of the following stationary sources of air pollutants which emits, or has the potential to emit, 100 tons per year or more of any regulated NSR pollutant: Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants (with thermal dryers), primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants (which does not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140), fossil-fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants, and charcoal production plants;

(b) Notwithstanding the stationary source size specified in paragraph (b)(1)(i) of this section, any stationary source which emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant; or

(c) Any physical change that would occur at a stationary source not otherwise qualifying under paragraph (b)(1) of this section, as a major stationary source, if the changes would constitute a major stationary source by itself.

(ii) A major source that is major for volatile organic compounds or NO_x shall be considered major for ozone.

(iii) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:

(a) Coal cleaning plants (with thermal dryers);

(b) Kraft pulp mills;

(c) Portland cement plants;

(d) Primary zinc smelters;

(e) Iron and steel mills;

(f) Primary aluminum ore reduction plants;

(g) Primary copper smelters;

- (h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
- (i) Hydrofluoric, sulfuric, or nitric acid plants;
- (j) Petroleum refineries;
- (k) Lime plants;
- (l) Phosphate rock processing plants;
- (m) Coke oven batteries;
- (n) Sulfur recovery plants;
- (o) Carbon black plants (furnace process);
- (p) Primary lead smelters;
- (q) Fuel conversion plants;
- (r) Sintering plants;
- (s) Secondary metal production plants;
- (t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (w) Taconite ore processing plants;
- (x) Glass fiber processing plants;

(y) Charcoal production plants;

(z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, and

(aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

(2)(i) Major modification means any physical change in or change in the method of operation of a major stationary source that would result in: a significant emissions increase (as defined in paragraph (b)(40) of this section) of a regulated NSR pollutant (as defined in paragraph (b)(50) of this section); and a significant net emissions increase of that pollutant from the major stationary source.

(ii) Any significant emissions increase (as defined at paragraph (b)(40) of this section) from any emissions units or net emissions increase (as defined in paragraph (b)(3) of this section) at a major stationary source that is significant for volatile organic compounds or NO_x shall be considered significant for ozone.

(iii) A physical change or change in the method of operation shall not include:

(a) Routine maintenance, repair and replacement. Routine maintenance, repair and replacement shall include, but not be limited to, any activity(s) that meets the requirements of the equipment replacement provisions contained in paragraph (cc) of this section;

Note to paragraph (b)(2)(iii)(a): By court order on December 24, 2003, the second sentence of this paragraph (b)(2)(iii)(a) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(b) Use of an alternative fuel or raw material by reason of an order under sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plant pursuant to the Federal Power Act;

(c) Use of an alternative fuel by reason of an order or rule under section 125 of the Act;

(d) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;

(e) Use of an alternative fuel or raw material by a stationary source which:

(1) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975 pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or [40 CFR 51.166](#); or

(2) The source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166;

(f) An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166.

(g) Any change in ownership at a stationary source.

(h) [Reserved]

(i) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(1) The State implementation plan for the State in which the project is located, and

(2) Other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(j) The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.

(k) The reactivation of a very clean coal-fired electric utility steam generating unit.

(iv) This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under paragraph (aa) of this section for a PAL for that pollutant. Instead, the definition at paragraph (aa)(2)(viii) of this section shall apply.

<Text of subsection (b)(2)(v) stayed effective March 30, 2011.>

(v) Fugitive emissions shall not be included in determining for any of the purposes of this section whether a physical change in or change in the method of operation of a major stationary source is a major modification, unless the source belongs to one of the source categories listed in paragraph (b)(1)(iii) of this section.

(3)(i) Net emissions increase means, with respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero:

- (a) The increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph (a)(2)(iv) of this section; and

- (b) Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this paragraph (b)(3)(i)(b) shall be determined as provided in paragraph (b)(48) of this section, except that paragraphs (b)(48)(i)(c) and (b)(48)(ii)(d) of this section shall not apply.

- (ii) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:
 - (a) The date five years before construction on the particular change commences; and

 - (b) The date that the increase from the particular change occurs.

- (iii) An increase or decrease in actual emissions is creditable only if:
 - (a) The Administrator or other reviewing authority has not relied on it in issuing a permit for the source under this section, which permit is in effect when the increase in actual emissions from the particular change occurs; and

 - (b) The increase or decrease in emissions did not occur at a Clean Unit except as provided in paragraphs (x)(8) and (y)(10) of this section.

<Text of subsection (b)(3)(iii)(c) stayed effective March 30, 2011.>

 - (c) As it pertains to an increase or decrease in fugitive emissions (to the extent quantifiable), it occurs at an emissions unit that is part of one of the source categories listed in paragraph (b)(1)(iii) of this section or it occurs at an emission unit that is located at a major stationary source that belongs to one of the listed source categories.

- (iv) An increase or decrease in actual emissions of sulfur dioxide, particulate matter, or nitrogen oxides that occurs before the applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available.

- (v) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

- (vi) A decrease in actual emissions is creditable only to the extent that:
 - (a) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(b) It is enforceable as a practical matter at and after the time that actual construction on the particular change begins.

(c) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and

(d) [Reserved]

(vii) [Reserved]

(viii) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.

(ix) Paragraph (b)(21)(ii) of this section shall not apply for determining creditable increases and decreases.

(4) Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(5) Stationary source means any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.

(6) Building, structure, facility, or installation means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e., which have the same first two digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0066 and 003-005-00176-0, respectively).

(7) Emissions unit means any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant and includes an electric utility steam generating unit as defined in paragraph (b)(31) of this section. For purposes of this section, there are two types of emissions units as described in paragraphs (b)(7)(i) and (ii) of this section.

(i) A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.

(ii) An existing emissions unit is any emissions unit that does not meet the requirements in paragraph (b)(7)(i) of this section. A replacement unit, as defined in paragraph (b)(33) of this section, is an existing emissions unit.

(8) Construction means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in emissions.

(9) Commence as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:

(i) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

(ii) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(10) Necessary preconstruction approvals or permits means those permits or approvals required under Federal air quality control laws and regulations and those air quality control laws and regulations which are part of the applicable State Implementation Plan.

(11) Begin actual construction means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.

(12) Best available control technology means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

(13)(i) Baseline concentration means that ambient concentration level that exists in the baseline area at the time of the applicable minor source baseline date. A baseline concentration is determined for each pollutant for which a minor source baseline date is established and shall include:

- (a) The actual emissions, as defined in paragraph (b)(21) of this section, representative of sources in existence on the applicable minor source baseline date, except as provided in paragraph (b)(13)(ii) of this section; and
 - (b) The allowable emissions of major stationary sources that commenced construction before the major source baseline date, but were not in operation by the applicable minor source baseline date.
- (ii) The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):
- (a) Actual emissions, as defined in paragraph (b)(21) of this section, from any major stationary source on which construction commenced after the major source baseline date; and
 - (b) Actual emissions increases and decreases, as defined in paragraph (b)(21) of this section, at any stationary source occurring after the minor source baseline date.
- (14)(i) Major source baseline date means:
- (a) In the case of PM₁₀ and sulfur dioxide, January 6, 1975;
 - (b) In the case of nitrogen dioxide, February 8, 1988; and
 - (c) In the case of PM_{2.5}, October 20, 2010.
- (ii) "Minor source baseline date" means the earliest date after the trigger date on which a major stationary source or a major modification subject to 40 CFR 52.21 or to regulations approved pursuant to 40 CFR 51.166 submits a complete application under the relevant regulations. The trigger date is:
- (a) In the case of PM₁₀ and sulfur dioxide, August 7, 1977;
 - (b) In the case of nitrogen dioxide, February 8, 1988; and
 - (c) In the case of PM_{2.5}, October 20, 2011.
- (iii) The baseline date is established for each pollutant for which increments or other equivalent measures have been established if:

(a) The area in which the proposed source or modification would construct is designated as attainment or unclassifiable under section 107(d)(1)(A)(ii) or (iii) of the Act for the pollutant on the date of its complete application under 40 CFR 52.21 or under regulations approved pursuant to [40 CFR 51.166](#); and

(b) In the case of a major stationary source, the pollutant would be emitted in significant amounts, or, in the case of a major modification, there would be a significant net emissions increase of the pollutant.

(iv) Any minor source baseline date established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM-10 increments, except that the Administrator shall rescind a minor source baseline date where it can be shown, to the satisfaction of the Administrator, that the emissions increase from the major stationary source, or net emissions increase from the major modification, responsible for triggering that date did not result in a significant amount of PM-10 emissions.

(15)(i) Baseline area means any intrastate area (and every part thereof) designated as attainment or unclassifiable under section 107(d)(1)(A)(ii) or (iii) of the Act in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact for the pollutant for which the baseline date is established, as follows: equal to or greater than $1 \mu\text{g}/\text{m}^3$ (annual average) for SO_2 , NO_2 , or PM_{10} ; or equal or greater than $0.3 \mu\text{g}/\text{m}^3$ (annual average) for $\text{PM}_{2.5}$.

(ii) Area redesignations under section 107(d)(1)(A)(ii) or (iii) of the Act cannot intersect or be smaller than the area of impact of any major stationary source or major modification which:

(a) Establishes a minor source baseline date; or

(b) Is subject to 40 CFR 52.21 and would be constructed in the same state as the state proposing the redesignation.

(iii) Any baseline area established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM-10 increments, except that such baseline area shall not remain in effect if the Administrator rescinds the corresponding minor source baseline date in accordance with paragraph (b)(14)(iv) of this section.

(16) Allowable emissions means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

(i) The applicable standards as set forth in 40 CFR parts 60 and 61;

(ii) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or

(iii) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

(17) Federally enforceable means all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I, including operating permits issued under an EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program.

(18) Secondary emissions means emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

(i) Emissions from ships or trains coming to or from the new or modified stationary source; and

(ii) Emissions from any offsite support facility which would not otherwise be constructed or increase its emissions as a result of the construction or operation of the major stationary source or major modification.

(19) Innovative control technology means any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or nonair quality environmental impacts.

(20) Fugitive emissions means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(21)(i) Actual emissions means the actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with paragraphs (b)(21)(ii) through (iv) of this section, except that this definition shall not apply for calculating whether a significant emissions increase has occurred, or for establishing a PAL under paragraph (aa) of this section. Instead, paragraphs (b)(41) and (b)(48) of this section shall apply for those purposes.

(ii) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation. The Administrator shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(iii) The Administrator may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

(iv) For any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

(22) Complete means, in reference to an application for a permit, that the application contains all of the information necessary for processing the application.

(23)(i) Significant means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant and Emissions Rate

Carbon monoxide: 100 tons per year (tpy)

Nitrogen oxides: 40 tpy

Sulfur dioxide: 40 tpy

Particulate matter: 25 tpy of particulate matter emissions

PM₁₀: 15 tpy

PM_{2.5}: 10 tpy of direct PM_{2.5} emissions; 40 tpy of sulfur dioxide emissions; 40 tpy of nitrogen oxide emissions unless demonstrated not to be a PM_{2.5} precursor under paragraph (b)(50) of this section

Ozone: 40 tpy of volatile organic compounds or nitrogen oxides

Lead: 0.6 tpy

Fluorides: 3 tpy

Sulfuric acid mist: 7 tpy

Hydrogen sulfide (H₂S): 10 tpy

Total reduced sulfur (including H₂S): 10 tpy

Reduced sulfur compounds (including H₂S): 10 tpy

Municipal waste combustor organics (measured as total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans):
3.2 x 10⁻⁶ megagrams per year (3.5 x 10⁻⁶ tons per year)

Municipal waste combustor metals (measured as particulate matter): 14 megagrams per year (15 tons per year)

Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year)

Municipal solid waste landfills emissions (measured as nonmethane organic compounds): 45 megagrams per year (50 tons per year)

(ii) Significant means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that paragraph (b)(23)(i) of this section, does not list, any emissions rate.

(iii) Notwithstanding paragraph (b)(23)(i) of this section, significant means any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within 10 kilometers of a Class I area, and have an impact on such area equal to or greater than $1 \mu\text{g}/\text{m}^3$, (24-hour average).

(24) Federal Land Manager means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

(25) High terrain means any area having an elevation 900 feet or more above the base of the stack of a source.

(26) Low terrain means any area other than high terrain.

(27) Indian Reservation means any federally recognized reservation established by Treaty, Agreement, executive order, or act of Congress.

(28) Indian Governing Body means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self government.

(29) Adverse impact on visibility means visibility impairment which interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the Federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of visibility impairment, and how these factors correlate with (1) times of visitor use of the Federal Class I area, and (2) the frequency and timing of natural conditions that reduce visibility.

(30) Volatile organic compounds (VOC) is as defined in § 51.100(s) of this chapter.

(31) Electric utility steam generating unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(32) [Reserved]

(33) Replacement unit means an emissions unit for which all the criteria listed in paragraphs (b)(33)(i) through (iv) of this section are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.

(i) The emissions unit is a reconstructed unit within the meaning of § 60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit.

(ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.

(iii) The replacement does not alter the basic design parameters (as discussed in paragraph (cc)(2) of this section) of the process unit.

(iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.

(34) Clean coal technology means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

(35) Clean coal technology demonstration project means a project using funds appropriated under the heading “Department of Energy–Clean Coal Technology”, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

(36) Temporary clean coal technology demonstration project means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plans for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(37)(i) Repowering means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.

(ii) Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

(iii) The Administrator shall give expedited consideration to permit applications for any source that satisfies the requirements of this subsection and is granted an extension under section 409 of the Clean Air Act.

(38) Reactivation of a very clean coal-fired electric utility steam generating unit means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(i) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;

(ii) Was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(iii) Is equipped with low-NO_x burners prior to the time of commencement of operations following reactivation; and

(iv) Is otherwise in compliance with the requirements of the Clean Air Act.

(39) Pollution prevention means any activity that through process changes, product reformulation or redesign, or substitution of less polluting raw materials, eliminates or reduces the release of air pollutants (including fugitive emissions) and other pollutants to the environment prior to recycling, treatment, or disposal; it does not mean recycling (other than certain "in-process recycling" practices), energy recovery, treatment, or disposal.

(40) Significant emissions increase means, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in paragraph (b)(23) of this section) for that pollutant.

(41)(i) Projected actual emissions means the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.

(ii) In determining the projected actual emissions under paragraph (b)(41)(i) of this section (before beginning actual construction), the owner or operator of the major stationary source:

(a) Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under the approved State Implementation Plan; and

(b) Shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions; and

(c) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under paragraph (b)(48) of this section and that are also unrelated to the particular project, including any increased utilization due to product demand growth; or

(d) In lieu of using the method set out in paragraphs (a)(41)(ii)(a) through (c) of this section, may elect to use the emissions unit's potential to emit, in tons per year, as defined under paragraph (b)(4) of this section.

(42) [Reserved]

(43) Prevention of Significant Deterioration (PSD) program means the EPA-implemented major source preconstruction permit programs under this section or a major source preconstruction permit program that has been approved by the Administrator and incorporated into the State Implementation Plan pursuant to § 51.166 of this chapter to implement the requirements of that section. Any permit issued under such a program is a major NSR permit.

(44) Continuous emissions monitoring system (CEMS) means all of the equipment that may be required to meet the data acquisition and availability requirements of this section, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.

(45) Predictive emissions monitoring system (PEMS) means all of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.

(46) Continuous parameter monitoring system (CPMS) means all of the equipment necessary to meet the data acquisition and availability requirements of this section, to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and to record average operational parameter value(s) on a continuous basis.

(47) Continuous emissions rate monitoring system (CERMS) means the total equipment required for the determination and recording of the pollutant mass emissions rate (in terms of mass per unit of time).

(48) Baseline actual emissions means the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance with paragraphs (b)(48)(i) through (iv) of this section.

(i) For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the

project. The Administrator shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

(a) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

(b) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period.

(c) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used For each regulated NSR pollutant.

(d) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraph (b)(48)(i)(b) of this section.

(ii) For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Administrator for a permit required under this section or by the reviewing authority for a permit required by a plan, whichever is earlier, except that the 10-year period shall not include any period earlier than November 15, 1990.

(a) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

(b) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.

(c) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period. However, if an emission limitation is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under part 63 of this chapter, the baseline actual emissions need only be adjusted if the State has taken credit for such emissions reductions in an attainment demonstration or maintenance plan consistent with the requirements of § 51.165(a)(3)(ii)(G) of this chapter.

(d) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period can be used For each regulated NSR pollutant.

(e) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraphs (b)(48)(ii)(b) and (c) of this section.

(iii) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit.

(iv) For a PAL for a stationary source, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in paragraph (b)(48)(i) of this section, for other existing emissions units in accordance with the procedures contained in paragraph (b)(48)(ii) of this section, and for a new emissions unit in accordance with the procedures contained in paragraph (b)(48)(iii) of this section.

(49) Subject to regulation means, for any air pollutant, that the pollutant is subject to either a provision in the Clean Air Act, or a nationally-applicable regulation codified by the Administrator in subchapter C of this chapter, that requires actual control of the quantity of emissions of that pollutant, and that such a control requirement has taken effect and is operative to control, limit or restrict the quantity of emissions of that pollutant released from the regulated activity. Except that:

(i) Greenhouse gases (GHGs), the air pollutant defined in § 86.1818–12(a) of this chapter as the aggregate group of six greenhouse gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, shall not be subject to regulation except as provided in paragraphs (b)(49)(iv) through (v) of this section and shall not be subject to regulation if the stationary source maintains its total source-wide emissions below the GHG PAL level, meets the requirements in paragraphs (aa)(1) through (15) of this section, and complies with the PAL permit containing the GHG PAL.

(ii) For purposes of paragraphs (b)(49)(iii) through (v) of this section, the term tpy CO₂ equivalent emissions (CO₂e) shall represent an amount of GHGs emitted, and shall be computed as follows:

(a) Multiplying the mass amount of emissions (tpy), for each of the six greenhouse gases in the pollutant GHGs, by the gas's associated global warming potential published at Table A–1 to subpart A of part 98 of this chapter—Global Warming Potentials. For purposes of this paragraph, prior to July 21, 2014, the mass of the greenhouse gas carbon dioxide shall not include carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms (including products, by-products, residues and waste from agriculture, forestry and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic material).

(b) Sum the resultant value from paragraph (b)(49)(ii)(a) of this section for each gas to compute a tpy CO₂e.

(iii) The term emissions increase as used in paragraphs (b)(49)(iv) through (v) of this section shall mean that both a significant emissions increase (as calculated using the procedures in paragraph (a)(2)(iv) of this section) and a significant

net emissions increase (as defined in paragraphs (b)(3) and (b)(23) of this section) occur. For the pollutant GHGs, an emissions increase shall be based on tpy CO₂e, and shall be calculated assuming the pollutant GHGs is a regulated NSR pollutant, and “significant” is defined as 75,000 tpy CO₂e instead of applying the value in paragraph (b)(23)(ii) of this section.

(iv) Beginning January 2, 2011, the pollutant GHGs is subject to regulation if:

(a) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs, and also will emit or will have the potential to emit 75,000 tpy CO₂e or more; or

(b) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO₂e or more; and,

(50) Regulated NSR pollutant, for purposes of this section, means the following:

(i) Any pollutant for which a national ambient air quality standard has been promulgated. This includes, but is not limited to, the following:

(a) PM_{2.5} emissions and PM₁₀ emissions shall include gaseous emissions from a source or activity, which condense to form particulate matter at ambient temperatures. On or after January 1, 2011, such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM_{2.5} and PM₁₀ in PSD permits. Compliance with emissions limitations for PM_{2.5} and PM₁₀ issued prior to this date shall not be based on condensable particulate matter unless required by the terms and conditions of the permit or the applicable implementation plan. Applicability determinations made prior to this date without accounting for condensable particulate matter shall not be considered in violation of this section unless the applicable implementation plan required condensable particulate matter to be included.

(b) Any pollutant identified under this paragraph (b)(50)(i)(b) as a constituent or precursor for a pollutant for which a national ambient air quality standard has been promulgated. Precursors identified by the Administrator for purposes of NSR are the following:

(1) Volatile organic compounds and nitrogen oxides are precursors to ozone in all attainment and unclassifiable areas.

(2) Sulfur dioxide is a precursor to PM_{2.5} in all attainment and unclassifiable areas.

(3) Nitrogen oxides are presumed to be precursors to PM_{2.5} in all attainment and unclassifiable areas, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of nitrogen oxides from sources in a specific area are not a significant contributor to that area's ambient PM_{2.5} concentrations.

(4) Volatile organic compounds are presumed not to be precursors to PM_{2.5} in any attainment or unclassifiable area, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of volatile organic compounds from sources in a specific area are a significant contributor to that area's ambient PM_{2.5} concentrations.

(ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act;

(iii) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act;

(iv) Any pollutant that otherwise is subject to regulation under the Act as defined in paragraph (b)(49) of this section.

(v) Notwithstanding paragraphs (b)(50)(i) through (iv) of this section, the term regulated NSR pollutant shall not include any or all hazardous air pollutants either listed in section 112 of the Act, or added to the list pursuant to section 112(b)(2) of the Act, and which have not been delisted pursuant to section 112(b)(3) of the Act, unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.

(51) Reviewing authority means the State air pollution control agency, local agency, other State agency, Indian tribe, or other agency authorized by the Administrator to carry out a permit program under § 51.165 and § 51.166 of this chapter, or the Administrator in the case of EPA-implemented permit programs under this section.

(52) Project means a physical change in, or change in the method of operation of, an existing major stationary source.

(53) Lowest achievable emission rate (LAER) is as defined in § 51.165(a)(1)(xiii) of this chapter.

(54) Reasonably available control technology (RACT) is as defined in § 51.100(o) of this chapter.

(55)(i) In general, process unit means any collection of structures and/or equipment that processes, assembles, applies, blends, or otherwise uses material inputs to produce or store an intermediate or a completed product. A single stationary source may contain more than one process unit, and a process unit may contain more than one emissions unit.

(ii) Pollution control equipment is not part of the process unit, unless it serves a dual function as both process and control equipment. Administrative and warehousing facilities are not part of the process unit.

(iii) For replacement cost purposes, components shared between two or more process units are proportionately allocated based on capacity.

(iv) The following list identifies the process units at specific categories of stationary sources.

(a) For a steam electric generating facility, the process unit consists of those portions of the plant that contribute directly to the production of electricity. For example, at a pulverized coal-fired facility, the process unit would generally be the combination of those systems from the coal receiving equipment through the emission stack (excluding post-combustion pollution controls), including the coal handling equipment, pulverizers or coal crushers, feedwater heaters, ash handling, boiler, burners, turbine-generator set, condenser, cooling tower, water treatment system, air preheaters, and operating control systems. Each separate generating unit is a separate process unit.

(b) For a petroleum refinery, there are several categories of process units: those that separate and/or distill petroleum feedstocks; those that change molecular structures; petroleum treating processes; auxiliary facilities, such as steam generators and hydrogen production units; and those that load, unload, blend or store intermediate or completed products.

(c) For an incinerator, the process unit would consist of components from the feed pit or refuse pit to the stack, including conveyors, combustion devices, heat exchangers and steam generators, quench tanks, and fans.

Note to paragraph (b)(55): By a court order on December 24, 2003, this paragraph (b)(55) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(56) Functionally equivalent component means a component that serves the same purpose as the replaced component.

Note to paragraph (b)(56): By a court order on December 24, 2003, this paragraph (b)(56) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(57) Fixed capital cost means the capital needed to provide all the depreciable components. "Depreciable components" refers to all components of fixed capital cost and is calculated by subtracting land and working capital from the total capital investment, as defined in paragraph (b)(58) of this section.

Note to paragraph (b)(57): By a court order on December 24, 2003, this paragraph (b)(57) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(58) Total capital investment means the sum of the following: all costs required to purchase needed process equipment (purchased equipment costs); the costs of labor and materials for installing that equipment (direct installation costs); the costs of site preparation and buildings; other costs such as engineering, construction and field expenses, fees to contractors, startup and performance tests, and contingencies (indirect installation costs); land for the process equipment; and working capital for the process equipment.

Note to paragraph (b)(58): By a court order on December 24, 2003, this paragraph (b)(58) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

(c) Ambient air increments. In areas designated as Class I, II or III, increases in pollutant concentration over the baseline concentration shall be limited to the following:

Pollutant	Maximum allowable increase (micrograms per cubic meter)
Class I Area	
PM _{2.5} :	
Annual arithmetic mean.....	1
24-hr maximum.....	2
PM ₁₀ :	
Annual arithmetic mean.....	4
24-hr maximum.....	8
Sulfur dioxide:	
Annual arithmetic mean.....	2
24-hr maximum.....	5
3-hr maximum.....	25
Nitrogen dioxide:	
Annual arithmetic mean.....	2.5
Class II Area	
PM _{2.5} :	
Annual arithmetic mean.....	4
24-hr maximum.....	9
PM ₁₀ :	
Annual arithmetic mean.....	17
24-hr maximum.....	30
Sulfur dioxide:	

Annual arithmetic mean.....	20
24-hr maximum.....	91
3-hr maximum.....	512
Nitrogen dioxide:	
Annual arithmetic mean.....	25
Class III Area	
PM _{2.5} :	
Annual arithmetic mean.....	8
24-hr maximum.....	18
PM ₁₀ :	
Annual arithmetic mean.....	34
24-hr maximum.....	60
Sulfur dioxide:	
Annual arithmetic mean.....	40
24-hr maximum.....	182
3-hr maximum.....	700
Nitrogen dioxide:	
Annual arithmetic mean.....	50

For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

(d) Ambient air ceilings. No concentration of a pollutant shall exceed:

- (1) The concentration permitted under the national secondary ambient air quality standard, or
- (2) The concentration permitted under the national primary ambient air quality standard, whichever concentration is lowest for the pollutant for a period of exposure.

(e) Restrictions on area classifications.

- (1) All of the following areas which were in existence on August 7, 1977, shall be Class I areas and may not be redesignated:

- (i) International parks,
- (ii) National wilderness areas which exceed 5,000 acres in size,
- (iii) National memorial parks which exceed 5,000 acres in size, and
- (iv) National parks which exceed 6,000 acres in size.

(2) Areas which were redesignated as Class I under regulations promulgated before August 7, 1977, shall remain Class I, but may be redesignated as provided in this section.

(3) Any other area, unless otherwise specified in the legislation creating such an area, is initially designated Class II, but may be redesignated as provided in this section.

(4) The following areas may be redesignated only as Class I or II:

(i) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and

(ii) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.

(f) [Reserved]

(g) Redesignation.

(1) All areas (except as otherwise provided under paragraph (e) of this section) are designated Class II as of December 5, 1974. Redesignation (except as otherwise precluded by paragraph (e) of this section) may be proposed by the respective States or Indian Governing Bodies, as provided below, subject to approval by the Administrator as a revision to the applicable State implementation plan.

(2) The State may submit to the Administrator a proposal to redesignate areas of the State Class I or Class II provided that:

(i) At least one public hearing has been held in accordance with procedures established in § 51.102 of this chapter;

(ii) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation were notified at least 30 days prior to the public hearing;

(iii) A discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic, social and energy effects of the proposed redesignation, was prepared and made available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contained appropriate notification of the availability of such discussion;

(iv) Prior to the issuance of notice respecting the redesignation of an area that includes any Federal lands, the State has provided written notice to the appropriate Federal Land Manager and afforded adequate opportunity (not in excess of 60 days) to confer with the State respecting the redesignation and to submit written comments and recommendations. In redesignating any area with respect to which any Federal Land Manager had submitted written comments and recommendations, the State shall have published a list of any inconsistency between such redesignation and such comments and recommendations (together with the reasons for making such redesignation against the recommendation of the Federal Land Manager); and

(v) The State has proposed the redesignation after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.

(3) Any area other than an area to which paragraph (e) of this section refers may be redesignated as Class III if—

(i) The redesignation would meet the requirements of paragraph (g)(2) of this section;

(ii) The redesignation, except any established by an Indian Governing Body, has been specifically approved by the Governor of the State, after consultation with the appropriate committees of the legislature, if it is in session, or with the leadership of the legislature, if it is not in session (unless State law provides that the redesignation must be specifically approved by State legislation) and if general purpose units of local government representing a majority of the residents of the area to be redesignated enact legislation or pass resolutions concurring in the redesignation:

(iii) The redesignation would not cause, or contribute to, a concentration of any air pollutant which would exceed any maximum allowable increase permitted under the classification of any other area or any national ambient air quality standard; and

(iv) Any permit application for any major stationary source or major modification, subject to review under paragraph (l) of this section, which could receive a permit under this section only if the area in question were redesignated as Class III, and any material submitted as part of that application, were available insofar as was practicable for public inspection prior to any public hearing on redesignation of the area as Class III.

(4) Lands within the exterior boundaries of Indian Reservations may be redesignated only by the appropriate Indian Governing Body. The appropriate Indian Governing Body may submit to the Administrator a proposal to redesignate areas Class I, Class II, or Class III: *Provided*, That:

(i) The Indian Governing Body has followed procedures equivalent to those required of a State under paragraphs (g)(2), (g)(3)(iii), and (g)(3)(iv) of this section; and

(ii) Such redesignation is proposed after consultation with the State(s) in which the Indian Reservation is located and which border the Indian Reservation.

(5) The Administrator shall disapprove, within 90 days of submission, a proposed redesignation of any area only if he finds, after notice and opportunity for public hearing, that such redesignation does not meet the procedural requirements of this paragraph or is inconsistent with paragraph (e) of this section. If any such disapproval occurs, the classification of the area shall be that which was in effect prior to the redesignation which was disapproved.

(6) If the Administrator disapproves any proposed redesignation, the State or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the Administrator.

(h) Stack heights.

(1) The degree of emission limitation required for control of any air pollutant under this section shall not be affected in any manner by—

(i) So much of the stack height of any source as exceeds good engineering practice, or

(ii) Any other dispersion technique.

(2) Paragraph (h)(1) of this section shall not apply with respect to stack heights in existence before December 31, 1970, or to dispersion techniques implemented before then.

(i) Exemptions.

(1) The requirements of paragraphs (j) through (r) of this section shall not apply to a particular major stationary source or major modification, if;

(i) Construction commenced on the source or modification before August 7, 1977. The regulations at 40 CFR 52.21 as in effect before August 7, 1977, shall govern the review and permitting of any such source or modification; or

(ii) The source or modification was subject to the review requirements of 40 CFR 52.21(d)(1) as in effect before March 1, 1978, and the owner or operator:

(a) Obtained under 40 CFR 52.21 a final approval effective before March 1, 1978;

(b) Commenced construction before March 19, 1979; and

- (c) Did not discontinue construction for a period of 18 months or more and completed construction within a reasonable time; or

- (iii) The source or modification was subject to 40 CFR 52.21 as in effect before March 1, 1978, and the review of an application for approval for the stationary source or modification under 40 CFR 52.21 would have been completed by March 1, 1978, but for an extension of the public comment period pursuant to a request for such an extension. In such a case, the application shall continue to be processed, and granted or denied, under 40 CFR 52.21 as in effect prior to March 1, 1978; or

- (iv) The source or modification was not subject to 40 CFR 52.21 as in effect before March 1, 1978, and the owner or operator:
 - (a) Obtained all final Federal, state and local preconstruction approvals or permits necessary under the applicable State Implementation Plan before March 1, 1978;

 - (b) Commenced construction before March 19, 1979; and

 - (c) Did not discontinue construction for a period of 18 months or more and completed construction within a reasonable time; or

- (v) The source or modification was not subject to 40 CFR 52.21 as in effect on June 19, 1978 or under the partial stay of regulations published on February 5, 1980 (45 FR 7800), and the owner or operator:
 - (a) Obtained all final Federal, state and local preconstruction approvals or permits necessary under the applicable State Implementation Plan before August 7, 1980;

 - (b) Commenced construction within 18 months from August 7, 1980, or any earlier time required under the applicable State Implementation Plan; and

 - (c) Did not discontinue construction for a period of 18 months or more and completed construction within a reasonable time; or

- (vi) The source or modification would be a nonprofit health or nonprofit educational institution, or a major modification would occur at such an institution, and the governor of the state in which the source or modification would be located requests that it be exempt from those requirements; or

- (vii) The source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and the source does not belong to any of the following categories:

- (a) Coal cleaning plants (with thermal dryers);
- (b) Kraft pulp mills;
- (c) Portland cement plants;
- (d) Primary zinc smelters;
- (e) Iron and steel mills;
- (f) Primary aluminum ore reduction plants;
- (g) Primary copper smelters;
- (h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
- (i) Hydrofluoric, sulfuric, or nitric acid plants;
- (j) Petroleum refineries;
- (k) Lime plants;
- (l) Phosphate rock processing plants;
- (m) Coke oven batteries;
- (n) Sulfur recovery plants;
- (o) Carbon black plants (furnace process);
- (p) Primary lead smelters;
- (q) Fuel conversion plants;
- (r) Sintering plants;

- (s) Secondary metal production plants;

- (t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;

- (u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;

- (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

- (w) Taconite ore processing plants;

- (x) Glass fiber processing plants;

- (y) Charcoal production plants;

- (z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;

- (aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act; or

- (viii) The source is a portable stationary source which has previously received a permit under this section, and
 - (a) The owner or operator proposes to relocate the source and emissions of the source at the new location would be temporary; and

 - (b) The emissions from the source would not exceed its allowable emissions; and

 - (c) The emissions from the source would impact no Class I area and no area where an applicable increment is known to be violated; and

 - (d) Reasonable notice is given to the Administrator prior to the relocation identifying the proposed new location and the probable duration of operation at the new location. Such notice shall be given to the Administrator not less than 10 days in advance of the proposed relocation unless a different time duration is previously approved by the Administrator.

- (ix) The source or modification was not subject to § 52.21, with respect to particulate matter, as in effect before July 31, 1987, and the owner or operator:

(a) Obtained all final Federal, State, and local preconstruction approvals or permits necessary under the applicable State implementation plan before July 31, 1987;

(b) Commenced construction within 18 months after July 31, 1987, or any earlier time required under the State implementation plan; and

(c) Did not discontinue construction for a period of 18 months or more and completed construction within a reasonable period of time.

(x) The source or modification was subject to 40 CFR 52.21, with respect to particulate matter, as in effect before July 31, 1987 and the owner or operator submitted an application for a permit under this section before that date, and the Administrator subsequently determines that the application as submitted was complete with respect to the particular matter requirements then in effect in the section. Instead, the requirements of paragraphs (j) through (r) of this section that were in effect before July 31, 1987 shall apply to such source or modification.

(2) The requirements of paragraphs (j) through (r) of this section shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment under section 107 of the Act. Nonattainment designations for revoked NAAQS, as contained in 40 CFR part 81, shall not be viewed as current designations under section 107 of the Act for purposes of determining the applicability of paragraphs (j) through (r) of this section to a major stationary source or major modification after the revocation of that NAAQS is effective.

(3) The requirements of paragraphs (k), (m) and (o) of this section shall not apply to a major stationary source or major modification with respect to a particular pollutant, if the allowable emissions of that pollutant from the source, or the net emissions increase of that pollutant from the modification:

(i) Would impact no Class I area and no area where an applicable increment is known to be violated, and

(ii) Would be temporary.

(4) The requirements of paragraphs (k), (m) and (o) of this section as they relate to any maximum allowable increase for a Class II area shall not apply to a major modification at a stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each regulated NSR pollutant from the modification after the application of best available control technology would be less than 50 tons per year.

(5) The Administrator may exempt a stationary source or modification from the requirements of paragraph (m) of this section, with respect to monitoring for a particular pollutant if:

(i) The emissions increase of the pollutant from the new source or the net emissions increase of the pollutant from the modification would cause, in any area, air quality impacts less than the following amounts:

(a) Carbon monoxide— $575 \mu\text{g}/\text{m}^3$, 8-hour average;

(b) Nitrogen dioxide— $14 \mu\text{g}/\text{m}^3$, annual average;

(c) $\text{PM}_{2.5}$ — $0 \mu\text{g}/\text{m}^3$;

Note to paragraph (i)(5)(i)(c): In accordance with *Sierra Club v. EPA*, 706 F.3d 428 (DC Cir. 2013), no exemption is available with regard to $\text{PM}_{2.5}$.

(d) PM_{10} — $10 \mu\text{g}/\text{m}^3$, 24-hour average;

(e) Sulfur dioxide— $13 \mu\text{g}/\text{m}^3$, 24-hour average;

(f) Ozone;

(g) Lead— $0.1 \mu\text{g}/\text{m}^3$, 3-month average;

(h) Fluorides— $0.25 \mu\text{g}/\text{m}^3$, 24-hour average;

(i) Total reduced sulfur— $10 \mu\text{g}/\text{m}^3$, 1-hour average;

(j) Hydrogen sulfide— $0.2 \mu\text{g}/\text{m}^3$, 1-hour average;

(k) Reduced sulfur compounds— $10 \mu\text{g}/\text{m}^3$, 1-hour average; or

Note to paragraph (c)(5)(i)(f):

No de minimis air quality level is provided for ozone. However, any net emissions increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of ambient air quality data.

(ii) The concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations listed in paragraph (i)(5)(i) of this section; or

(iii) The pollutant is not listed in paragraph (i)(5)(i) of this section.

(6) The requirements for best available control technology in paragraph (j) of this section and the requirements for air quality analyses in paragraph (m)(1) of this section, shall not apply to a particular stationary source or modification that was subject to 40 CFR 52.21 as in effect on June 19, 1978, if the owner or operator of the source or modification submitted an application for a permit under those regulations before August 7, 1980, and the Administrator subsequently determines that the application as submitted before that date was complete. Instead, the requirements at 40 CFR 52.21(j) and (n) as in effect on June 19, 1978 apply to any such source or modification.

(7)(i) The requirements for air quality monitoring in paragraphs (m)(1)(ii) through (iv) of this section shall not apply to a particular source or modification that was subject to 40 CFR 52.21 as in effect on June 19, 1978, if the owner or operator of the source or modification submits an application for a permit under this section on or before June 8, 1981, and the Administrator subsequently determines that the application as submitted before that date was complete with respect to the requirements of this section other than those in paragraphs (m)(1)(ii) through (iv) of this section, and with respect to the requirements for such analyses at 40 CFR 52.21(m)(2) as in effect on June 19, 1978. Instead, the latter requirements shall apply to any such source or modification.

(ii) The requirements for air quality monitoring in paragraphs (m)(1)(iii) through (iv) of this section shall not apply to a particular source or modification that was not subject to 40 CFR 52.21 as in effect on June 19, 1978, if the owner or operator of the source or modification submits an application for a permit under this section on or before June 8, 1981, and the Administrator subsequently determines that the application as submitted before that date was complete, except with respect to the requirements in paragraphs (m)(1)(ii) through (iv).

(8)(i) At the discretion of the Administrator, the requirements for air quality monitoring of PM₁₀ in paragraphs (m)(1)(i)–(iv) of this section may not apply to a particular source or modification when the owner or operator of the source or modification submits an application for a permit under this section on or before June 1, 1988 and the Administrator subsequently determines that the application as submitted before that date was complete, except with respect to the requirements for monitoring particulate matter in paragraphs (m)(1)(i)–(iv).

(ii) The requirements for air quality monitoring of PM₁₀ in paragraphs (m)(1)(ii) and (iv) and (m)(3) of this section shall apply to a particular source or modification if the owner or operator of the source or modification submits an application for a permit under this section after June 1, 1988 and no later than December 1, 1988. The data shall have been gathered over at least the period from February 1, 1988 to the date the application becomes otherwise complete in accordance with the provisions set forth under paragraph (m)(1)(viii) of this section, except that if the Administrator determines that a complete and adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than 4 months), the data that paragraph (m)(1)(iii) requires shall have been gathered over a shorter period.

(9) The requirements of paragraph (k)(1)(ii) of this section shall not apply to a stationary source or modification with respect to any maximum allowable increase for nitrogen oxides if the owner or operator of the source or modification submitted an application for a permit under this section before the provisions embodying the maximum allowable increase took effect as part of the applicable implementation plan and the Administrator subsequently determined that the application as submitted before that date was complete.

(10) The requirements in paragraph (k)(1)(ii) of this section shall not apply to a stationary source or modification with respect to any maximum allowable increase for PM₁₀ if (i) the owner or operator of the source or modification submitted an application for a permit under this section before the provisions embodying the maximum allowable increases for PM₁₀

10 took effect in an implementation plan to which this section applies, and (ii) the Administrator subsequently determined that the application as submitted before that date was otherwise complete. Instead, the requirements in paragraph (k)(1)(ii) shall apply with respect to the maximum allowable increases for TSP as in effect on the date the application was submitted.

(11) The requirements of paragraph (k)(1) of this section shall not apply to a stationary source or modification with respect to the national ambient air quality standards for PM_{2.5} in effect on March 18, 2013 if:

(i) The Administrator has determined a permit application subject to this section to be complete on or before December 14, 2012. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for PM_{2.5} in effect at the time the Administrator determined the permit application to be complete; or

(ii) The Administrator has first published before March 18, 2013 a public notice that a draft permit subject to this section has been prepared. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for PM_{2.5} in effect on the date the Administrator first published a public notice that a draft permit has been prepared.

(12) The requirements of paragraph (k)(1) of this section shall not apply to a permit application for a stationary source or modification with respect to the revised national ambient air quality standards for ozone published on October 26, 2015 if:

(i) The Administrator has determined the permit application subject to this section to be complete on or before October 1, 2015. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for ozone in effect at the time the Administrator determined the permit application to be complete; or

(ii) The Administrator has first published before December 28, 2015 a public notice of a preliminary determination or draft permit for the permit application subject to this section. Instead, the requirements in paragraph (k)(1) of this section shall apply with respect to the national ambient air quality standards for ozone in effect on the date the Administrator first published a public notice of a preliminary determination or draft permit.

(j) Control Technology Review.

(1) A major stationary source or major modification shall meet each applicable emissions limitation under the State Implementation Plan and each applicable emissions standard and standard of performance under 40 CFR parts 60 and 61.

(2) A new major stationary source shall apply best available control technology for each regulated NSR pollutant that it would have the potential to emit in significant amounts.

(3) A major modification shall apply best available control technology for each regulated NSR pollutant for which it would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.

(4) For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source.

(k) Source impact analysis—

(1) Required demonstration. The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reduction (including secondary emissions), would not cause or contribute to air pollution in violation of:

(i) Any national ambient air quality standard in any air quality control region; or

(ii) Any applicable maximum allowable increase over the baseline concentration in any area.

(2) [Reserved by 78 FR 73702]

(l) Air quality models.

(1) All estimates of ambient concentrations required under this paragraph shall be based on applicable air quality models, data bases, and other requirements specified in appendix W of part 51 of this chapter (Guideline on Air Quality Models).

(2) Where an air quality model specified in appendix W of part 51 of this chapter (Guideline on Air Quality Models) is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis for a specific state program. Written approval of the Administrator must be obtained for any modification or substitution. In addition, use of a modified or substituted model must be subject to notice and opportunity for public comment under procedures developed in accordance with paragraph (q) of this section.

(m) Air Quality Analysis—

(1) Preapplication analysis.

(i) Any application for a permit under this section shall contain an analysis of ambient air quality in the area that the major stationary source or major modification would affect for each of the following pollutants:

(a) For the source, each pollutant that it would have the potential to omit in a significant amount;

(b) For the modification, each pollutant for which it would result in a significant net emissions increase.

(ii) With respect to any such pollutant for which no National Ambient Air Quality Standard exists, the analysis shall contain such air quality monitoring data as the Administrator determines is necessary to assess ambient air quality for that pollutant in any area that the emissions of that pollutant would affect.

(iii) With respect to any such pollutant (other than nonmethane hydrocarbons) for which such a standard does exist, the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any maximum allowable increase.

(iv) In general, the continuous air quality monitoring data that is required shall have been gathered over a period of at least one year and shall represent at least the year preceding receipt of the application, except that, if the Administrator determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that is required shall have been gathered over at least that shorter period.

(v) For any application which becomes complete, except as to the requirements of paragraphs (m)(1)(iii) and (iv) of this section, between June 8, 1981, and February 9, 1982, the data that paragraph (m)(1)(iii) of this section, requires shall have been gathered over at least the period from February 9, 1981, to the date the application becomes otherwise complete, except that:

(a) If the source or modification would have been major for that pollutant under 40 CFR 52.21 as in effect on June 19, 1978, any monitoring data shall have been gathered over at least the period required by those regulations.

(b) If the Administrator determines that a complete and adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than four months), the data that paragraph (m)(1)(iii) of this section, requires shall have been gathered over at least that shorter period.

(c) If the monitoring data would relate exclusively to ozone and would not have been required under 40 CFR 52.21 as in effect on June 19, 1978, the Administrator may waive the otherwise applicable requirements of this paragraph (v) to the extent that the applicant shows that the monitoring data would be unrepresentative of air quality over a full year.

(vi) The owner or operator of a proposed stationary source or modification of volatile organic compounds who satisfies all conditions of [40 CFR part 51 Appendix S](#), section IV may provide post-approval monitoring data for ozone in lieu of providing preconstruction data as required under paragraph (m)(1) of this section.

(vii) For any application that becomes complete, except as to the requirements of paragraphs (m)(1) (iii) and (iv) pertaining to PM₁₀, after December 1, 1988 and no later than August 1, 1989 the data that paragraph (m)(1)(iii) requires shall have been gathered over at least the period from August 1, 1988 to the date the application becomes otherwise complete, except that if the Administrator determines that a complete and adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than 4 months), the data that paragraph (m)(1)(iii) requires shall have been gathered over that shorter period.

(viii) With respect to any requirements for air quality monitoring of PM₁₀ under paragraphs (i)(11) (i) and (ii) of this section, the owner or operator of the source or modification shall use a monitoring method approved by the Administrator and shall estimate the ambient concentrations of PM₁₀ using the data collected by such approved monitoring method in accordance with estimating procedures approved by the Administrator.

(2) Post-construction monitoring. The owner or operator of a major stationary source or major modification shall, after construction of the stationary source or modification, conduct such ambient monitoring as the Administrator determines is necessary to determine the effect emissions from the stationary source or modification may have, or are having, on air quality in any area.

(3) Operations of monitoring stations. The owner or operator of a major stationary source or major modification shall meet the requirements of Appendix B to part 58 of this chapter during the operation of monitoring stations for purposes of satisfying paragraph (m) of this section.

(n) Source information. The owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or make any determination required under this section.

(1) With respect to a source or modification to which paragraphs (j), (l), (n) and (p) of this section apply, such information shall include:

(i) A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;

(ii) A detailed schedule for construction of the source or modification;

(iii) A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates, and any other information necessary to determine that best available control technology would be applied.

(2) Upon request of the Administrator, the owner or operator shall also provide information on:

(i) The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and

(ii) The air quality impacts, and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the source or modification would affect.

(o) Additional impact analyses.

(1) The owner or operator shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.

(2) The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the source or modification.

(3) Visibility monitoring. The Administrator may require monitoring of visibility in any Federal class I area near the proposed new stationary source for major modification for such purposes and by such means as the Administrator deems necessary and appropriate.

(p) Sources Impacting Federal Class I Areas—Additional Requirements—

(1) Notice to Federal land managers. The Administrator shall provide written notice of any permit application for a proposed major stationary source or major modification, the emissions from which may affect a Class I area, to the Federal land manager and the Federal official charged with direct responsibility for management of any lands within any such area. Such notification shall include a copy of all information relevant to the permit application and shall be given within 30 days of receipt and at least 60 days prior to any public hearing on the application for a permit to construct. Such notification shall include an analysis of the proposed source's anticipated impacts on visibility in the Federal Class I area. The Administrator shall also provide the Federal land manager and such Federal officials with a copy of the preliminary determination required under paragraph (q) of this section, and shall make available to them any materials used in making that determination, promptly after the Administrator makes such determination. Finally, the Administrator shall also notify all affected Federal land managers within 30 days of receipt of any advance notification of any such permit application.

(2) Federal Land Manager. The Federal Land Manager and the Federal official charged with direct responsibility for management of such lands have an affirmative responsibility to protect the air quality related values (including visibility) of such lands and to consider, in consultation with the Administrator, whether a proposed source or modification will have an adverse impact on such values.

(3) Visibility analysis. The Administrator shall consider any analysis performed by the Federal land manager, provided within 30 days of the notification required by paragraph (p)(1) of this section, that shows that a proposed new major stationary source or major modification may have an adverse impact on visibility in any Federal Class I area. Where the Administrator finds that such an analysis does not demonstrate to the satisfaction of the Administrator that an adverse impact on visibility will result in the Federal Class I area, the Administrator must, in the notice of public hearing on the permit application, either explain his decision or give notice as to where the explanation can be obtained.

(4) Denial—impact on air quality related values. The Federal Land Manager of any such lands may demonstrate to the Administrator that the emissions from a proposed source or modification would have an adverse impact on the air quality-related values (including visibility) of those lands, notwithstanding that the change in air quality resulting from emissions from such source or modification would not cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Administrator concurs with such demonstration, then he shall not issue the permit.

(5) Class I variances. The owner or operator of a proposed source or modification may demonstrate to the Federal Land Manager that the emissions from such source or modification would have no adverse impact on the air quality related values of any such lands (including visibility), notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Federal land manager concurs with such demonstration and he so certifies, the State may authorize the Administrator: *Provided*, That the applicable requirements of this section are otherwise met, to issue the permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide, PM_{2.5}, PM₁₀, and nitrogen oxides would not exceed the following maximum allowable increases over minor source baseline concentration for such pollutants:

Pollutant	Maximum allowable increase (micrograms per cubic meter)
PM _{2.5} :	
Annual arithmetic mean.....	4
24-hr maximum.....	9
PM ₁₀ :	
Annual arithmetic mean.....	17
24-hr maximum.....	30
Sulfur dioxide:	
Annual arithmetic mean.....	20
24-hr maximum.....	91
3-hr maximum.....	325
Nitrogen dioxide:	
Annual arithmetic mean.....	25

(6) Sulfur dioxide variance by Governor with Federal Land Manager's concurrence. The owner or operator of a proposed source or modification which cannot be approved under paragraph (q)(4) of this section may demonstrate to the Governor that the source cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for a period of twenty-four hours or less applicable to any Class I area and, in the case of Federal mandatory Class I areas, that a variance under this clause would not adversely affect the air quality related values of the area (including visibility). The Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may, after notice and public hearing, grant a variance from such maximum allowable increase. If such variance is granted, the Administrator shall issue a permit to such source or modification pursuant to the requirements of paragraph (q)(7) of this section: *Provided*, That the applicable requirements of this section are otherwise met.

(7) Variance by the Governor with the President's concurrence. In any case where the Governor recommends a variance in which the Federal Land Manager does not concur, the recommendations of the Governor and the Federal Land Manager shall be transmitted to the President. The President may approve the Governor's recommendation if he finds that the variance is in the national interest. If the variance is approved, the Administrator shall issue a permit pursuant to the requirements of paragraph (q)(7) of this section: *Provided*, That the applicable requirements of this section are otherwise met.

(8) Emission limitations for Presidential or gubernatorial variance. In the case of a permit issued pursuant to paragraph (q) (5) or (6) of this section the source or modification shall comply with such emission limitations as may be necessary to assure that emissions of sulfur dioxide from the source or modification would not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which would exceed the following maximum allowable increases over the baseline concentration and to assure that such emissions would not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of 24 hours or less for more than 18 days, not necessarily consecutive, during any annual period:

MAXIMUM ALLOWABLE INCREASE

[Micrograms per cubic meter]

Period of exposure	Terrain areas	
	Low	High
24-hr maximum.....	36	62
3-hr maximum.....	130	221

(q) Public participation. The Administrator shall follow the applicable procedures of 40 CFR part 124 in processing applications under this section. The Administrator shall follow the procedures at 40 CFR 52.21(r) as in effect on June 19, 1979, to the extent that the procedures of 40 CFR part 124 do not apply.

(r) Source obligation.

(1) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this section or with the terms of any approval to construct, or any owner or operator of a source or modification subject to this section who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to appropriate enforcement action.

(2) Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Administrator may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

(3) Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State implementation plan and any other requirements under local, State, or Federal law.

(4) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements or paragraphs (j) through (s) of this section shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(5) [Reserved]

(6) Except as otherwise provided in paragraph (r)(6)(vi)(b) of this section, the provisions of this paragraph (r)(6) apply with respect to any regulated NSR pollutant emitted from projects at existing emissions units at a major stationary source (other than projects at a source with a PAL) in circumstances where there is a reasonable possibility, within the meaning of paragraph (r)(6)(vi) of this section, that a project that is not a part of a major modification may result in a significant emissions increase of such pollutant, and the owner or operator elects to use the method specified in paragraphs (b)(41)(ii)(a) through (c) of this section for calculating projected actual emissions.

(i) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

(a) A description of the project;

(b) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and

(c) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (b)(41)(ii)(c) of this section and an explanation for why such amount was excluded, and any netting calculations, if applicable.

(ii) If the emissions unit is an existing electric utility steam generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in paragraph (r)(6)(i) of this section to the Administrator. Nothing in this paragraph (r)(6)(ii) shall be construed to require the owner or operator of such a unit to obtain any determination from the Administrator before beginning actual construction.

(iii) The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in paragraph (r)(6)(i)(b) of this section; and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit that regulated NSR pollutant at such emissions unit.

(iv) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the Administrator within 60 days after the end of each year during which records must be generated under paragraph (r)(6)(iii) of this section setting out the unit's annual emissions during the calendar year that preceded submission of the report.

(v) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the Administrator if the annual emissions, in tons per year, from the project identified in paragraph (r)(6)(i) of this section, exceed the baseline actual emissions (as documented and maintained pursuant to paragraph (r)(6)(i)(c) of this section), by a significant amount (as defined in paragraph (b)(23) of this section) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to paragraph (r)(6)(i)(c) of this section. Such report shall be submitted to the Administrator within 60 days after the end of such year. The report shall contain the following:

(a) The name, address and telephone number of the major stationary source;

(b) The annual emissions as calculated pursuant to paragraph (r)(6)(iii) of this section; and

(c) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

(vi) A "reasonable possibility" under paragraph (r)(6) of this section occurs when the owner or operator calculates the project to result in either:

(a) A projected actual emissions increase of at least 50 percent of the amount that is a "significant emissions increase," as defined under paragraph (b)(40) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant; or

(b) A projected actual emissions increase that, added to the amount of emissions excluded under paragraph (b)(41)(ii)(c) of this section, sums to at least 50 percent of the amount that is a "significant emissions increase," as defined under paragraph (b)(40) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant. For a project for which a reasonable possibility occurs only within the meaning of paragraph (r)(6)(vi)(b) of this section, and not also within the meaning of paragraph (r)(6)(vi)(a) of this section, then provisions (r)(6)(ii) through (v) do not apply to the project.

(7) The owner or operator of the source shall make the information required to be documented and maintained pursuant to paragraph (r)(6) of this section available for review upon a request for inspection by the Administrator or the general public pursuant to the requirements contained in § 70.4(b)(3)(viii) of this chapter.

(s) Environmental impact statements. Whenever any proposed source or modification is subject to action by a Federal Agency which might necessitate preparation of an environmental impact statement pursuant to the National Environmental Policy Act (42 U.S.C. 4321), review by the Administrator conducted pursuant to this section shall be coordinated with the broad environmental reviews under that Act and under section 309 of the Clean Air Act to the maximum extent feasible and reasonable.

(t) Disputed permits or redesignations. If any State affected by the redesignation of an area by an Indian Governing Body, or any Indian Governing Body of a tribe affected by the redesignation of an area by a State, disagrees with such redesignation, or if a permit is proposed to be issued for any major stationary source or major modification proposed for construction in any State which the Governor of an affected State or Indian Governing Body of an affected tribe determines will cause or contribute to a cumulative change in air quality in excess of that allowed in this part within the affected State or Indian Reservation, the Governor or Indian Governing Body may request the Administrator to enter into negotiations with the parties involved to resolve such dispute. If requested by any State or Indian Governing Body involved, the Administrator shall make a recommendation to resolve the dispute and protect the air quality related values of the lands involved. If the parties involved do not reach agreement, the Administrator shall resolve the dispute and his determination, or the results of agreements reached through other means, shall become part of the applicable State implementation plan and shall be enforceable as part of such plan. In resolving such disputes relating to area redesignation, the Administrator shall consider the extent to which the lands involved are of sufficient size to allow effective air quality management or have air quality related values of such an area.

(u) Delegation of authority.

(1) The Administrator shall have the authority to delegate his responsibility for conducting source review pursuant to this section, in accordance with paragraph (u)(2) of this section.

(2) Where the Administrator delegates the responsibility for conducting source review under this section to any agency other than a Regional Office of the Environmental Protection Agency, the following provisions shall apply:

(i) Where the delegate agency is not an air pollution control agency, it shall consult with the appropriate state, tribe, and local air pollution control agency prior to making any determination under this section. Similarly, where the delegate agency does not have continuing responsibility for managing land use, it shall consult with the appropriate state, tribe, and local agency primarily responsible for managing land use prior to making any determination under this section.

(ii) The delegate agency shall send a copy of any public comment notice required under paragraph (r) of this section to the Administrator through the appropriate Regional Office.

(3) In the case of a source or modification which proposes to construct in a class III area, emissions from which would cause or contribute to air quality exceeding the maximum allowable increase applicable if the area were designated a class II area, and where no standard under section 111 of the act has been promulgated for such source category, the Administrator must approve the determination of best available control technology as set forth in the permit.

(v) Innovative Control Technology.

(1) An owner or operator of a proposed major stationary source or major modification may request the Administrator in writing no later than the close of the comment period under [40 CFR 124.10](#) to approve a system of innovative control technology.

(2) The Administrator shall, with the consent of the governor(s) of the affected state(s), determine that the source or modification may employ a system of innovative control technology, if:

(i) The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function;

(ii) The owner or operator agrees to achieve a level of continuous emissions reduction equivalent to that which would have been required under paragraph (j)(2) of this section, by a date specified by the Administrator. Such date shall not be later than 4 years from the time of startup or 7 years from permit issuance;

(iii) The source or modification would meet the requirements of paragraphs (j) and (k) of this section, based on the emissions rate that the stationary source employing the system of innovative control technology would be required to meet on the date specified by the Administrator;

(iv) The source or modification would not before the date specified by the Administrator:

(a) Cause or contribute to a violation of an applicable national ambient air quality standard; or

(b) Impact any area where an applicable increment is known to be violated; and

(v) All other applicable requirements including those for public participation have been met.

(vi) The provisions of paragraph (p) of this section (relating to Class I areas) have been satisfied with respect to all periods during the life of the source or modification.

(3) The Administrator shall withdraw any approval to employ a system of innovative control technology made under this section, if:

(i) The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or

(ii) The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare, or safety; or

(iii) The Administrator decides at any time that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare, or safety.

(4) If a source or modification fails to meet the required level of continuous emission reduction within the specified time period or the approval is withdrawn in accordance with paragraph (v)(3) of this section, the Administrator may allow the

source or modification up to an additional 3 years to meet the requirement for the application of best available control technology through use of a demonstrated system of control.

(w) Permit rescission.

(1) Any permit issued under this section or a prior version of this section shall remain in effect, unless and until it expires under paragraph (s) of this section or is rescinded.

(2) Any owner or operator of a stationary source or modification who holds a permit for the source or modification may request that the Administrator rescind the permit or a particular portion of the permit if the permit for the source or modification was issued:

(i) Under § 52.21 as in effect on July 30, 1987 or any earlier version of this section;

(ii) Under § 52.21 between July 1, 2011 and July 6, 2015 to a source that was classified as a major stationary source under paragraph (b)(1) of this section solely on the basis of potential emissions of greenhouse gases, which were defined as a regulated NSR pollutant through the application of paragraph (b)(49)(v)(a) of this section as in effect during this time period; or

(iii) Under § 52.21 between July 1, 2011 and July 6, 2015 for a modification that was classified as a major modification under paragraph (b)(2) solely on the basis of an increase in emissions of greenhouse gases, which were defined as a regulated NSR pollutant through the application of paragraph (b)(49)(v)(b) of this section as in effect during this time period.

(3) The Administrator shall grant an application for rescission if the application shows that this section would not apply to the source or modification. As a result of a decision of the United States Supreme Court, this section does not apply to sources or modifications that meet only the applicability criteria in paragraph (b)(49)(v) of this section.

(4) If the Administrator rescinds a permit under this paragraph, the public shall be given adequate notice of the rescission. Publication of an announcement of rescission in a newspaper of general circulation in the affected region within 60 days of the rescission shall be considered adequate notice.

(x) to (z) [Reserved]

(aa) Actuals PALs. The provisions in paragraphs (aa)(1) through (15) of this section govern actuals PALs.

(1) Applicability.

(i) The Administrator may approve the use of an actuals PAL, including for GHGs on either a mass basis or a CO₂e basis, for any existing major stationary source or any existing GHG-only source if the PAL meets the requirements in paragraphs (aa)(1) through (15) of this section. The term “PAL” shall mean “actuals PAL” throughout paragraph (aa) of this section.

(ii) Any physical change in or change in the method of operation of a major stationary source or a GHG-only source that maintains its total source-wide emissions below the PAL level, meets the requirements in paragraphs (aa)(1) through (15) of this section, and complies with the PAL permit:

(a) Is not a major modification for the PAL pollutant;

(b) Does not have to be approved through the PSD program;

(c) Is not subject to the provisions in paragraph (r)(4) of this section (restrictions on relaxing enforceable emission limitations that the major stationary source used to avoid applicability of the major NSR program); and

(d) Does not make GHGs subject to regulation as defined by paragraph (b)(49) of this section.

(iii) Except as provided under paragraph (aa)(1)(ii)(c) of this section, a major stationary source or a GHG-only source shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.

(2) Definitions. For the purposes of this section, the definitions in paragraphs (aa)(2)(i) through (xi) of this section apply. When a term is not defined in these paragraphs, it shall have the meaning given in paragraph (b) of this section or in the Act.

(i) Actuals PAL for a major stationary source means a PAL based on the baseline actual emissions (as defined in paragraph (b)(48) of this section) of all emissions units (as defined in paragraph (b)(7) of this section) at the source, that emit or have the potential to emit the PAL pollutant. For a GHG-only source, actuals PAL means a PAL based on the baseline actual emissions (as defined in paragraph (aa)(2)(xiii) of this section) of all emissions units (as defined in paragraph (aa)(2)(xiv) of this section) at the source, that emit or have the potential to emit GHGs.

(ii) Allowable emissions means “allowable emissions” as defined in paragraph (b)(16) of this section, except as this definition is modified according to paragraphs (aa)(2)(ii)(a) and (b) of this section.

(a) The allowable emissions for any emissions unit shall be calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.

(b) An emissions unit's potential to emit shall be determined using the definition in paragraph (b)(4) of this section, except that the words “or enforceable as a practical matter” should be added after “federally enforceable.”

(iii) Small emissions unit means an emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant, as defined in paragraph (b)(23) of this section or in the Act, whichever is lower. For a GHG PAL issued on a CO₂e basis, small emissions unit means an emissions unit that emits or has the potential to emit less than the amount of GHGs on a CO₂e basis defined as “significant” for the purposes of paragraph (b)(49)(iii) of this section at the time the PAL permit is being issued.

(iv) Major emissions unit means:

(a) Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant in an attainment area; or

(b) Any emissions unit that emits or has the potential to emit the PAL pollutant in an amount that is equal to or greater than the major source threshold for the PAL pollutant as defined by the Act for nonattainment areas. For example, in accordance with the definition of major stationary source in section 182(c) of the Act, an emissions unit would be a major emissions unit for VOC if the emissions unit is located in a serious ozone nonattainment area and it emits or has the potential to emit 50 or more tons of VOC per year.

(c) For a GHG PAL issued on a CO₂e basis, any emissions unit that emits or has the potential to emit equal to or greater than the amount of GHGs on a CO₂e basis that would be sufficient for a new source to trigger permitting requirements under paragraph (b)(49) of this section at the time the PAL permit is being issued.

(v) Plantwide applicability limitation (PAL) means an emission limitation expressed on a mass basis in tons per year, or expressed in tons per year CO₂e for a CO₂e-based GHG emission limitation, for a pollutant at a major stationary source or GHG-only source, that is enforceable as a practical matter and established source-wide in accordance with paragraphs (aa)(1) through (15) of this section.

(vi) PAL effective date generally means the date of issuance of the PAL permit. However, the PAL effective date for an increased PAL is the date any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

(vii) PAL effective period means the period beginning with the PAL effective date and ending 10 years later.

(viii) PAL major modification means, notwithstanding paragraphs (b)(2), (b)(3), and (b)(49) of this section (the definitions for major modification, net emissions increase, and subject to regulation), any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.

(ix) PAL permit means the major NSR permit, the minor NSR permit, or the State operating permit under a program that is approved into the State Implementation Plan, or the title V permit issued by the Administrator that establishes a PAL for a major stationary source or a GHG-only source.

(x) PAL pollutant means the pollutant for which a PAL is established at a major stationary source or a GHG-only source. For a GHG-only source, the only available PAL pollutant is greenhouse gases.

(xi) Significant emissions unit means an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in paragraph (b)(23) of this section or in the Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit as defined in paragraph (aa)(2)(iv) of this section. For a GHG PAL issued on a CO₂e basis, significant emissions unit means any emissions unit that emits or has the potential to emit GHGs on a CO₂e basis in amounts equal to or greater than the amount that would qualify the unit as small emissions unit as defined in paragraph (aa)(2)(iii) of this section, but less than the amount that would qualify the unit as a major emissions unit as defined in paragraph (aa)(2)(iv)(c) of this section.

(xii) GHG-only source means any existing stationary source that emits or has the potential to emit GHGs in the amount equal to or greater than the amount of GHGs on a mass basis that would be sufficient for a new source to trigger permitting requirements for GHGs under paragraph (b)(1) of this section and the amount of GHGs on a CO₂e basis that would be sufficient for a new source to trigger permitting requirements for GHGs under paragraph (b)(49) of this section at the time the PAL permit is being issued, but does not emit or have the potential to emit any other non-GHG regulated NSR pollutant at or above the applicable major source threshold. A GHG-only source may only obtain a PAL for GHG emissions under paragraph (aa) of this section.

(xiii) Baseline actual emissions for a GHG PAL means the average rate, in tons per year CO₂e or tons per year GHG, as applicable, at which the emissions unit actually emitted GHGs during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Administrator for a permit required under this section or by the permitting authority for a permit required by a plan, whichever is earlier. For any existing electric utility steam generating unit, baseline actual emissions for a GHG PAL means the average rate, in tons per year CO₂e or tons per year GHG, as applicable, at which the emissions unit actually emitted the GHGs during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding either the date the owner or operator begins actual construction of the project, except that the Administrator shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

(a) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

(b) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.

(c) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the stationary source must currently comply, had such stationary source been required to comply with such limitations during the consecutive 24-month period.

(d) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual GHG emissions and for adjusting this amount if required by paragraphs (aa)(2)(xiii)(b) and (c) of this section.

(xiv) Emissions unit with respect to GHGs means any part of a stationary source that emits or has the potential to emit GHGs. For purposes of this section, there are two types of emissions units as described in the following:

(a) A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.

(b) An existing emissions unit is any emissions unit that does not meet the requirements in paragraph (aa)(2)(xiv)(a) of this section.

(xv) Minor source means any stationary source that does not meet the definition of major stationary source in paragraph (b)(1) of this section for any pollutant at the time the PAL is issued.

(3) Permit application requirements. As part of a permit application requesting a PAL, the owner or operator of a major stationary source or a GHG-only source shall submit the following information to the Administrator for approval:

(i) A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations, or work practices apply to each unit.

(ii) Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup, shutdown, and malfunction.

(iii) The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (aa)(13)(i) of this section.

(iv) As part of a permit application requesting a GHG PAL, the owner or operator of a major stationary source or a GHG-only source shall submit a statement by the source owner or operator that clarifies whether the source is an existing major source as defined in paragraph (b)(1)(i)(a) and (b) of this section or a GHG-only source as defined in paragraph (aa)(2)(xii) of this section.

(4) General requirements for establishing PALs.

(i) The Administrator is allowed to establish a PAL at a major stationary source or a GHG-only source, provided that at a minimum, the requirements in paragraphs (aa)(4)(i)(a) through (g) of this section are met.

- (a) The PAL shall impose an annual emission limitation expressed on a mass basis in tons per year, or expressed in tons per year CO₂e, that is enforceable as a practical matter, for the entire major stationary source or GHG-only source. For each month during the PAL effective period after the first 12 months of establishing a PAL, the major stationary source or GHG-only source owner or operator shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL (a 12-month average, rolled monthly). For each month during the first 11 months from the PAL effective date, the major stationary source or GHG-only source owner or operator shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.
- (b) The PAL shall be established in a PAL permit that meets the public participation requirements in paragraph (aa)(5) of this section.
- (c) The PAL permit shall contain all the requirements of paragraph (aa)(7) of this section.
- (d) The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major stationary source or GHG-only source.
- (e) Each PAL shall regulate emissions of only one pollutant.
- (f) Each PAL shall have a PAL effective period of 10 years.
- (g) The owner or operator of the major stationary source or GHG-only source with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in paragraphs (aa)(12) through (14) of this section for each emissions unit under the PAL through the PAL effective period.
- (ii) At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant that occur during the PAL effective period creditable as decreases for purposes of offsets under § 51.165(a)(3)(ii) of this chapter unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.
- (5) Public participation requirements for PALs. PALs for existing major stationary sources or GHG-only sources shall be established, renewed, or increased through a procedure that is consistent with §§ 51.160 and 51.161 of this chapter. This includes the requirement that the Administrator provide the public with notice of the proposed approval of a PAL permit and at least a 30-day period for submittal of public comment. The Administrator must address all material comments before taking final action on the permit.
- (6) Setting the 10-year actuals PAL level.
- (i) Except as provided in paragraph (aa)(6)(ii) and (iii) of this section, the plan shall provide that the actuals PAL level for a major stationary source or a GHG-only source shall be established as the sum of the baseline actual emissions (as defined in paragraph (b)(48) of this section or, for GHGs, paragraph (aa)(2)(xiii) of this section) of the PAL pollutant for

each emissions unit at the source; plus an amount equal to the applicable significant level for the PAL pollutant under paragraph (b)(23) of this section or under the Act, whichever is lower. When establishing the actuals PAL level, for a PAL pollutant, only one consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions units. However, a different consecutive 24-month period may be used for each different PAL pollutant. Emissions associated with units that were permanently shut down after this 24-month period must be subtracted from the PAL level. The reviewing authority shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the reviewing authority is aware of prior to issuance of the PAL permit. For instance, if the source owner or operator will be required to reduce emissions from industrial boilers in half from baseline emissions of 60 ppm NO_x to a new rule limit of 30 ppm, then the permit shall contain a future effective PAL level that is equal to the current PAL level reduced by half of the original baseline emissions of such unit(s).

(ii) For newly constructed units (which do not include modifications to existing units) on which actual construction began after the 24-month period, in lieu of adding the baseline actual emissions as specified in paragraph (aa)(6)(i) of this section, the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

(iii) For CO₂e based GHG PAL, the actuals PAL level shall be established as the sum of the GHGs baseline actual emissions (as defined in paragraph (aa)(2)(xiii) of this section) of GHGs for each emissions unit at the source, plus an amount equal to the amount defined as “significant” on a CO₂e basis for the purposes of paragraph (b)(49)(iii) at the time the PAL permit is being issued. When establishing the actuals PAL level for a CO₂e-based PAL, only one consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions units. Emissions associated with units that were permanently shut down after this 24-month period must be subtracted from the PAL level. The reviewing authority shall specify a reduced PAL level (in tons per year CO₂e) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or state regulatory requirement(s) that the reviewing authority is aware of prior to issuance of the PAL permit.

(7) Contents of the PAL permit. The PAL permit must contain, at a minimum, the information in paragraphs (aa)(7)(i) through (xi) of this section.

(i) The PAL pollutant and the applicable source-wide emission limitation in tons per year or tons per year CO₂e.

(ii) The PAL permit effective date and the expiration date of the PAL (PAL effective period).

(iii) Specification in the PAL permit that if a major stationary source or a GHG-only source owner or operator applies to renew a PAL in accordance with paragraph (aa)(10) of this section before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by a reviewing authority.

(iv) A requirement that emission calculations for compliance purposes must include emissions from startups, shutdowns, and malfunctions.

(v) A requirement that, once the PAL expires, the major stationary source or GHG-only source is subject to the requirements of paragraph (aa)(9) of this section.

(vi) The calculation procedures that the major stationary source or GHG-only source owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total as required by paragraph (aa)(13)(i) of this section.

(vii) A requirement that the major stationary source or GHG-only source owner or operator monitor all emissions units in accordance with the provisions under paragraph (aa)(12) of this section.

(viii) A requirement to retain the records required under paragraph (aa)(13) of this section on site. Such records may be retained in an electronic format.

(ix) A requirement to submit the reports required under paragraph (aa)(14) of this section by the required deadlines.

(x) Any other requirements that the Administrator deems necessary to implement and enforce the PAL.

(xi) A permit for a GHG PAL issued to a GHG-only source shall also include a statement denoting that GHG emissions at the source will not be subject to regulation under paragraph (b)(49) of this section as long as the source complies with the PAL.

(8) PAL effective period and reopening of the PAL permit. The requirements in paragraphs (aa)(8)(i) and (ii) of this section apply to actuals PALs.

(i) PAL effective period. The Administrator shall specify a PAL effective period of 10 years.

(ii) Reopening of the PAL permit.

(a) During the PAL effective period, the Administrator must reopen the PAL permit to:

(1) Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL;

(2) Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under § 51.165(a)(3)(ii) of this chapter; and

(3) Revise the PAL to reflect an increase in the PAL as provided under paragraph (aa)(11) of this section.

(b) The Administrator shall have discretion to reopen the PAL permit for the following:

(1) Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date;

(2) Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and that the State may impose on the major stationary source or GHG-only source under the State Implementation Plan; and

(3) Reduce the PAL if the reviewing authority determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.

(c) Except for the permit reopening in paragraph (aa)(8)(ii)(a)(1) of this section for the correction of typographical/calculation errors that do not increase the PAL level, all other reopenings shall be carried out in accordance with the public participation requirements of paragraph (aa)(5) of this section.

(9) Expiration of a PAL. Any PAL that is not renewed in accordance with the procedures in paragraph (aa)(10) of this section shall expire at the end of the PAL effective period, and the requirements in paragraphs (aa)(9)(i) through (v) of this section shall apply.

(i) Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the procedures in paragraphs (aa)(9)(i)(a) and (b) of this section.

(a) Within the time frame specified for PAL renewals in paragraph (aa)(10)(ii) of this section, the major stationary source or GHG-only source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the Administrator) by distributing the PAL allowable emissions for the major stationary source or GHG-only source among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under paragraph (aa)(10)(v) of this section, such distribution shall be made as if the PAL had been adjusted.

(b) The Administrator shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Administrator determines is appropriate.

(ii) Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The Administrator may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS, or CPMS to demonstrate compliance with the allowable emission limitation.

(iii) Until the Administrator issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under paragraph (aa)(9)(i)(b) of this section, the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.

(iv) Any physical change or change in the method of operation at the major stationary source or GHG-only source will be subject to major NSR requirements if such change meets the definition of major modification in paragraph (b)(2) of this section.

(v) The major stationary source or GHG-only source owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to paragraph (r)(4) of this section, but were eliminated by the PAL in accordance with the provisions in paragraph (aa)(1)(ii)(c) of this section.

(10) Renewal of a PAL.

(i) The Administrator shall follow the procedures specified in paragraph (aa)(5) of this section in approving any request to renew a PAL for a major stationary source or a GHG-only source, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the Administrator.

(ii) Application deadline. A major stationary source or GHG-only source owner or operator shall submit a timely application to the Administrator to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source or GHG-only source submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.

(iii) Application requirements. The application to renew a PAL permit shall contain the information required in paragraphs (aa)(10)(iii)(a) through (d) of this section.

(a) The information required in paragraphs (aa)(3)(i) through (iii) of this section.

(b) A proposed PAL level.

(c) The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).

(d) Any other information the owner or operator wishes the Administrator to consider in determining the appropriate level for renewing the PAL.

(iv) PAL adjustment. In determining whether and how to adjust the PAL, the Administrator shall consider the options outlined in paragraphs (aa)(10)(iv)(a) and (b) of this section. However, in no case may any such adjustment fail to comply with paragraph (aa)(10)(iv)(c) of this section.

(a) If the emissions level calculated in accordance with paragraph (aa)(6) of this section is equal to or greater than 80 percent of the PAL level, the Administrator may renew the PAL at the same level without considering the factors set forth in paragraph (aa)(10)(iv)(b) of this section; or

(b) The Administrator may set the PAL at a level that he or she determines to be more representative of the source's baseline actual emissions, or that he or she determines to be more appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the Administrator in his or her written rationale.

(c) Notwithstanding paragraphs (aa)(10)(iv)(a) and (b) of this section:

(1) If the potential to emit of the major stationary source or GHG-only source is less than the PAL, the Administrator shall adjust the PAL to a level no greater than the potential to emit of the source; and

(2) The Administrator shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source or GHG-only source has complied with the provisions of paragraph (aa)(11) of this section (increasing a PAL).

(v) If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the Administrator has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or title V permit renewal, whichever occurs first.

(11) Increasing a PAL during the PAL effective period.

(i) The Administrator may increase a PAL emission limitation only if the major stationary source or GHG-only source complies with the provisions in paragraphs (aa)(11)(i)(a) through (d) of this section.

(a) The owner or operator of the major stationary source or GHG-only source shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary or GHG-only source's emissions to equal or exceed its PAL.

(b) As part of this application, the major stationary source or GHG-only source owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s) exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.

(c) The owner or operator obtains a major NSR permit for all emissions unit(s) identified in paragraph (aa)(11)(i)(a) of this section, regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the major NSR process (for example, BACT), even though they have also become subject to the PAL or continue to be subject to the PAL.

(d) The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

(ii) The Administrator shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with paragraph (aa)(11)(i)(b)), plus the sum of the baseline actual emissions of the small emissions units.

(iii) The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of paragraph (aa)(5) of this section.

(12) Monitoring requirements for PALs.

(i) General requirements.

(a) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time or CO₂e per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.

(b) The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in paragraphs (aa)(12)(ii)(a) through (d) of this section and must be approved by the Administrator.

(c) Notwithstanding paragraph (aa)(12)(i)(b) of this section, you may also employ an alternative monitoring approach that meets paragraph (aa)(12)(i)(a) of this section if approved by the Administrator.

(d) Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.

(ii) Minimum performance requirements for approved monitoring approaches. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in paragraphs (aa)(12)(iii) through (ix) of this section:

(a) Mass balance calculations for activities using coatings or solvents;

(b) CEMS;

(c) CPMS or PEMS; and

(d) Emission factors.

(iii) Mass balance calculations. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:

(a) Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;

(b) Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and

(c) Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Administrator determines there is site-specific data or a site-specific monitoring program to support another content within the range.

(iv) CEMS. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:

(a) CEMS must comply with applicable Performance Specifications found in [40 CFR part 60, appendix B](#); and

(b) CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating.

(v) CPMS or PEMS. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:

(a) The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and

(b) Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the Administrator, while the emissions unit is operating.

(vi) Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:

- (a) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;
 - (b) The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and
 - (c) If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the Administrator determines that testing is not required.
- (vii) A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.
- (viii) Notwithstanding the requirements in paragraphs (aa)(12)(iii) through (vii) of this section, where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the Administrator shall, at the time of permit issuance:
- (a) Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or
 - (b) Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.
- (ix) Re-validation. All data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the Administrator. Such testing must occur at least once every 5 years after issuance of the PAL.
- (13) Recordkeeping requirements.
- (i) The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of paragraph (aa) of this section and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record.
 - (ii) The PAL permit shall require an owner or operator to retain a copy of the following records for the duration of the PAL effective period plus 5 years:
 - (a) A copy of the PAL permit application and any applications for revisions to the PAL; and
 - (b) Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

(14) Reporting and notification requirements. The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the Administrator in accordance with the applicable title V operating permit program. The reports shall meet the requirements in paragraphs (aa)(14)(i) through (iii) of this section.

(i) Semi-annual report. The semi-annual report shall be submitted to the Administrator within 30 days of the end of each reporting period. This report shall contain the information required in paragraphs (aa)(14)(i)(a) through (g) of this section.

(a) The identification of owner and operator and the permit number.

(b) Total annual emissions (expressed on a mass-basis in tons per year, or expressed in tons per year CO₂e) based on a 12-month rolling total for each month in the reporting period recorded pursuant to paragraph (aa)(13)(i) of this section.

(c) All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.

(d) A list of any emissions units modified or added to the major stationary source or GHG-only source during the preceding 6-month period.

(e) The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.

(f) A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by (aa)(12)(vii).

(g) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

(ii) Deviation report. The major stationary source or GHG-only source owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to § 70.6(a)(3)(iii)(B) of this chapter shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed by the applicable program implementing § 70.6(a)(3)(iii)(B) of this chapter. The reports shall contain the following information:

(a) The identification of owner and operator and the permit number;

(b) The PAL requirement that experienced the deviation or that was exceeded;

(c) Emissions resulting from the deviation or the exceedance; and

(d) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

(iii) Re-validation results. The owner or operator shall submit to the Administrator the results of any re-validation test or method within 3 months after completion of such test or method.

(15) Transition requirements.

(i) The Administrator may not issue a PAL that does not comply with the requirements in paragraphs (aa)(1) through (15) of this section after March 3, 2003.

(ii) The Administrator may supersede any PAL that was established prior to March 3, 2003 with a PAL that complies with the requirements of paragraphs (aa)(1) through (15) of this section.

(bb) If any provision of this section, or the application of such provision to any person or circumstance, is held invalid, the remainder of this section, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

(cc) Without regard to other considerations, routine maintenance, repair and replacement includes, but is not limited to, the replacement of any component of a process unit with an identical or functionally equivalent component(s), and maintenance and repair activities that are part of the replacement activity, provided that all of the requirements in paragraphs (cc)(1) through (3) of this section are met.

(1) Capital cost threshold for equipment replacement.

(i) For an electric utility steam generating unit, as defined in § 52.21(b)(31), the fixed capital cost of the replacement component(s) plus the cost of any associated maintenance and repair activities that are part of the replacement shall not exceed 20 percent of the replacement value of the process unit, at the time the equipment is replaced. For a process unit that is not an electric utility steam generating unit the fixed capital cost of the replacement component(s) plus the cost of any associated maintenance and repair activities that are part of the replacement shall not exceed 20 percent of the replacement value of the process unit, at the time the equipment is replaced.

(ii) In determining the replacement value of the process unit; and, except as otherwise allowed under paragraph (cc)(1)(iii) of this section, the owner or operator shall determine the replacement value of the process unit on an estimate of the fixed capital cost of constructing a new process unit, or on the current appraised value of the process unit.

(iii) As an alternative to paragraph (cc)(1)(ii) of this section for determining the replacement value of a process unit, an owner or operator may choose to use insurance value (where the insurance value covers only complete replacement),

investment value adjusted for inflation, or another accounting procedure if such procedure is based on Generally Accepted Accounting Principles, provided that the owner or operator sends a notice to the reviewing authority. The first time that an owner or operator submits such a notice for a particular process unit, the notice may be submitted at any time, but any subsequent notice for that process unit may be submitted only at the beginning of the process unit's fiscal year. Unless the owner or operator submits a notice to the reviewing authority, then paragraph (cc)(1)(ii) of this section will be used to establish the replacement value of the process unit. Once the owner or operator submits a notice to use an alternative accounting procedure, the owner or operator must continue to use that procedure for the entire fiscal year for that process unit. In subsequent fiscal years, the owner or operator must continue to use this selected procedure unless and until the owner or operator sends another notice to the reviewing authority selecting another procedure consistent with this paragraph or paragraph (cc)(1)(ii) of this section at the beginning of such fiscal year.

(2) Basic design parameters. The replacement does not change the basic design parameter(s) of the process unit to which the activity pertains.

(i) Except as provided in paragraph (cc)(2)(iii) of this section, for a process unit at a steam electric generating facility, the owner or operator may select as its basic design parameters either maximum hourly heat input and maximum hourly fuel consumption rate or maximum hourly electric output rate and maximum steam flow rate. When establishing fuel consumption specifications in terms of weight or volume, the minimum fuel quality based on British Thermal Units content shall be used for determining the basic design parameter(s) for a coal-fired electric utility steam generating unit.

(ii) Except as provided in paragraph (cc)(2)(iii) of this section, the basic design parameter(s) for any process unit that is not at a steam electric generating facility are maximum rate of fuel or heat input, maximum rate of material input, or maximum rate of product output. Combustion process units will typically use maximum rate of fuel input. For sources having multiple end products and raw materials, the owner or operator should consider the primary product or primary raw material when selecting a basic design parameter.

(iii) If the owner or operator believes the basic design parameter(s) in paragraphs (cc)(2)(i) and (ii) of this section is not appropriate for a specific industry or type of process unit, the owner or operator may propose to the reviewing authority an alternative basic design parameter(s) for the source's process unit(s). If the reviewing authority approves of the use of an alternative basic design parameter(s), the reviewing authority shall issue a permit that is legally enforceable that records such basic design parameter(s) and requires the owner or operator to comply with such parameter(s).

(iv) The owner or operator shall use credible information, such as results of historic maximum capability tests, design information from the manufacturer, or engineering calculations, in establishing the magnitude of the basic design parameter(s) specified in paragraphs (cc)(2)(i) and (ii) of this section.

(v) If design information is not available for a process unit, then the owner or operator shall determine the process unit's basic design parameter(s) using the maximum value achieved by the process unit in the five-year period immediately preceding the planned activity.

(vi) Efficiency of a process unit is not a basic design parameter.

(3) The replacement activity shall not cause the process unit to exceed any emission limitation, or operational limitation that has the effect of constraining emissions, that applies to the process unit and that is legally enforceable.

Note to paragraph (cc): By a court order on December 24, 2003, this paragraph (cc) is stayed indefinitely. The stayed provisions will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the Federal Register advising the public of the termination of the stay.

Credits

[43 FR 26403, June 19, 1978, as amended at 44 FR 27571, May 10, 1979; 45 FR 52735, Aug. 7, 1980; 47 FR 27561, June 25, 1982; 49 FR 43209, Oct. 26, 1984; 50 FR 28550, July 12, 1985; 51 FR 32179, Sept. 9, 1986; 51 FR 40675, 40677, Nov. 7, 1986; 52 FR 24714, July 1, 1987; 52 FR 26401, July 14, 1987; 53 FR 396, Jan. 6, 1988; 53 FR 40671, Oct. 17, 1988; 54 FR 27285, 27300, June 28, 1989; 56 FR 5506, Feb. 11, 1991; 57 FR 3946, Feb. 3, 1992; 57 FR 32336, July 21, 1992; 58 FR 31637, June 3, 1993; 58 FR 38883, July 20, 1993; 60 FR 40474, Aug. 9, 1995; 61 FR 9918, March 12, 1996; 61 FR 41894, Aug. 12, 1996; 67 FR 80274, Dec. 31, 2002; 68 FR 61279, Oct. 27, 2003; 68 FR 63028, Nov. 7, 2003; 69 FR 40276, July 1, 2004; 70 FR 71704, Nov. 29, 2005; 72 FR 24078, May 1, 2007; 72 FR 32528, June 13, 2007; 72 FR 72617, Dec. 21, 2007; 73 FR 28349, May 16, 2008; 73 FR 77900, Dec. 19, 2008; 74 FR 26099, June 1, 2009; 74 FR 48156, Sept. 22, 2009; 74 FR 50117, Sept. 30, 2009; 74 FR 65695, Dec. 11, 2009; 75 FR 16016, 16017, March 31, 2010; 75 FR 31606, June 3, 2010; 75 FR 64905, Oct. 20, 2010; 76 FR 17555, March 30, 2011; 76 FR 28661, May 18, 2011; 76 FR 43507, July 20, 2011; 77 FR 41072, July 12, 2012; 77 FR 65118, Oct. 25, 2012; 78 FR 3281, Jan. 15, 2013; 78 FR 73702, Dec. 9, 2013; 79 FR 22032, April 21, 2014; 79 FR 22035, April 21, 2014; 80 FR 12318, March 6, 2015; 80 FR 26189, May 7, 2015; 80 FR 33413, June 12, 2015; 80 FR 50203, Aug. 19, 2015; 80 FR 65460, Oct. 26, 2015]

SOURCE: 57 FR 27936, 27939, 27942; 37 FR 10846, May 31, 1972; 50 FR 31369, Aug. 2, 1985; 57 FR 32336, July 21, 1992; 57 FR 37104, Aug. 18, 1992; 58 FR 6606, Feb. 1, 1993; 58 FR 38883, July 20, 1993; 59 FR 39859, Aug. 4, 1994; 62 FR 8328, Feb. 24, 1997, unless otherwise noted.

AUTHORITY: 42 U.S.C. 7401 et seq.

Notes of Decisions (219)

Current through April 15, 2016; 81 FR 22196.